Improving labour outcomes in the creative industries: the role of creative workers' social network structure and organisational business acumen

Benjamin Stuart Rodney Farr-Wharton

Southern Cross Business School
IMPROVING LABOUR OUTCOMES IN THE CREATIVE INDUSTRIES: THE
ROLE OF CREATIVE WORKERS’ SOCIAL NETWORK STRUCTURE AND
ORGANISATIONAL BUSINESS ACUMEN

PhD Thesis by Benjamin Farr-Wharton

Southern Cross University: School of Business and Tourism

Primary Supervisor: Professor Kerry Brown

Secondary Supervisor: Professor Robyn Keast

External Supervisor: Dr. Yuliya Shymko
Abstract

Individuals who work in artistic, cultural and creative fields (henceforth creative workers) are increasingly conceptualised as a labour force. Under this conceptualisation, creative workers are seen to contribute positively to significant, national economic indicators such as Gross Domestic Product and innovation indices. However, a growing body of research indicates that as a labour force, ‘creative workers’ experience particularly poor labour outcomes, insofar as they typically work longer hours, for relatively lower incomes, and have very little job security.

The theoretical concepts provided by the Resource-Based View (RBV) of the firm and Bourdieu’s theories concerning social and cultural capital, and the field of cultural production, are used in this thesis to examine the impact of organisational business acumen and social network structure on the labour outcomes (exploitation, labour precarity and earnings satisfaction) of creative workers. The research adopts a mixed methods approach that encompasses an initial pilot case study using social network analysis, followed by an explanatory quantitative-qualitative design. The study is situated within an Australian context, and a total of three hundred people were involved in the data collection for the sum of these three research phases.

Results from the quantitative and qualitative research indicate that organisational business acumen and social network structure significantly reduce the labour precarity of creative workers. In addition, organisational business acumen significantly reduces perceptions of exploitation, as well as enhances the earnings satisfaction of sampled creative workers.
This research is innovative and important in a number of ways. For practitioners, results from this thesis highlight the significance of both social network structure and organisational business acumen as resources that positively impact the labour outcomes of creative workers. For policy makers, the research encourages the development of new policy instruments to support the diffusion of organisational business acumen across the creative labour force, in order to enhance the efficiency of the creative sector. For theory, the research suggests that creative workers are no longer subject to a dichotomous ‘arts’ or ‘market’ mode of production, but compromise business practices and artistic pursuit to seek sustainable outcomes. For the field of network analysis, the research offers new quantitative instruments (specifically catering for the context of the network-centric creative sector) to measure the impact of network structures on performance measures.
# Table of Contents

**ABSTRACT** ......................................................................................................................... 2

**CHAPTER ONE - INTRODUCTION** ......................................................................................... 12
1.1 Introduction ....................................................................................................................... 12
1.2 The Creative Industries and Research ........................................................................... 13
1.3 Organisational Business Acumen and Creative Workers .............................................. 16
1.4 Social Network Structure and Creative Workers ............................................................ 18
1.5 Labour Outcomes ............................................................................................................ 20
1.6 Theoretical Lens ............................................................................................................. 22
1.7 Research Design ............................................................................................................ 25
1.8 Significance of the Research .......................................................................................... 26
1.8 limitations ........................................................................................................................ 27
1.9 Chapter Conclusion ........................................................................................................ 29

**CHAPTER TWO – THEORETICAL AND CONCEPTUAL FRAMEWORK** .................. 31
2.1 Introduction ...................................................................................................................... 31
2.2 Resource-Based View: Developments and Application .................................................. 31
2.3 Generating Value in Cultural Fields ............................................................................... 55
2.4 Forms of Capital: Social Capital .................................................................................... 58
2.5 Forms of Capital: Cultural Capital ................................................................................ 59
2.6 Institutional changes within the field of cultural production .......................................... 61
2.7 The Creative Industries: Policy, Definitions and Structures .......................................... 67
2.8 Labour outcomes within the creative industries .............................................................. 71
2.9 Micro causes of creative labour outcomes: Organisational Business Acumen ........ 79
2.10 The Creative Industries and Social networks ................................................................. 83
2.11 Co-varying Organisational business acumen and Social Network Structure ........... 96
2.11 Synthesis – Hypothetical models .................................................................................. 99
2.12 Chapter Conclusion ...................................................................................................... 102

**CHAPTER THREE – METHODOLOGY** .............................................................................. 104
3.1 Introduction ..................................................................................................................... 104
3.2 Methodology .................................................................................................................. 104
3.3 Research Paradigm ........................................................................................................ 105
3.4 Mixed Methods ............................................................................................................. 107
3.5 Research design ............................................................................................................ 111
3.6 Phase 1 - The Pilot Study ............................................................................................... 111
3.7 Phase 2 – Quantitative Study ......................................................................................... 123
3.8 Phase 3 – Qualitative Study ......................................................................................... 139
3.9 Chapter conclusion ....................................................................................................... 148
3.10 Supplementary to Chapter 3 – Pilot Investigation Results ........................................... 149

**CHAPTER FOUR – QUANTITATIVE RESULTS** ................................................................. 167
4.1 Generating the Survey Instruments ............................................................................ 167
4.2 Examining the Adequacy of the Quantitative Data ....................................................... 197
4.3 Summary: Assessing the adequacy of the quantitative data ....................................... 206
4.4 Results: Quantitative Analysis .................................................................................... 208

**CHAPTER FIVE – QUALITATIVE RESULTS** ................................................................... 223
5.1 Introduction .................................................................................................................... 223
5.2 The nature of organisational business acumen ............................................................. 225
5.3 The Nature of Social Network Structure ..................................................................... 231
5.4 the Direct and Indirect impact of Social Network Structure on Labour Outcomes ..........................................................................................................................237
5.5 Labour outcomes ................................................................................................................238
5.6 Other causes of Labour Outcomes .....................................................................................242
5.7 Conclusion ..........................................................................................................................244

CHAPTER SIX – DISCUSSION AND IMPLICATIONS .............................................................245
6.1 Synthesis of the Findings and Contribution to Knowledge ..............................................245
6.2 A Synthesis of Conclusions .............................................................................................254
6.3 Implications: The role of Organisational Business Acumen ........................................255
6.4 Implications: The role of Social Network Structure ......................................................266
6.5 Implications: The combined role of Organisational Business Acumen and Social
Network Structure ................................................................................................................273
6.6 Chapter Conclusion .........................................................................................................275

CHAPTER SEVEN – THESIS CONCLUSION ....................................................................276
7.1 Contextualising the study .................................................................................................276
7.2 The Results of the Study ..................................................................................................278
7.3 Conclusion ........................................................................................................................283

REFERENCES .......................................................................................................................276
APPENDICIES .......................................................................................................................276
Index of Figures
Figure 2.1: Primary Model (labour outcomes and organisational business acumen relationships emphasised). ......................................................... 82
Figure 2.2: Primary Model (network structure constructs emphasised) ................................................. 93
Figure 2.3: Final Model (social network structure higher-order variable emphasised) ....................... 95
Figure 2.4: Final Model with all relationships and constructs emphasised ......................................... 98
Figure 3.1: Research Design ............................................................................................................. 109
Figure 3.1.1: Social network map of cluster members ........................................................................ 151
Figure 3.1.2: Interdependency Social Network: ongoing commercial relationship .......................... 153
Figure 3.1.3: Interdependency Social Network: We have occasionally transacted financially .......... 155
Figure 3.1.4: Interdependency Social Network: We are friends ...................................................... 157
Figure 3.1.5: Line Graph comparing activity levels with network structure variables ....................... 162
Figure 3.6: Line graph mapping Network Size and Structural Hole Ranks for Highly Active Cluster Members ........................................................................................................ 164
Figure 3.7: Line graph mapping Network Size and Structural Hole Ranks for Active Cluster Members ..................................................................................................................... 164
Figure 4.1: Q-Q Plots for each measure ............................................................................................. 300

Appendix
Figure 4.1: Q-Q Plots for each measure ............................................................................................. 300

Index of Tables
Table 2.1: Summary of the treatment of theories used in this thesis .................................................... 33
Table 2.2: The theorised impact of different network structures ....................................................... 44
Table 3.2: Pseudonyms used to represent cluster sample .................................................................. 114
Table 3.3: Sociogram Question set used to establish types of interdependencies with cluster members ............................................................................................................ 116
Table 3.4: Websites used to generate database used in quantitative analysis .................................. 134
Table 3.4: Question types .................................................................................................................. 139
Table 3.5: Semi-structured interview questions ................................................................................ 140
Table 3.6: Characteristics of respondents ........................................................................................ 142
Table 3.12: Average overall network size and structural hole percentile rank per activity level ........ 162
Table 3.13: ANOVA of Network Size and Structural Hole against Activity Levels .......................... 163
Table 3.14: Network Size and Structural Hole Ranks for Highly Active Cluster Members .............. 164
Table 3.15: Network Size and Structural Hole Ranks for Active Cluster Members ......................... 164
Table 4.1: Constructs, Content and Item count .................................................................................. 171
Table 4.2: Content and items for Exploitation ................................................................................... 172
Table 4.3: Content and items for Labour Precarity ........................................................................... 173
Table 4.4: Content and items for Earnings Satisfaction ...................................................................... 174
Table 4.5: Content and items for Organisational Business Acumen ................................................ 176
Table 4.6: Content and items for Network Size ................................................................................ 177
Table 4.7: Content and items for Structural Hole .......................................................................... 178
Table 4.8: Content and items for Cluster Engagement ................................................................. 179
Table 4.9: Content and items for Non-Local Networks .............................................................. 180
Table 4.10: Descriptive statistics for measures developed through EFA .......................................... 185
Table 4.11: Correlation matrix for measures developed through EFA ............................................ 186
Table 4.12: VIF test of collinearity between strongly correlated variables ...................................... 187
Table 4.13: Confirmatory Factor Analysis Construct Reliability Indicators ...................................... 188
Table 4.14: Confirmatory Factor Analysis Goodness-of-fit Indices ................................................ 190
Table 4.16: Assessment of Reliability for the EFA Model ............................................................... 191
Table 4.17: Goodness-of-fit indicators for the EFA Model ........................................................... 191
Table 4.18: Assessment of Reliability for the Reduced Model ....................................................... 192
Table 4.19: Goodness-of-fit indices for the reduced model ........................................................... 193
Table 4.20: Descriptive statistics for the final model (continued) ................................................... 194
Table 4.21: Correlation matrix final model ...................................................................................... 194
Table 4.22: Processes for testing the adequacy of quantitative data for conducting structural equation modelling ................................................................. 197
Table 4.23: Kolmogorov-Smirnov test and Shapiro-Wilk test for all measures ............................................. 200
Table 4.24: Harmon’s Single Factor Test ...................................................................................................... 202
Table 4.25: Comparison of the goodness-of-fit indices with and without a common latent factor ........... 202
Table 4.29: Goodness-of-fit indices for the final measurement model .................................................... 205
Table 4.30: Reliability indicators for Social Network Structure ............................................................... 205
Table 4.31: Hypotheses and corresponding Research Question ............................................................... 207
The goodness-of-fit indices for the primary model were appropriate, as displayed in Table 4.32 ....... 208
Table 4.32: Goodness-of-fit indices for the primary model ................................................................. 208
Table 4.33: Control impacts on dependent variables for the primary model ..................................... 209
Table 4.34: Goodness-of-fit indices for the final model ............................................................................ 212
Table 4.35: Control impacts on dependent variables for the final model ......................................... 213
Table 4.36: Standardised Indirect Effects Significance levels for the final model ........................... 217
Table 4.37: MANOVA of sub-sector on Labour Outcomes ................................................................. 219
Table 4.38: Mean comparisons labour outcomes of different sub-sectors ......................................... 219
Table 4.39: MANOVA of full-time/part-time on Labour Outcomes ..................................................... 220
Table 4.40: Mean comparisons labour outcomes of different subsectors ......................................... 220
Table 5.1: Summary of qualitative themes and sub-themes ................................................................. 224
Table 6.1: Summary of findings for Research Question 1: What is the impact of organisational business acumen on the labour outcomes of creative workers? ......................................................... 247
Table 6.2: Summary of findings for Research Question 2: What is the impact of social network structure on the labour outcomes of creative workers? ................................................................. 249
Table 6.3: Summary of findings for Secondary Research Question 2 ................................................... 251

Appendix .................................................................................................................................................. 296
Table 3.7: Profile of Music Groups, DJs and Singers belonging to the Cluster ........................................... 296
Table 3.8: Profile of Vertical Actors belonging to the Cluster ............................................................... 297
Table 3.10: Network Size Scores and Ranking of Horizontal Actors ..................................................... 298
Table 3.11: Structural Hole Position and Ranking of Horizontal Actors ............................................. 299
Acknowledgements

There are many people who supported me to bring this PhD to completion, and I would like to acknowledge their contribution here.

First and foremost, to my supervisors – Kerry, Robyn and Yuliya: from the bottom of my heart I thank you! You taught me a great many things about academia and life, but most of all, you each challenged me to produce research that was of the highest quality, yet directly relevant and applicable to every day practice. We have much more work to do together!

To my loving wife – Eloisa; my eternally caring parents – Rod and Yvonne; and my dear brothers: thank you all for your support and encouragement. Eloisa, thank you for indulging me by engaging in my theoretical conversations and reminding me to enjoy the process!

To my friends – Jakob, Eli, Natalie, David, Tom, Kristina, Farai, and Matteo: thank you for offering me some occasional distractions. To my academic colleagues – Michael, Veronica, Ferruccio, Elio, Elisabetta, Jaime, Silvia, Sigrid, Brent, Owen, Martin and Matt: thank you for helping me to refine my ideas and research.

Above all, I would like to dedicate this PhD to all of the creative workers who participated in this research. I would particularly like to acknowledge the inspiration provided by Salvador, Hayley, Owen, Tim, Mel, Carlos, Noel, Joanne, Matija,
Fernando, Brian, David, Matt, Yotam, Sonya and Ash. You all played a major role in shaping and guiding this research. I hope that the results of this study provide you with some ideas on how to further your brilliant creative work. A final and extra offer of gratitude must go to my dear friends Salvador and Tom: thank you both for ensuring that at least one of my feet remained in the creative realm.
List of Published Works by the Author


List of Refereed Conference Proceedings


List of published edited books

Chapter One - Introduction

1.1 Introduction

Individuals who work in artistic, cultural and creative fields are increasingly conceptualised as a labour force. Under this conceptualisation, ‘creative workers’ are seen to contribute positively to significant, economic indicators such as national Gross Domestic Product (GDP) and innovation indices (Jaaniste, 2009; UNESCO, 2013). This economic interpretation of creative labour contrasts previous perspectives concerning the role of arts and culture for society, and is responsible for repositioning creative workers ‘from the margins to the mainstream’ in global, political discourse and academic research concerning development, innovation and entrepreneurship (Flew & Cunningham, 2010; Hearn, Ninan, Rogers, Cunningham, & Luckman, 2004, p. 101). However, research indicates that, as a labour force, creative workers experience particularly poor labour outcomes compared with people who work in other sectors of the economy.

Creative workers are typically subject to poor pay, labour insecurity, long hours and poor employment progression prospects. This situation ensues as a result of the institutionalisation of precarious, freelance and exploitative employment structures that necessitate the adoption of business management processes for creative workers, in and above their artistic and creative duties (Caves, 2000; De Peuter, 2011). The poor labour outcomes associated with creative work call into question the processes by which the macro and broad reaching economic benefits, stemming from the creative industries, are generated.
Recent research suggests that a link exists between the business skills possessed by creative workers, as well as their social networks, and the labour outcomes that they experience (Belussi & Sedita, 2008; Crombie & Hagoort, 2010). In order to provide an empirical basis for this link, as well as improving the labour situation faced by creative workers, this study examines the impact of organisational business acumen and social network structure on the labour outcomes of creative workers.

1.2 The Creative Industries and Research

The creative industries have emerged as a relatively recent concept for governments and incorporates a policy framework that combines the film, digital media, music, performing arts, design and fashion segments of the economy under one banner (Throsby, 2008). Creative industries policies emphasise an ‘industrial’ and ‘market’ interpretation of cultural production, which distinctly contrasts previous subsidised arts social and policy frameworks (O'Connor, 2009). This shift in emphasis has broadened the research discourse pertaining to the ‘field of cultural production’, to include significant contributions from the research fields of management, economics and organisational studies. Within current creative industries research, three distinct, albeit interrelated streams of enquiry have emerged.

The first stream concerns the macro economic significance of the creative industries. Research within this stream focuses on the overall economic contribution of creative products and services, as well as the impact of creative processes on other sectors of the economy (Jaaniste, 2009). From a macro-economic lens, research indicates that
within Australia, the creative industries contribute approximately 3% to national GDP, and represents about 3.5% of total employment (SGS, 2013). These figures are fairly representative of the economic contribution of the creative industries for many developed countries (UNCTAD, 2013). Additionally, research indicates that the creative industries have the potential to generate positive spillover effects for the growth of other industries (Davies & Sigthorsson, 2013; Flew & Cunningham, 2010). In this way, the creative industries are seen to positively contribute the economic activity and innovation system of the entire economy (Potts, Cunningham, Hartley, & Ormerod, 2008). As a result, creative industries development initiatives have become popular economic growth policy instruments for governments globally (Cunningham, 2009; Gibson & Klocker, 2005).

The second prevalent research stream present within creative industries research focuses on the role of social networks for the development and distribution of creative products and services. Previous research examining the ‘field of cultural production’ indicates that the social networks that link artists with each other, and their audiences, influence the diffusion of fashionable art (Bourdieu, 1983). More recently, Potts et al. (2008) posit that creative enterprises are reliant on densely connected, and socially-embedded, production and distribution networks. Further, the sector’s dependence on social networks presents as a new kind of ‘social network market’ (place), which distinguishes it from all other sectors (Potts et al., 2008). Additionally, empirical creative industries research using a social network focus has identified that creative workers tend to cluster together and collaborate to generate creative products and services (Coulson, 2012; De Propris, Chapain, Cooke, MacNeill, & Mateos-Garcia, 2009; Felton, Collis, & Graham, 2010).
The third stream of research connected to the creative industries focuses on the dynamics of creative labour. Research from this stream indicates that, in comparison to people working in other sectors, creative workers face poor labour outcomes. In general, creative workers tend to: a) work more; b) work under precarious, insecure and exploitative conditions; and c) receive lower levels of income than those who work in other sectors (Banks & Hesmondhalgh, 2009; De Peuter, 2011; Hesmondhalgh & Baker, 2010). In addition, creative workers are said to have low levels of business acumen, and research indicates a possible link between this, and the poor economic returns associated with creative work (Crombie & Hagoort, 2010; Throsby & Zednik, 2010).

Despite empirical and conceptual advances stemming from these three research streams, there has been little integration between them, and this presents as a significant research gap. To this end, the extent to which the positive economic impact of the creative industries is facilitated through the exploitation of creative workers has not been measured. Similarly, while social networks appear to play an important role in the diffusion of employment opportunities for creative workers, researchers and practitioners lack knowledge regarding the ways in which different social networking arrangements may impact on the quality of network-generated work. Without this knowledge, creative workers remain in a marginalised and precarious position with regard to their future employment security and income, and this in turn poses serious social, economic and political questions concerning the way in which creativity and culture, and those who generate it, can be sustained.
As a consequence, in an effort to integrate current creative industry research approaches more effectively, this study connects the social network and creative labour research streams, and examines the impact of creative workers’ organisational business acumen, and social network structure on the labour outcomes – including exploitation, labour precarity and the earnings satisfaction, they experience.

1.3 Organisational Business Acumen and Creative Workers

Creative workers are the units of labour that make up the supply chain of the creative industries (Huws, 2006). The creative industries has a predominance of freelance and subcontracting employment structures and, as such, creative workers are typically conceptualised as microfirms, small businesses and enterprises (comprised of one, or a small handful of employees), and/or entrepreneurs (Cunningham, 2005; Parkman, Holloway, & Sebastiao, 2012). In their business roles, creative workers have also been labelled as ‘accidental entrepreneurs’ (Coulson, 2012, p. 251). This is because they typically engage in business management activities in order to comply with the employment structures that are forced upon them (De Peuter, 2011; Poettschacher, 2010). Compliance with these structures is typically conducted with reluctance by creative workers, as it is seen to detract from their creative pursuits (Caves, 2000; Coulson, 2012).

In a review of more than three hundred European creative enterprises, Crombie and Hagoort (2010) found that people operating firms within the creative sector generally lacked basic business skills, and this inhibited their ability to generate market returns. Likewise, in a census of Australian performing arts workers, Throsby and Zednik
(2010) found that the majority of performing artists self-reported as having either low or average levels of business acumen. These authors suggest that this deficiency impacts on the ability of studied artists to ‘organise and manage work-related issues’ (Throsby & Zednik, 2010, p. 10).

Crombie and Hagoort (2010) indicate that the business acumen required by creative enterprises to exploit market opportunities encompass effective management skills, financial acumen, administrative ability (procedural competency), timeliness and professionalism. Organisational business acumen is defined in this thesis as:

A specific skill set encompassing general business administration, financial and communication management skills, possessed by creative workers and embedded within creative organisations, that enables market entry for creative products and services.

Adapted from Crombie and Hagoort (2010, p. 12).

Creative industries policies increasingly emphasise neo-liberal economic interpretations concerning the production of creative material (O'Connor, 2009). Within this climate, organisational business acumen appears to be an increasingly important resource that creative workers require in order to effectively leverage the marketplace. To date, however, there is a lack of empirical conclusions concerning the impact of organisational business acumen on the labour outcomes of creative workers. In order to resolve this knowledge gap, this research enquiry is guided by the following primary research question:

PRQ1: What is the impact of organisational business acumen on the labour outcomes of creative workers?
Organisational business acumen for creative workers is likely to be generative, and develop as a result of their experiences and engagement with their social networks (Rae, 2004). Such engagement is likely to impact on the labour opportunities afforded to creative workers.

1.4 Social Network Structure and Creative Workers

A network can be conceptualised as ‘a set of actors connected by a set of ties’ (Borgatti & Foster, 2003, p. 992). In social networks, actors are people and ties are relationships (such as friendships, family links and professional networks). Certain social network structures have the potential to enhance the outcomes of network actors (Gulati, Lavie, & Madhavan, 2011). This occurs as a result of access, generated through social networks, to diverse sources of information and resources (Gulati et al., 2011). In the context of the creative industries, the social networks possessed by creative workers appear to impact on their access to employment opportunities (Belussi & Sedita, 2008). This study seeks to test empirically the impact of creative workers’ social networks structure on the labour outcomes they experience. As a result, the thesis poses a second primary research question:

PRQ2: What is the impact of social network structure on the labour outcomes of creative workers?

In management research, there are very few studies that examine the impact of specific network structures on performance outcomes for firms and actors. Two notable exceptions include the work of Giuliani (2013), who compares the impact of industry clustering and non-local networks on the performance of Italian wine manufacturers, and the work of Yang and Liu (2012), who examine the impact of structural holes and network size for Taiwanese glass manufacturing firms. These authors adopt a quantitative lens to analyse survey data concerning social network
structure and firm performance. By adopting statistical reasoning, a comparison of different social network structures on firm performance can be established.

This study builds on the work of Yang and Liu (2012) and Giuliani (2013) to develop measures, catered specifically for the context of the creative industries, to measure the impact of network size, non-local networks, structural hole and cluster engagement on the labour outcomes of creative workers. Through statistical analysis, the impact of these individual social network structures can be compared, to determine which structures are more beneficial in generating positive labour outcomes. Thus, the study is guided by the following secondary research question:

SRQ1: Which network structures are more significant for the labour outcomes experienced by creative workers?

Notwithstanding the direct impact on performance outcomes generated by a creative worker’s social network structures, creative industries research adopting the lens of entrepreneurial learning indicates that a complex relationship exists between a creative worker’s business skill development (organisational business acumen in this thesis) and their social network engagement (Rae, 2004). Under this frame, Rae (2004) proposes an iterative process whereby creative workers’ business skills help them to develop their social networks, and similarly their social networks help them to develop their business skills. Both of these factors combine (co-vary) to generate business outcomes for creative entrepreneurs (Rae, 2004). This co-varied, indirect model contrasts current empirical research from the field of entrepreneurial networks, which typically proposes that social networks acts as a mediator between business
input factors, and business output factors (Boso, Story, & Cadogan, 2013; Yang & Liu, 2012).

This thesis aims to determine whether the proposition of Rae (2004) possesses empirical support. This is achieved by examining the dual-indirect effect created by organisational business acumen and social network structure, for the respective direct relationships on labour outcomes for creative workers using both quantitative and qualitative reasoning. Thus, a final secondary research question is posed:

SRQ2: To what extent does the social network structure of a creative worker, and their organisational business acumen, combine to impact on their labour outcomes?

1.5 Labour Outcomes

1.5.1 Labour Precarity

The specific labour outcomes examined in this study are labour precarity, exploitation and the earnings satisfaction of creative workers. Labour precarity comprises a ‘non-continuity of employment, lack of employment protections and exclusion from standard employment benefits’ (Burgess & Campbell, 1998, p. 7). Within the creative industries, workers experience precarity as a result of taking on the business risks that would otherwise be assumed by an employer. This situation requires creative workers to be responsible for ‘their own budgeting, taxes, pensions, insurance, training and equipment’ (Davies & Sigthorsson, 2013, p. 35). Within the creative industries labour precarity also encompasses situations whereby creative workers are constantly
seeking new work, as creative occupations are seasonal or temporary, and job security is poor (Hesmondhalgh & Baker, 2010).

1.5.2 Exploitation

Hesmondhalgh and Baker (2010) indicate that creative workers experience poor and exploitative labour conditions. Building from the analysis of Hesmondhalgh and Baker (2010) this thesis defines exploitation as:

The dissatisfaction experienced by creative workers that results from being required to complete work under poor labour conditions including; long hours, infrequent breaks and poor remuneration.

Hesmondhalgh and Baker (2010) and De Peuter (2011) link labour precarity with exploitation. These authors note that the insecure labour structures associated with the creative industries requires creative workers to undertake (and in some instances volunteer to undertake) extensive work, of which aspects may not receive remuneration, in order to maintain consistent employment. As a result creative workers develop a deep dissatisfaction concerning the conditions under which they conduct work and, as a result, become stressed (Hesmondhalgh & Baker, 2010).

1.5.3 Earnings Satisfaction

Earnings satisfaction is the final factor comprising the creative labour outcomes explored within this study. Earnings satisfaction comprises the level of contentment that a creative worker has for the income they receive. Research indicates that the earnings satisfaction of creative workers is generally low (Throsby & Zednik, 2010; Caves, 2000). To this end Throsby and Zednik (2010) indicate that, on average,
Australian performing artists earn twenty per cent less than blue-collar workers, and roughly half of what professionals in other sectors earn.

One of the factors attributed to the low levels of earnings satisfaction for creative workers concerns the lack of permanent tenure or long-term salary positions. As a result of a lack of regular employment options, creative workers are constantly seeking ways to generate a sustainable and regular income, and often undertake additional work in other sectors to compensate for their lack of income from creative work (Belussi & Sedita, 2008; Hesmondhalgh & Baker, 2010; Throsby & Zednik, 2010). Furthermore, the value (financial or otherwise) ascribed to creative products is highly ambiguous (Bourdieu, 1983; Caves, 2000). Thus, it is difficult to predict the financial returns of a creative product or service prior to its delivery, and unanticipated returns can further diminish the earnings satisfaction of creative workers.

1.6 Theoretical Lens

The theoretical foundation of this thesis uses a combination of the resource-based view of the firm, as well as Bourdieu’s (1983, 1986) ‘forms of capital’ and the ‘field of cultural production’ theories. When combined, these theories provide a robust position from which to examine the impact of organisational business acumen and social network structure on the labour outcomes of creative workers. Under the resource-based view of the firm perspectives of Peteraf (1993) and Lavie (2006), organisational business acumen and social network structure can be conceptualised as heterogeneous resources, possessed in degrees by creative workers. These resources
have the ability to enhance the productive capacities of creative workers, and
distinguish them from others within a competitive field. In turn, these resources
generate capital flows that contribute to the sustainable competitive advantage of
creative workers. Labour outcomes form one tangible measure of the degree to which
a creative worker generates a sustainable competitive advantage.

In addition to the resource-based view of the firm, this study applies Bourdieu’s
Bourdieu’s (1983, 1985) ‘field of cultural production’ theory indicates that people
operating in creative and cultural fields experience non-traditional market
competition, which invariably generates poor labour outcomes.

Bourdieu (1983) argues that competition exists in all fields. In fields that function
according to a traditional market logic, competition encourages producers to attain
market outcomes. The attainment of such outcomes is achieved through the
generation of products that are broadly accessible to a large audience. Bourdieu
(1983, p. 47) terms this kind of (market) production the ‘large-scale mode.’ Within
the cultural field, competition encourages producers to generate products of
significant intellectual and artistic value (Bourdieu, 1983, 1985). Such products are
not typically broadly accessible by a mass market, and hence they do not generate
market, nor labour, outcomes. Bourdieu (1983, p. 47) terms this kind of (intellectually
consecrated) production the ‘restricted mode.’ Cultural producers who seek to
generate products within the mode of ‘restricted production’ experience poor labour
outcomes, and are typically resigned to a life of poverty.
While a creative worker operates within a ‘restricted’ or ‘large-scale mode’ of production, an additional consideration that determines the degree to which they realize success within a field concerns the capital they possess (Bourdieu, 1986). Social capital and cultural capital are two forms of significant capital that facilitates career success for creative workers (Bourdieu, 1986; Throsby, 1999). Viewed through the lens of Bourdieu’s (1986) ‘forms of capital’ theory, organisational business acumen forms a tangible representation of an aspect of a creative workers’ cultural capital, with significant potential to enhance labour outcomes within the field of large-scale production. Furthermore, social network structure forms one measurable aspect of a person’s social capital, which is representative of the amount of people (with whom they are connected to) they can effectively mobilize to achieve a desired outcome (Bourdieu, 1986).

Through this composite theoretical approach, organisational business acumen and social network structure are simultaneously conceptualised as resources, as well as tangible components comprising creative workers’ cultural and social capital. In this way, Bourdieu’s (1983, 1986) ‘forms of capital’ and ‘field of cultural production’ theories are useful in explaining why, in particular, organisational business acumen has come to the fore as a central form of cultural capital required for creative workers to achieve positive labour outcomes in the market-oriented creative industries. At the same time, under the resource-based view, organisational business acumen and social network structure form resources that can enhance production and firm heterogeneity, enhancing their competitive position, thereby generating positive labour outcomes.
1.7 Research Design

The research design of this study is comprised of three phases. The first phase encompassed a pilot investigation and used social network analysis to examine the impact of elements of creative workers’ social network structure on their work activity levels, within a creative cluster, over a twelve-month period. However, the limitations of the approach, concerning the small sample size, and the use of a rudimentary measure for labour outcomes, warranted a larger and more comprehensive study to establish generalisable conclusions.

The second and third phase of the research design utilised an explanatory-mixed methods approach based on the model of Creswell and Plano Clark (2007). The explanatory design comprised an initial, large quantitative study, followed by a smaller and selected qualitative study. In line with the explanatory design, the qualitative phase was used to explain the results found in the quantitative phase (Creswell & Plano Clark, 2007).

The quantitative component of the explanatory design, applied to this study, utilised a set of custom-built scales to measure organisational business acumen, social network structure and labour outcomes of a random sample of 271 creative workers operating in Australia. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) was used to establish the validity and reliability of the scales for use in statistical analysis. Once the scales had been validated, structural equation modelling
(SEM) was employed to examine causality present between constructs. The quantitative results are presented in Chapter Four of this thesis.

The qualitative phase of this study formed the second component of the explanatory design model. It incorporated analysis from semi-structured interviews conducted with fifteen creative workers. In this phase, respondents reflected on the ways in which their social network structure and organisational business acumen impacted on the labour outcomes they experienced. The qualitative analysis examined convergence between the quantitative and qualitative data and the results are presented in Chapter Five.

1.8 Significance of the Research

This study is novel and represents one of a very small number of studies that incorporates both quantitative and qualitative reasoning to examine the labour dynamics of the creative industries. To this end, the findings of this study build on existing creative industries research by providing a causal understanding concerning the role of organisational business acumen and social network structure for improving the labour outcomes of creative workers. As a consequence, the results pose significant implications for current policy and practice concerning the resources and forms of capital necessary to enhance the labour outcomes of creative workers. Such results are also important for improving the viability of the sector as a whole through interventions at the policy, and individual, level.
From a theoretical position, the research suggests that organisational business acumen comprehensively benefits creative workers, and may go some way to resolving internal tensions to choose either to operate within the ‘large-scale ‘restricted’ mode of production. In addition, the study identifies that social network structure and organisational business acumen have a positive direct effect on each other, and indirectly impact on the others’ relationship with labour outcomes. This finding provides both empirical support, as well as a conceptual extension, for the entrepreneurial learning proposition of Rae (2004). The study also presents a number of implications concerning the treatment of social networks structures and organisational business acumen for future research.

The thesis contributes to existing research methods by providing a validated mechanism to investigate the impact of social network structures on performance variables. To this end, the study validates four psychometric scales that measure creative workers’ network size, non-local networks, cluster engagement and their structural hole position. The scales provide a mechanism to undertake multivariate analysis for the purposes of examining the consequences of possessing particular network structures. This complements existing social network analysis methods, which can be restrictive with respect to the transferability of results (Ferligoj & Hlebec, 1999; Lee, 2010).

1.8 Limitations

This study must be viewed in relation to other studies that explore the labour and network dynamics of the creative industries, of which there is an overwhelming
predominance of qualitative studies. In this regard, while the quantitative approach builds from previous qualitative work, the scales employed in the statistical analysis are novel and warrant further development. The exploratory and confirmatory factor analysis processes undertaken in this thesis provide a strong platform from which to initiate such development.

A second limitation concerns the use of self-report surveys for the pilot (social network mapping study) and the quantitative study. Such surveys are open to bias from respondents. To overcome this limitation, the qualitative study uses interview data to triangulate the quantitative findings. An additional limitation of the study concerns its sampling frame and sample size used in the quantitative study. While the quantitative study adopts a random sample to undertake statistical analysis, the method requires further replication to establish definitive conclusions that are applicable to larger contexts. One of the reasons for this is that the exact population of creative workers in the country where this study took place (Australia) is not accurately known (Cunningham, Higgs, Freebody, & Anderson, 2010). As a result the sampling power of the quantitative study cannot be adequately established. To this end, the qualitative phase of the research was undertaken to support and explain the quantitative findings.

An additional limitation concerns the conceptualisation of organisational business acumen used in this thesis. Organisational business acumen is simultaneously conceptualised as a firm resource, and an individual resource, and a blurring of individual- and firm-levels of analysis can be perceived. Similar blurring is
consistently found in creative industries research as creative workers are often conceptualised as both businesses/enterprises, as well as individuals (Coulson, 2012; Poettshacher, 2010). In future, research needs to begin to distinguish between these levels of analysis. However, in order to build from previous approaches, the limitation is retained in this study.

1.9 Chapter Conclusion

This study examines the impact of organisational business acumen and social network structure on the labour outcomes experienced by creative workers. In doing so, the study connects two distinct streams of creative industries research enquiry, namely, the ‘social network markets’ field of enquiry, with that of ‘creative labour conditions’. The thesis merges Bourdieu’s theories concerning the role of cultural and social capital for the generation of value within the ‘field of cultural production’, with the resource-based view of the firm, to provide a robust foundation from which to undertake the analysis. The study presents results from a pilot investigation, followed by an expansive quantitative-qualitative study that presents evidence concerning the impact of organisational business acumen and social network structure for the labour outcomes of creative workers.

Chapter Two of this study investigates the theoretical assumptions that underpin the resource-based view of the firm. In addition the chapter examines Bourdieu’s theories concerning the ‘field of cultural production’ and ‘forms of capital’. The chapter concludes with an examination the creative industries, and outlines the conceptual models tested through this thesis. Chapter Three presents the methodology
underpinning the study, and concludes with a supplementary section outlining the results from the pilot investigation. Chapter Four presents the quantitative analysis, followed by the qualitative analysis presented in Chapter Five. The Sixth Chapter discusses the implications of the research. This is followed by the Seventh Chapter, which concludes the study.
Chapter Two – Theoretical and Conceptual Framework

2.1 Introduction

The previous chapter introduced the research questions that guide the enquiry of this study. The aim of this chapter is to provide a theoretical and conceptual foundation that explains the mechanisms by which organisational business acumen and social network structure impact on the labour outcomes of creative workers. To achieve this, the chapter begins by examining a combination of theories including the resource-based view of the firm, and Bourdieu’s theories concerning the ‘forms of capital’ and the ‘field of cultural production’ are examined. The chapter then moves to examine the rise of the creative industries, noting the labour dynamics of the sector. The chapter concludes by drawing hypotheses from the literature to model that impact of organisational business acumen and social network structure on the labour outcomes of creative workers.

2.2 Resource-Based View: Developments and Application

The resource-based view of the firm provides a theoretical foundation to understand the ways in which resources, held by firms, have the ability to generate a sustainable competitive advantage; represented in this study as advantageous labour outcomes for creative workers. However, the resource-based view in isolation cannot fully account for some of the more complex dynamics present within the field of creative and cultural production. Furthermore, the theory does not justify, in isolation, the way in
which organisational business acumen and social network structures, in contrast to other potential resources that creative workers might possess (such as artistic talent for example), are particularly important in the current socio-economic climate of the creative industries.

To understand more comprehensively the theoretical dynamics that impact on the labour outcomes of creative workers, and the role of organisational business acumen and social network structure in facilitating this, a combination of the resource-based view theory with the ‘field of cultural production’ and ‘forms of capital’ theories of Bourdieu (1983, 1985, 1986) is applied in this study. In combination, these theories provide a foundation for understanding how the supply of resources (organisational business acumen and social network structure) facilitates competitive advantage in the form of labour outcomes for creative workers, as well as how organisational business acumen and social network structure, representing aspects of a creative worker’s cultural and social capital, can be converted into labour outcomes in the contemporary field of cultural production (i.e. the creative industries). The following table summarises the basic assumptions underpinning each of these theories, in addition to how these theories have been applied to this study (table 1).
<table>
<thead>
<tr>
<th>Resource-based view of the firm theory</th>
<th>The competitive advantage of interconnected firms theory</th>
<th>Field of cultural production theory</th>
<th>Forms of capital theory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seminal Author(s)</strong></td>
<td>(Barney, 1991; Peteraf, 1993)</td>
<td>(Gulati et al., 2011; Lavie, 2006)</td>
<td>(Bourdieu, 1983, 1985)</td>
</tr>
<tr>
<td><strong>Theoretical Condition</strong></td>
<td>Firms possess resources</td>
<td>The network of relationships possessed by a firm can be conceptualised as a firm resource. The social network structure of a firm is a resource (Gulati et al., 2011).</td>
<td>Social capital and cultural capital are two forms of capital possessed by people that contribute to their success within any given field.</td>
</tr>
<tr>
<td><strong>Theoretical Outcome</strong></td>
<td>Resources that are rare, valuable, immobile and inimitable have the potential to enhance the productive capacity of a firm and generate a sustainable competitive advantage</td>
<td>Network structures facilitate access to diverse sources of information and resources for network actors, and have the potential to generate a competitive advantage (Gulati et al., 2011).</td>
<td>Those that operate within the mode of restricted production will experience poor labour outcomes, as their products seek to be consecrated intellectually.</td>
</tr>
<tr>
<td><strong>Application to thesis</strong></td>
<td>A creative worker’s organisational business acumen and social network structure are firm resources that have the potential to enhance the labour outcomes they experience</td>
<td>Creative industries policies encourage creative workers to adopt a market (large-scale) mode or production. Organisational business acumen appears as a significant form of cultural capital that can advance a creative worker’s field position within the market oriented creative industries. Social network structure represents one aspect of creative workers’ social capital, and has the potential to enhance their field position.</td>
<td></td>
</tr>
</tbody>
</table>
This chapter proceeds with an analysis of the resource-based view of the firm applied to context of creative workers and their labour outcomes. Following this section, a discussion concerning the theoretical roles of organisational business acumen and social network structure as firm resources, is provided. A theoretical appraisal concerning the ways in which creative workers generate economic value and labour outcomes within the creative and cultural field is discussed towards the end of the chapter. Through an historical analysis of the economic dynamics of creative and cultural fields, justification is given as to why organisational business acumen, in particular, has come to the fore as a requisite form of cultural capital that creative workers can possess to enhance their labour outcomes.

The resource-based view of the firm came to academic attention through a special forum in the Journal of Management in 1991 edited by Barney. However, the conceptualisation of the firm as a collection of heterogeneous resources was originally developed through the work of Wernerfelt (1984) and Penrose (1959). At its core, the resource-based view of the firm theory promotes a shift in perspective from a ‘product-focus’, which can be largely homogenous amongst competing firms, to a ‘resource-focus’, which are generally heterogeneous (i.e. the resources are significantly different across different organisations) (Wernerfelt, 1995). The central tenant of the resource-based view of the firm is that the resources, possessed by a firm, have the potential to create a sustainable, competitive advantage, on the condition that they are rare, valuable, inimitable and not substitutable (Barney, 1991). In essence, resources that are unique to one firm provide it with a platform from which to distinguish itself from its competition, as well as an aid to enhance production or distribution (Peteraf, 1993). The resource-based view is a strategic
management theory. However, as resources can include firm knowledge, human resources, as well as marketing, geographic, financial, economic factors etc., the theory has wide application.

Peteraf (1993) reconceptualised Barney’s (1991) rare, valuable, inimitable and non—substitutional criterion by offering an economic perspective of resource heterogeneity. Peteraf’s (1993) conceptualisation is analysed here as her position was integrated into the later theory development of Lavie (2006), who posited that a firm’s networks create resources that facilitate rent generation. Through her re-conceptualisation, Peteraf (1993) re-categorised the valuable, rare, imperfect imitability and substitutability assessment of firm resources under the banners of resource heterogeneity (Ricardian and monopoly rents), ex post limits, imperfect resource mobility and ex ante limits and suggested that these resources form rents that contribute to the sustainable competitive advantage of a firm. Fundamental to Peteraf’s (1993) perspective is the notion that sustained competitive advantage is determined by the ability of a firm to remain heterogeneous, i.e. a firm’s collection of resources must be, to some extent, distinguishable and superior from the resources of other firms within a marketplace in order for it to accumulate resource rents.

A firm generates a Ricardian rent when they manufacture products, or have naturally occurring, superior productive factors, that other firms do not (Peteraf, 1993). Firms with superior production resources can hence produce goods at a ‘lower average cost than other firms’ (Peteraf, 1993, p. 180). This enhances their heterogeneity (i.e. the extent to which they are distinguishable from firms within a marketplace). To apply this to the context of creative production, a creative worker with specific resources
that facilitate the generation of creative goods at a cost that is less than its competitors will generate a Ricardian rent. Furthermore, if a creative worker has a resource that enhances the production of creative goods, they also generate a Ricardian rent. In this way, organisational business acumen is a resource that generates a Ricardian rent (this is discussed further below). As another very general example of Ricardian rent generation in the creative industries, a musician with free access to high-quality recording equipment, as well as knowledge to operate such equipment, has the ability to produce music at a rate that is cheaper than other musicians who need to contract an external studio to generate recordings. As a result, the musician has the potential to generate a Ricardian rent.

Monopoly rents result from a deliberate restriction of output rather than a scarcity of resource supply (Peteraf, 1993). Thus, when a firm’s resource profile facilitates the creation of products that are scarce in a market place (scarce in that no other competing firms are producing these), rent is generated and the firms’ heterogeneity is enhanced. Applied to the context of an enterprise, when only one firm can generate a specific product that has demand, they generate a monopoly rent.

Monopoly rents that occur within the field of creative and cultural production have been discussed by theorists such as Bourdieu (1983). Bourdieu (1983) claimed that cultural products can generate symbolic value amongst audiences. As a result, their producers (i.e. creative workers) generate a reputation. The creative worker’s reputation (celebrity power) represents a monopoly rent, as it is assigned to only one cultural producer, thereby distinguishing that producer from others in the field.
Bourdieu (1983) argued that, as audience tastes change over time, this monopoly rent may fade away, and occasionally re-emerge (even after the lifespan of the producer).

A firm may also possess resources that limit their competition, such resources are termed ex post limits (Peteraf, 1993). In this way, while a firm’s superior resources and capabilities enable value creation, other kinds of resources help to erect barriers to competition. Thus, ex post limits ensure that monopoly and Ricardian rents are maintained over time. This occurs when there is an organisational or legal framework that ensures that resources remain the property of a focal firm. An example of this is production patenting, whereby competing firms are legally restricted in the degree to which they can wholly replicate competitor’s property rights in products and production capital. In the creative subfield of music, rents generated through ex post limits have been diminished significantly through copyright infringements such as the performance of illegally downloaded music by disk jockeys. However, many countries also have performance royalty collection agencies (such as the Australasian Performing Right Association (APRA) in Australia and the South Pacific) that recompense musicians when their music is performed by disk jockeys or on the radio. Thus, through the possession of the firm resource of APRA membership, Australian musicians generate an ex post rent when other people play their music in a certified venue.

Imperfect mobility is another mechanism by which firms generate competitive advantage (Peteraf, 1993). Imperfect mobility occurs when a firm’s resource profile means that their products cannot efficiently be traded by competing firms. This may result because of particular Ricardian rents that cannot be replicated in other firms.
An application of this concept to the creative industries might include a high-profile orchestra’s restrictive contract with one particular conductor. The contract binds the conductor to the orchestra, and the contract restriction means that the two cannot operate separately in the production of music.

Ex ante limits to competition is the final condition proposed by Peteraf (1993) that can lead to a sustainable competitive advantage through resource heterogeneity. Peteraf (1993) indicated that this condition exists when a firm enters a space where there is limited competition already present. As an example of ex ante limits to competition applied to the creative industries, an artist who moves to a geographical location where there is a) demand, but b) no other artists, possesses an ex ante limit to competition.

The rent generation conceptualisation of the resource-based view of Peteraf (1993) provides a theoretical framework to understand the way in which superior resources bundle together to enhance productive capacities, limit competition and firm heterogeneity. In this way, the theory is useful in providing a theoretical foundation for understanding the way in which resources held by a creative worker, including their organisational business acumen and social network structure, impact on their market and labour outcomes. This is discussed further in the following sections.

2.2.1 Organisational Business Acumen as a Firm Resource

The study focuses on two specific resources possessed by creative workers: a) organisational business acumen, and b) social network structure. Before turning to a
theoretical appraisal of social network structure as a firm resource, the theoretical dimension of organisational business acumen as a firm resource is explored here.

Organisational business acumen is an internal resource that has the potential to generate Ricardian rents for creative workers. As defined in the introduction of this thesis, organisational business acumen comprises business administration and management skills that enhance market entry for creative products by creative workers. Creative workers who possess high levels of organisational business acumen have an improved ability to administer and manage their creative business activities in a manner that is more effective than those with low levels (Crombie & Hagoort, 2010). In this way, organisational business acumen can be viewed as providing superior productive capacity for creative workers. Furthermore, in a competitive field where other creative workers (potential competitors) have relatively low levels of organisational business acumen, a creative worker with high levels of business acumen is distinguished from others, and this is likely to enhance their competitive advantage.

It appears obvious form a market and strategic management logic that creative workers, as firms, require organisational business acumen as a foundational resource in order to operate effectively in a market place. However, as will be discussed later in this chapter, the acquisition of organisational business acumen has not historically been of central importance for people working in cultural and creative fields.
2.2.2 Social Network Structures as Firm Resources

The social networks possessed by members in a firm can also be conceptualised as a resource with the potential to generate a competitive advantage (Gulati, 1998, 1999). Lavie (2006) merged social network theory with the resource-based view to develop the ‘resource-based view of the interconnected firm’. Before investigating Lavie’s (2006) position further, the following section provides a brief outline to social network theory.

Network theories seek to understand the role of networks in cause and effect relationships (Borgatti & Halgin, 2011). Borgatti and Halgin (2011, p. 1169) offer the following definition of networks:

A network consists of a set of actors or nodes along with a set of ties of a specified type (such as friendship) that link them.

Social network theory boasts nearly a century of evolution, and was developed originally through the fields of mathematics and sociology. The theory entered management studies through the work of Harrary (1959), who applied graph theory (an early component of social network theory) to understand communication flows within organisations. However, one of the most penetrating and popular studies using social network theory to date was completed by Granovetter (1973). The study, entitled ‘the Strength of Weak Ties’ compared the impact of actors’ strong and weak network ties on outcomes (in this case, outcomes were represented by job opportunities).

Within the last thirty years, in part as a result of the novel assertions made through the study by Granovetter (1973), social network theory gained widespread attention
within management studies. As a response, the theory has undergone significant advances in methodology and application (Parkhe, Wasserman, & Ralston, 2006). Consequently, network research in the field of management studies has diffused across a number of different subfields: such as policy networks in public management research, interorganisational networks in the fields of business ethics and organisational studies, and entrepreneurial networks in entrepreneurship research.

In an effort to connect the theoretical developments underpinning social network research and research conducted in the field of management studies, Gulati (1998, 1999) conceptualised the networks that ensconce a firm as a resource. Gulati (1999, p. 399) noted that:

Network resources inhere not so much within the firm, but in the interfirm networks in which firms are located… They are distinct from the resources that reside securely within its boundaries and are the source of valuable information for firms.

Before this time the resource-based view of the firm was singularly focussed on firms’ internal resources, however, the advent of Gulati’s (1998, 1999) conceptualisation meant that an extension of what constitutes a resource – to include not just internal, but also external resources – was achieved.

Drawing heavily from Gulati’s (1998, 1999) research, Lavie (2006, pp. 642) suggested that:

The resource-based position proclaimed by Barney (1991) and Wernerfelt (1984) can not explain how firms gain competitive advantage in environments involving multiple collaborative relationships between firms.

Hence, Lavie (2006) posited the ‘competitive advantage of interconnected firm’
perspective, thereby extending the resource-based view to not only include internal resources occurring within the firm, but external and shared resources (that occur through networks).

Network resources are defined as:

External resources embedded in the firm’s alliance network that provide strategic opportunities and affect firm behavior and value.  
(Lavie, 2006, pp. 638-639)

Building from Peteraf (1993), Lavie (2006) re-conceptualised the types of rents created by firm resources, as; internal rents, appropriated relational rents, inbound spillover rents, and outbound spillover rents. Through this, Lavie (2006) provided a theoretical account by which a firm’s network resources had the ability to generate competitive advantage.

According to Lavie’s (2006) conceptualisation, internal rents comprise the Ricardian and monopoly rents (as listed above), fixed in time, and derived from the internal resources of a focal firm. Appropriate relational rents occur as a benefit common to alliance partners that manifest through combining, exchanging and co-developing idiosyncratic resources. These rents are extracted from relational-specific assets, knowledge-sharing, dovetailing resources, and through effective co-firm governance arrangements (Dyer & Singh, 1998; Lavie, 2006). As an example of how this concept may be applied to firms within the creative industries, an appropriate relational rent may occur when a musician and recording studio (two separate businesses) develop a relationship over time through trade. As both progress their craft, and engage in trade (i.e. the musician records at the studio several times over the course of several years),
their respective industry and technical knowledge (i.e. resources) are exchanged, which may prove valuable to both parties. For example, CDs sold by the musician may bear the logo of the studio, thereby providing a source of marketing material for the latter.

Inbound spillover rents occur unexpectedly, and are exclusively derived from network resources (Lavie, 2006). A hypothetical application of inbound spillover rents to the context of the creative industries, may include, in the music segment for instance, a performance endorsement by one music group, for another, to a music venue. In such an instance, the second group receives an unexpected network resource (recommendation). For a firm to receive an inbound spillover rent, it must have a strong absorptive capacity and a way to assess the strategic value of the inbound rent (Lavie, 2006). This is enhanced also by a firm’s opportunistic behaviour. To apply this to the given example above, in order to make full use of the potential benefits, and to weigh up potential costs, associated with the network resource (i.e. the other band’s recommendation), the music group would need to assess quickly (absorptive capacity) if performing on the same evening as the other group would complement or diminish their competitive standing.

Finally, an outbound spillover rent is an unintended leakage of a focal firms’ resources to its alliance partners (Lavie, 2006). In essence, an outbound spillover rent is the inverse of an inbound one whereupon a firm has to forgo, pass-over or loses a rent to another firm within its network. This may occur, given the above example, when one firm cannot perform on one night, and instead offer the performance to another competitor within their network.
A more recent development extending the ‘resource-based view of the interconnected firm’ of Lavie (2006), is the proposition that social network structure is similarly a firm resource (Gulati et al., 2011). Social network structure has the ability to enhance or diminish the exchange of all other external resources for focal firms (Gulati et al., 2011). This is because the structure of a network forms a resource that can aid in the diffusion and receipt of other network resources (such as knowledge and opportunities) (Gulati et al., 2011; Gulati, Nohria, & Zaheer, 2000).

2.2.3 Social Network Structure as a Firm Resource

Particular network structures have been shown to enhance the diffusion of resources through a network, such as when actors bridge two networks (Burt, 1992), or the strength of ties between two actors (Granovetter, 1973). Hence, social network structures can be conceptualised as a firm resource, with the potential to generate a competitive advantage. However, Lee (2011) notes that, while it is agreed that structural elements of a firm’s network impact on its economic performance, there is a lack of consensus as to which structures have more impact than others.

Previous research has identified that certain social networks structures have the potential to yield particular theoretical outcomes (Kilduff & Tsai, 2003). A summary of notable network structures identified as having an impact on the flow of network resources is provided in the following table (Table 2.2).

Table 2.2: The theorised impact of different network structures
<table>
<thead>
<tr>
<th>Network Structure</th>
<th>Description</th>
<th>Associated with the work of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyad</td>
<td>Two actors connected by a tie</td>
<td></td>
</tr>
<tr>
<td>Strong and weak ties</td>
<td>Strong ties are those social relationships that are frequent, long-lasting and affect-laden, whereas weak ties are infrequent and distant</td>
<td>(Granovetter, 1973, 1983)</td>
</tr>
<tr>
<td>Cliques</td>
<td>A group in which all actors have direct ties with all other actors in the group, and there is no outside-the-group actor to whom all group members have a tie</td>
<td></td>
</tr>
<tr>
<td>Structural holes</td>
<td>A gap between two actors or two clusters of actors that can be spanned by another actor who may, thereby, become the only member to belong to both A and B, or who serves as the only intermediary between A and B</td>
<td>(Burt, 1992)</td>
</tr>
<tr>
<td>Embeddedness</td>
<td>The overlap between social ties and economic ties. Actors are also embedded to the extent that all or most of their social ties are within a community that has few ties outside of the community.</td>
<td>(Granovetter, 1985; Uzzi, 1996)</td>
</tr>
<tr>
<td>Centrality</td>
<td>The extent to which an actor occupies a central position in the network by having many ties to other actors, being able to reach many other actors and/or having connection to centrally located actors</td>
<td>(Borgatti &amp; Foster, 2003)</td>
</tr>
<tr>
<td>Density</td>
<td>The number of ties in the network divided by the maximum number of ties that are possible</td>
<td>(Borgatti &amp; Foster, 2003)</td>
</tr>
<tr>
<td>Network Size</td>
<td>The number of direct links between a focal actor and other actors</td>
<td>(Hoang &amp; Antoncic, 2003)</td>
</tr>
<tr>
<td>Non-local networks</td>
<td>Non-local networks are the professional relationships that occur externally to the immediate geographical region of the focal actor</td>
<td>(Bathelt, Malmberg, &amp; Maskell, 2004)</td>
</tr>
<tr>
<td>(external openness)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cluster engagement</td>
<td>The professional relationships that occur between geographically proximal competing and co-operating business within an industry and allied organisations</td>
<td>(Johannisson, Ramirez-Pasillas, &amp; Karlsson, 2002)</td>
</tr>
</tbody>
</table>

Adapted from Kilduff and Tsai (2003, pp. 132-136) and Hoang and Antoncic (2003, p. 171)

This study focuses specifically on the social network structures of: network size, non-local networks, structural holes and cluster engagement. There are two reasons why these structures are the focus of investigation. In the first instance, empirical research from the creative industries, as well as research from the field of entrepreneurial networks, indicates that the network structures of size, structural holes, non-local networks and cluster engagement, have an identified impact on the economic
outcomes of actors and firms within networks (Giuliani, 2013; Gulati et al., 2011). The second reason for focusing on these structures concerns the methodological design of this thesis, which utilizes multiple-question survey design (psychometrics) to approximate actors’ social network structure.

This ‘psychometric approximation method’ deviates from traditional social network analysis but has a number of advantages to it. A justification for employing this method, as well as the advantages and disadvantages of the approach, is discussed in the quantitative analysis chapter of this thesis (Chapter Four). However, the method is limited in its ability to derive data concerning microstructures of networks (such as strength of ties). As a result, the analysis of microstructures of networks has been omitted from the focal scope of analysis of this study.

The proceeding paragraphs provide a theoretical review concerning the nature and impact of the social network structures of network size, non-local networks, structural holes and cluster engagement. An empirical review of research that has used the ‘psychometric approximation method’ for analysing the impact of social network structures on firm outcomes is provided in later in this chapter.

**2.2.3.1 NETWORK SIZE AS A RESOURCE**

Network actors that possess more connections than others in a network are said to benefit as a result of having access to more potential resources (Bourdieu, 1986; Gulati et al., 2011). However, network size can vary significantly from one actor to another within a network. A recent development in network theory claims that some
synthetic (man-made) and naturally occurring networks are free of ‘scale’ (Barabasi, 2003). This means that links between network actors (known as ‘nodes’ in non-human networks) can span a seemingly infinite, and ever growing, amount of connections, with this ‘scale-free’ property appearing in networks such as the Internet, power grids, and the human brain. Within scale-free networks, there are generally many nodes that are highly connected to each other, and a (comparatively) small number of nodes that are significantly less connected. The Internet displays such properties, as ‘mega-sites’, such as Facebook and Google, connect vast amounts of WebPages to each other whereas, and other domains remain comparatively unconnected (Barabasi, 2003).

The scale free network conceptualisation of Barabasi (2003) provides a theoretical platform that explains the way in which some actors within social networks accumulate more connections, and as a result, they generate a perpetually expanding network. The initial dynamic that leads network actors to generate a large network is termed the fit get rich principle (Barabasi, 2003). Under this principle, network actors that possess qualities that are attractive to others (particularly in comparison to others within a field), begin to accumulate connections with other nodes around them. It is through this fit get rich mechanism that actors begin to accumulate connections.

An additional dynamic by which a fit actor generates further network expansion is termed the ‘rich get richer’ principle (Barabasi, 2003). Once a fit actor is rich with network connections, they also begin to generate even more connections as a result of their popularity. In social networks, this means that network actors who already have a large network of people to which they are connected will typically accumulate even more, simply as a result of their (enhanced level of) popularity.
At a surface level of analysis, an actor in a social network that possesses many network connections in turn has access to a larger range of network resources (Barabasi & Bonabeau, 2003; Gulati et al., 2011). However, network size in isolation does not necessarily enhance the usefulness or quality of network resources to a focal actor. Furthermore, tending to a large social network may occupy a significant investment of resources (such as time) for a focal actor, which has the potential to degrade productivity (Kadushin, 2004; Watson, 2007). In theory, the size of an actor’s network has the potential to impart benefits, such as an enhanced range of network resources, as well as some costs, such as the cost involved in maintaining and/or growing network membership.

2.2.3.2 NON-LOCAL NETWORKS AS A RESOURCE

Knowledge, delivered through a network, is not exclusively localised within an actor’s immediate geography (Bathelt et al., 2004; Gertler & Levitte, 2005). Instead, a network actor’s non-local networks form interregional, and global, linkages that provide them with access to network resources (knowledge and opportunities for example) from distant connections. From a theoretical standpoint, the network dynamics at play between a focal actor and their non-local networks, at least in part, pertain to the theory of small worlds. Small worlds theory, developed from the work of Milgram (1967), provides a theoretical explanation concerning the process by which resources, diseases, information, innovation etc., are transferred via paths of people that are connected through intersecting networks, over both local, and vast, geographies (Gladwell, 2000; Watts, 1999).
Two of the main network dynamics that exist in small worlds theory concern the clustering of localised networks, and the way in which these clusters generate network ‘bridges’ to other distant clusters (Robins, Pattison, & Woolcock, 2006; Watts, 1999). In small worlds, some network actors/nodes are highly connected (both locally and non-locally) (Watts, 1999), and others are not. Network actors who do not possess a large number of network connections, despite being connected to a highly connected actor, have a distant association to other (potentially non-local) actors through their connection to the highly connected actor. Hence, highly connected actors bridge structural holes between clusters of localised networks; and these bridges form the paths by which resources are diffused from one location to another (Watts, 1999). In addition, Gulati et al. (2011) indicate that the types of resources that a firm can access is enhanced through the ability of an actor’s network to accumulate distant and diverse connections. In this way, non-local network connections provide a focal actor with novel, alternate perspectives regarding modes and structures of operations (Gulati et al., 2011). Within the context of the creative industries, a creative worker’s non-local networks has the potential to provide them with knowledge and resources concerning better models of operations, as well as employment opportunities (such as collaborating on non-local, even international, projects).

2.2.3.3 STRUCTURAL HOLE AS A RESOURCE
An actor that bridges two or more otherwise disconnected nodes or network clusters is known as a structural hole (Burt, 1992). Network actors that occupy bridging positions have the ability to facilitate knowledge and relationship flows between different groups. Structural holes form the contact points by which network resources are exchanged between network clusters, that would otherwise be unconnected (Yang & Liu, 2012). Furthermore, actors and firms that occupy structural hole positions benefit from having ‘speedy access to diverse information’ (Ahuja, 2000, p. 451). Thus, network bridges allow for the diffusion of new ideas from one location to another which in turn has the potential to promote innovation (Ahuja, 2000).

2.2.3.4 Cluster engagement as a resource

Industry clusters exist when firms within a particular industry or supply chain, agglomerate in a geographically proximal area, and compete and collaborate with co-located firms (Baptista & Swann, 1998; Brown, Burgess, Festing, Royer, & Keast, 2010; Porter, 1998). Research examining the reasons why firms co-location, as well as the firm-level benefits that accrue as a result of co-location and collaboration, stem back over a century to the work of Marshall (1890). The concept of clustering gained renewed interest in the 1990s with the work of Porter (1990, 1998), who identified that clusters have the potential to contribute significantly to the economic profile of regions, at the same time as providing positive firm outcomes.

The central principle behind the concept of clusters is that proximal firms experience enhanced performance as a result of competing and collaborating with like firms
However, critics claim that the cluster concept is poorly developed in theory and method (Martin & Sunley, 2003).

Rather than being a model or theory to be rigorously tested and evaluated, the cluster idea has instead become accepted largely on faith as a valid and meaningful ‘way of thinking’ about the national economy, as a template or procedure with which to decompose the economy into distinct industrial-geographic groupings for the purposes of understanding and promoting competitiveness and innovation.

(Martin & Sunley, 2003, p. 9)

Despite such criticism, empirical research indicates that firms within industry clusters typically outperform those operating in isolation (OECD, 2007). Theories seeking to account for why this occurs, focus on the impact on regional branding that ensues through firm collocation (which enhances demand), as well as the generation of innovation, that results through localised firm collaboration and competition (Maskell, 2001; Porter, 2000). However, research also indicates that clustering can expose a firm to risks as clusters can enhance the likelihood of resource leakages (Andersson, Hansson, Schwaag Serger, & Sorvik, 2004).

By integrating social network theory with the resource-based view of the firm, Brown et al. (2010) have sought to provide a more robust theoretical understanding of the firm-level, network-level and region-level outcomes that are enabled through clustering. This perspective is analysed here as it provides a cluster-level conceptualisation of the resource-based view, and thus has congruence with the resource-based view of interconnected firm conceptualisation of Lavie (2006) adopted in this study.

Within industry clusters, there are a multitude of factors at play that can affect both cluster-level, and firm-level, outcomes (Brown et al., 2010). Firms that engage with
clusters experience an increase in the amount of network resources available to them (Brown et al., 2010). As a consequence, clusters provide additional value to firms, and can be reconceptualised as a ‘series of value adding webs around firms within a particular industry setting’ (Brown et al., 2007, p. 59). Such ‘value adding webs’ are localised networks that involve horizontal, vertical and lateral actors of a supply chain.

Horizontal actors comprise the production element of a supply chain pertaining to a particular industry (Brown et al., 2010). In the case of the creative industries, horizontal actors are musicians, actors, filmmakers, artists, web designers and fashion designers etc., as these people represent the core producers of creative goods. Vertical actors have the role of bringing products to market. In this role, vertical actors manage and distribute the goods that have been developed by horizontal actors (Brown et al., 2010). In the creative industries, vertical actors include firms, such as film and music distributors and fashion retailers, as well as art galleries. Vertical actors also have the task of refining products. Hence, in the creative industries, music and film studios can also be conceptualised as vertical actors. Finally, lateral actors comprise supporting institutions and organisations that facilitate trade links and regional development programs to enhance cluster performance (Brown et al., 2010). Government agencies, education providers, economic development organisations and business angel investors are examples of lateral actors that can exist within clusters.

A complex interplay of variables exists within clusters, and this complexity influences the way in which resources are exchanged between cluster members (Brown et al., 2010; Dyer & Singh, 1998). At the network level, effective governance, evidenced by
a firms’ ability to self-enforce and moderate relationships with other members, rather than through a third party, can enhance the absorption of network resources. Furthermore, knowledge-sharing infrastructure, such as cluster-level information systems (like cluster newsletters) and routines (such as meetings) can enhance tacit and component knowledge sharing (Brown et al., 2010). Restrictions need to be maintained however, in order to avoid free riding by network members. Free riding exists when a firm receives inbound network resources without reciprocating an outbound flow. Finally, firms need to have a mechanism to strategically assess whether inbound network resources are beneficial and complementary (Daugherty et al., 2006).

Network actors that engage more heavily with a cluster form linkages of collaboration with other cluster members and resources flow through these relationships as a result (Brown et al., 2010). Thus, the degree to which a clustered-firm engages with other horizontal, vertical and lateral actors may impact on the degree to which they can access inter-firm resources and enhance productivity and innovation, as well as receive spillovers (Brown et al., 2010).

Clustering can also enhance the degree to which a firm is embedded, and this may have negative consequences (Uzzi, 1997). Network embeddedness exists when an actor within a network is strongly tied to a group of actors that are also strongly connected to each other. This strong, group-bond creates benefits as well as costs (Granovetter, 1985; Uzzi, 1997). Embeddedness within clusters can create coordinative and integrative behaviour, as well as knowledge exchange, and this can facilitate economic outcomes (such as effective coordination between firms) (Uzzi,
1997). However, embeddedness can shield groups of firms from resources that are derived from parties who are external to the cluster, as well as facilitate redundant information streams (Rowley, Behrens, & Krackhardt, 2000).

In the context of the creative industries, creative workers who engage with clusters benefit from the potential resource flows streaming from competitors, and other horizontal, vertical and lateral cluster members (Belussi & Sedita, 2008). This may take the form of employment opportunities, such as collaborating on a lucrative creative project or festival (Belussi & Sedita, 2008). In addition, cluster engagement may initiate tacit knowledge sharing for a creative worker that helps enhance their current creative operations. However, cluster engagement may also impede the flow of resources stemming from non-local networks, as local networks are given preference. Furthermore, too much embeddedness may impact on the redundancy of information received; hence, creative workers may receive less ‘new’ information.

2.2.4 Summarizing Social Network Structures as Resources

The resource-based view of the firm, and by extension Lavie’s (2006) ‘resource-based view of the interconnected firm’, provides a theoretical foundation that explains the way in which a creative workers, who possess network resources that are superior to their competitors, generate positive market and labour outcomes. However, the resource-based view theory, drawing from a traditional market understanding of competition, assumes that competitive advantage can easily be translated into market outcomes. Within creative and cultural fields, however, firm competitiveness is not necessarily an antecedent to market outcomes (Bourdieu, 1983). In order to describe
more comprehensively the conditions under which the resources, possessed by a creative worker, may aid in the generation of a sustainable competitive advantage, a review of Bourdieu’s (1983) ‘field of cultural production’ and ‘forms of capital’ theories are provided in the following paragraphs.

The creative industries can be conceptualised as the modern manifestation of Bourdieu’s (1983) notion of the ‘field of cultural production’ as the sector is fundamentally concerned with the production and consumption of culture. Within cultural fields, the degree to which a creative worker has the potential to generate economic outcomes is determined by the degree to which they operate within a mode of ‘restricted production’, and/or ‘large-scale production’ (Bourdieu, 1985). In addition, the collection of capital possessed by a cultural producer will enhance the outcomes they experience in either mode (Bourdieu, 1983, 1986). As a consequence, within the creative industries, positive market outcomes, and by extension labour outcomes, is not solely dependent on the competitive position that a creative worker occupies relative to others in a field. Thus, in order to more adequately describe the processes that result in market and labour outcomes for creative workers, the following section reviews Bourdieu’s (1983, 1986) ‘field of cultural production’ and ‘forms of capital’ theories.

2.3 Generating Value in Cultural Fields

The economics of creativity, culture and art are complex as they operate under a logic that can be distinct from that of a traditional market (Bourdieu, 1983; Ginsburgh & Throsby, 2006). To this end, a fundamental logic associated with traditional markets
is that a product, which is perceived to possess symbolic value by its market, is
c consecrated economically (i.e. it is assigned a market value). However, Bourdieu
(1983) notes that within the ‘field of cultural production’, a product with significant
symbolic value may not generate a market value, but instead be consecrated
intellectually. In both instances, the dynamics of competition within the field remain
constant, however holding a competitive advantage does not necessarily translate into
economic outcomes within the ‘field of cultural production’ (Bourdieu, 1983).

Bourdieu (1983, 1985) indicates that the ‘field of cultural production’ can be split into
two modes. The first mode is termed ‘restricted production’, and embodies a situation
whereby the production of cultural products is separate from the logic underpinning
traditional markets. In this segment, cultural producers create products of symbolic
meaning that accumulate significant symbolic value, yet this symbolic value is not
assigned a market value. Instead, products generated within the mode of ‘restricted
production’ are valued intellectually, and do not necessarily produce any market
returns.

Bourdieu (1983), using the example of the 19th century French literary arts field,
offered two audience groups for whom products generated within the mode of
‘restricted production’ gained significant intellectual value, yet no market value. The
first group was termed the arts for arts sake audience, and was a group comprised of
other artists, who consecrated art based on the intellectual and coded meaning present
within works. The second group was termed the leftist/bohemian audience, and this
group placed little value in assigning a financial worth to products of great symbolic
value, and were also poor.
Since cultural producers operating within the ‘restricted production’ mode are not motivated to generate products of economic value they are liberated from the logic of traditional markets. However, such producers also require some form of economic capital to sustain their work and livelihoods. Thus, this mode is very financially restrictive, and as a prerequisite, cultural producers that operate within this sphere are generally dependent on inherited wealth or patronage, or are inevitably reduced to a life of poverty (Bourdieu, 1983). In contrast, the second mode of production of the cultural field (the ‘large-scale production’ mode) subscribes to more traditional market power structures. The audience groups that were identified by Bourdieu (1983), who belonged to the 19th century field of literary arts, were the ‘mass-market’ and the ‘bourgeois’ groups. These audience groups consecrated the symbolic value of cultural products economically.

Bourdieu (1983) argues that cultural producers who operate within the ‘large-scale’ production mode are tied to the logic associated with generating market outcomes. As a result, cultural producers operating within this mode lack the liberty to produce products with the same degree of inherent intellectual symbolism as those operating within the restricted production segment (Bourdieu, 1985). Thus, driven to achieve economic outcomes, cultural producers operating within this mode are compelled to produce art that appeals to the widest possible public (Bourdieu, 1985). The level of intellectual value ascribed to these works is diminished to ensure that it remains appealing. In contrast, to the cultural producers operating in the mode of ‘restricted production’, ‘large-scale’ producers sacrifice the intellectual symbolism embedded within their products in place of commercial outcomes. Cultural producers are often
caught between these two poles and fluctuate from one to the other in a quest to generate market returns in order to fund their intellectual pursuits (Bourdieu, 1983).

2.4 Forms of Capital: Social Capital

Within both the restricted and large-scale production segments in the field of cultural production, cultural producers gain prestige and successful career outcomes as a result of their accumulated capital (Bourdieu, 1986). With reference to the scope of enquiry of this study, a creative worker’s social and cultural capital are of particular importance in generating successful career outcomes within cultural fields (Bourdieu, 1986). Social capital is defined as:

The aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition.

(Bourdieu, 1986, p. 189)

‘The profits that accrue as a result of membership to a group are the basis of the solidarity that makes them possible’ (Bourdieu, 1986, p. 190). This means that the economic capital, which ensues as a result of a person’s social capital, is dependent on the degree to which a person possesses a very real connection with a particular group. For creative workers, social capital may represent linkages with other powerful people within a particular creative field, and this can advance the legitimacy of the products and services they provide, as well as aid in their distribution (Bourdieu, 1983).
2.4.1 Social network structure as a form of Social Capital

Thus far within this study, social network structure has been conceptualised as a firm resource with the potential to impact on the sustainable competitive advantage of creative workers. However, social network structure can also be conceptualised as representing a part of person’s social capital. Social capital is represented by the size and structure of a person’s social network, as well as the degree to which the social network can be mobilised to generate a desired outcome (Bourdieu, 1986).

As a form of social capital, the social network structure that a creative worker engages with links them with other network resources that may be mobilised to achieve set outcomes. To this end, knowing and being able to access a large array of people, who themselves can activate their own networks, enhances the ability of a creative worker to operate. However, the network structure of a person does not determine the degree to which others may feel obligated to advancing a particular person’s field position (Kadushin, 2004). In this way, social network structure, as discussed and measured in this study, does not comprehensively account for a creative worker’s social capital, but rather provides an indication of it.

2.5 Forms of Capital: Cultural Capital

Bourdieu (1986) contends that cultural capital can be embodied, objectified or institutionalised in an agent, which connotes a person’s status within a culture. In an embodied state, cultural capital takes the form of knowledge, skills, ways of talking, or competencies in a particular cultural practice, or analysis process. In an objectified state, cultural capital takes the form of material possession that symbolises a person’s
association with a particular social group’s standing. In an institutionalised state, cultural capital takes the form of an acquired symbol (such as a university degree). Noting contention with Bourdieu’s (1986) expansive definition, Johnson (1993, p. 7) summarises cultural capital as:

A form of knowledge, an internalised code or a cognitive acquisition which equips the social agent with empathy towards, appreciation for or competence in deciphering cultural relations and cultural artifacts.

For creative workers, the cultural capital that they possess functions to assist them in encoding the products that they create, in a way that is meaningful to particular audience groups. Hence, creative workers that possess broad forms of cultural capital have the ability to cater for larger and more lucrative audiences (if operating within the large-scale production mode), or produce art of enhanced intellectual value (if operating within the restrictive production mode) (Bourdieu, 1983).

2.5.1 Organisational business acumen as a form of Cultural Capital

In this study, organisational business acumen is conceptualised as a form of cultural capital that enhances the ability of creative workers to conduct business within the creative industries. With reference to the above cultural capital definition of Johnson (1993, p. 7), organisational business acumen is a ‘form of knowledge’ that equips creative workers with a ‘competence in deciphering’ creative business processes. Within the ‘field of cultural production’, organisational business acumen has a positive, or negative, outcome for creative workers, depending on whether they operate within a ‘large-scale production’ or ‘restricted production’ mode. If operating within the former mode, which subscribes to a traditional market logic, organisational business acumen is a valuable competency for creative workers, which they can
utilize to advance their field position. However, the same competency has no application within the mode of restricted production. It follows that any application of this form of capital within this mode represents a wasted investment, and is likely to be a quality that may be viewed negatively by audiences (particularly bohemian ones) and other artists.

The institutional forces, embodied through cultural, creative and economic policies of Anglophone and European countries over the last century have impacted on the ability of cultural and creative workers to economically sustain themselves within the ‘restricted production’ and the ‘large-scale production’ mode. In effect, government policy before the establishment of the creative industries framework enabled producers of cultural and creative content access to government subsidy. This meant that, for a brief period in time, the dynamics of Bourdieu’s (1983, 1985) field of cultural production were altered. This institutional change is analysed in order to provide a theoretical platform from which to argue the importance of organisational business acumen as a form of a creative worker’s cultural capital, within the context of the creative industries.

2.6 Institutional changes within the field of cultural production

The appraisal undertaken by Bourdieu (1983) of the 19th century French literary arts field provides a theoretical platform from which to understand the ways in which creative workers operating in a different historical context, generated economic and/or symbolic/intellectual outcomes. However, fields change over time, and merge with new fields to incorporate new logics (Thornton, Ocasio, & Lounsbury, 2012). To this
end, government subsidy for cultural producers operating within the 19th century French literary arts field appeared to be non-existent (Bourdieu, 1983). However, cultural production fields since this time have involved more direct government, and market, intervention. Such shifts in government and market intervention have changed the forms of capital, required by cultural producers, to generate economic outcomes.

2.6.1 Policy Frameworks and their impact on cultural producers

The Democratic Arts movement, stemming from pre-World War Two United States of America, gained popularity across many Anglophone and European countries (De Hart Mathews, 1975; DiMaggio & Useem, 1989). The movement was underpinned by a belief that communities may possess the ability to engage actively with some forms of socially mindful art, which had the potential to create intangible benefits such as citizenship and wellbeing. In the immediate years following World War Two, the Democratic Arts movement led to significant public subsidy for (what is now termed) high arts – such as opera companies, orchestras, theatre groups, etc. (O'Connor, 2010b). This era was termed the ‘culture industry’ (O'Connor, 2010b). Within the culture industry, governments played an intercessory role between audiences and cultural producers, by providing funding for particular art forms. This offered opportunities to cultural producers operating within the ‘restricted mode’ of production to create (albeit in fairly mainstream genres) and receive market returns.

In the post-war period, the intercessory role that governments played between audiences and cultural produces steadily increased with the rise of postmodernism.
Furthermore, the rise of postmodernism was met with a change in the concept of what was considered to be ‘good art’, and this led to the devolution of subsidised art from being ‘high art’ in isolation, to folk, community-based and popular arts (O’Connor, 2010b). This period was termed the ‘cultural industries’ and represented a time, relative to others, whereupon there were enhanced opportunities for professional cultural producers could work under the auspices of the state, and could create in an ever-widening palate of art forms. Commercial and industrial arts markets ran parallel to the subsidised arts market; however, professional artists had increased opportunity to transverse both fields, owing to the breadth of art forms that received public subsidy.

This political intervention changed the generic structure of arts markets. To this end, the cultural industries represented a time where artists had increasing potential to exclusively create within the mode of restricted production (i.e. focus on producing art of exclusive intellectual value) and still generate economic capital in the form of a broad application of government subsidy. Such cultural production was only constrained by the degree to which its symbolic value was meaningful to the political institutions that underpinned communities in the market economies local to Anglophone and European countries (which was, in some cases, quite inclusive).

The 1970s and 80s saw the rise of neo-classical economic ideology and new public management. The rise of these policy approaches led to an increased scrutinisation of the economic value of publicly funded arts (O’Connor, 2009). In this climate, the economic impact of intangible benefits resulting through community-engaged arts practice was called into question. Intangible benefits, by definition, are difficult to
measure. For this reason, a justification for public subsidy towards creative production significantly conflicted with the foundations of new public management approaches, which emphasised instead a need for a financial justification for public spending based on (quite stringent) efficiency measures (Diefenbach, 2009). As a result, the United States significantly decreased the public subsidy directed to the arts, thereby forcing professional artists again to suffer at the whims of a free market (DiMaggio, 1983).

Other Anglophone and European countries, to some degree, replicated the approach by the United States, though with some delay. For example, Australia really only began to introduce neoliberal arts policies in the 1990s (Throsby, 2001). Furthermore, rather than ceasing public subsidy of cultural production, many Anglophone and European countries changed the nature by which cultural production was funded. In effect, these governments shifted from funding cultural production as an exclusive act of community cultural development (or wellbeing creation vis-à-vis the culture industry), to cultural production that facilitated economic efficiencies, with potential for spill overs resulting in economic and social benefits. This movement saw the role of cultural production labelled as an activity with economic and social outcomes within the creative industries of Australia, the United Kingdom and Europe (Poettschacher, 2010). In addition, it led to the rise of social enterprise and crowd-funding business models for creative endeavours (Flew & Cunningham, 2010; Markusen, 2010).

Within the creative industries, governments still play an intercessory role for cultural producers (creative workers in this context). However, the role that they play is in
direct opposition to previous approaches. Thus, within the political frameworks of Australia, the United Kingdom and Europe, public subsidy is generally made available to creative workers in the form of business grants when economic spillovers can be justified. Paradoxically, in contrast to the culture industry and cultural industries, the public funding framework within Anglophone-European creative policies mean that creative workers who operate within the mode of ‘large-scale production’ are more likely to receive government subsidy as such activity aligns with traditional market logics that emphasise competition and wealth generation.

Researchers, including Cunningham (2002) and Potts et al. (2008), suggest that cultural producers within the creative industries are not subjects of a marketplace (as in the mode of ‘large-scale production’), nor do they need to be excluded from it (as in a ‘restricted production’ mode). Rather, cultural producers within the creative industries can find economic value for niche products through enhanced technologies such as the Internet. Cunningham (2002, p. 58) notes:

> Since the 1980s, small-business models of networked, usually commercial, interdependency have arisen which have the scale and commitment to creativity of the typical arts company, but the ethos of commercial practice – wealth creation and meeting their markets.

What this suggests is that, under the creative industries policy framework, the field of cultural production allows for cultural producers operating within the mode of restricted production the opportunity to generate economic outcomes through connections to niche markets. However, this claim requires further empirical testing to conclude.
O’Connor (2009) has suggested that, within contemporary creative industries policy framework, cultural goods are reduced to a purely market value. As a result of this, creative workers have begun to mimic the language of the market, while not necessarily subscribing to it (Poettschacher, 2010). The implication of this market dominated position of cultural goods for creative workers, is that it has become, once again, increasingly difficult to operate within an exclusively ‘restricted mode’ of cultural production, while generating economic outcomes. In contrast, cultural producers operating with the creative industries who cultivate the development of organisational business acumen have enhanced potential to engage with the market. In this way, the market dynamics of the creative industries advantage those creative workers who adopt traditional business-like structures in conducting their cultural production work (Poettschacher, 2010).

As a form of cultural capital, organisational business acumen enhances the ability of creative workers to negotiate a more market-centric field of cultural production. To this end, it enables their ability to recognise, organise and prepare for, as well as execute market and business operations that are allied to their generation of cultural goods. Despite this, in a quest for a stronger level of intellectual consecration of creative products, creative workers may still reject the notion of organisational business acumen, and instead imbue their art with more intellectually exclusive features.
2.7 The Creative Industries: Policy, Definitions and Structures

The concept of creative industries has political, social and cultural undertones, and its diffusion across multiple global policy domains has been divisive among academics and practitioners (Flew & Cunningham, 2010; O'Connor, 2009, 2010a). The term ‘creative industries’ has gained prominence through the United Kingdom and Australian governments’ policy platforms at the very end of the 20th century. More recently, the promotion of creative industries has become intertwined with contemporary economic development policy tools, particularly across the European Union, and at the local government level within Australia (European Commission, 2010; Gibson & Klocker, 2005). The rise of the notion of creative industries has been observed as a policy response, that emphasises a market orientation of cultural and creative practice, which contrasts previous subsidised arts policy frameworks (Cunningham, 2002; Throsby, 2008). Contextually, the creative industries can be seen as growing out of the global economic, academic and political trends, stemming from the 1980s and 1990s, which infused a more market-oriented discourse for the production culturally symbolic goods.

In recent years, two criticisms relating to the market emphasis present within creative industries policies have emerged. The first criticism concerns a problem of defining the creative industries in a way that is coherent as a description for an economic sector, as well as an adequate description that accounts for the non-economic processes and outcomes stemming from artistic, cultural and talent based activities (Flew & Cunningham, 2010; O'Connor, 2009). The second issue concerns the way in which creative industries policies and processes have been shown to generate
particularly poor labour outcomes for creative workers (Banks & Hesmondhalgh, 2009; De Peuter, 2011).

2.7.1 Defining the Creative Industries

There is no unified, or universally agreed upon, model or definition of the creative industries (Davies & Sigthorsson, 2013; O'Connor, 2010b). In an effort to more align multiple definitions and concepts pertaining to the creative industries, the United Nations Conference on Trade and Development constructed the following five-part description of the creative industries:

- Cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs;
- Constitute a set of knowledge-based activities, focused on but not limited to arts, potentially generating revenues from trade and intellectual property rights;
- Comprise tangible products and intangible intellectual or artistic services with creative content economic value and market objectives;
- Stand at the crossroads of the artisan, services and industrial sectors; and
- Constitute a new dynamic sector in world trade.

(UNCTAD, 2008, p. 13)

The UNCTAD (2008) definition captures a more comprehensive depiction of what the creative industries are: this is achieved by aligning concepts of economic, artistic and creative significance with the notion of the creative industries. For this reason, Cunningham (2009) suggests that this definition is applicable across a wider, more global context.

The diffusion of creative industries policies to nations outside of the European Union and Anglophone countries (excluding the United States of America) has been sporadic. The Asian nations of Singapore and China have embraced aspects of
creative industries policies particularly related to digital production and creative clusters (Cunningham, 2009; O’Connor, 2010c). However, the general adoption of creative industries policies in nations such as Nigeria, Brazil, India and other countries in the developing world is still in its infancy despite a longstanding tradition of institutionalised and enterprise-based cultural production (UNESCO, 2013).

Notwithstanding the rise and diffusion of creative industries policies globally, some critics argue that the sector can be seen as promoting a neo-liberal political ideology that furthers the dominance that multinational corporations have over the production of culture (Flew & Cunningham, 2010; Gibson & Klocker, 2005; Miller, 2002; Oakley, 2006). Neo-liberalism, within the context of the creative industries, refers to the reduction, and commoditisation, of creative processes and products into an economic valuation; as well as an adoption and preference for a free-market design and a privatisation of social/cultural service delivery (Gibson & Klocker, 2005). In addition, some creative practitioners dissociate themselves, and/or reject the notion of belonging to the creative industries on the grounds that culture cannot adequately be constituted into an economic sector (O’Connor, 2010b; Oakley, 2006).

The creative industries policies of the United Kingdom, which largely became the template for the rest of the world, have received criticism for possessing a neo-liberal ideology corresponding to Britain’s New Labour political agenda of the time (1997-2007). To this end, Oakley (2006, p. 261) claimed that creative industries policies have rhetorical undertones which position citizens as ‘being liberated from the state’ through ‘creative entrepreneurship.’ Oakley (2006, p. 261) argued that creative industries policies seek to intertwine themes of ‘social advancement for marginalised
people’ with ‘economic competitiveness’; however, she noted that there are very few policy tools within creative industries that have the potential to facilitate social advancement. In reality, the case studies examined by Oakley (2006), indicated that creative industries development policies typically advantage those creative workers within society that are wealthy and well connected.

Within the context of Australia, Gibson and Klocker (2005) have adopted a similar argument to Oakley (2006) by suggesting that local governments have infused creative industries policies within a narrow, neo-liberal economic development agenda. As a result, governments have ‘normalised the meanings of creativity, and depoliticised culture, such that the only relevant forms of innovation are those that produce profitable private-sector outcomes’ (Gibson & Klocker, 2005, p. 100). By way of challenging the overly economic focus of creative industries policy, Gibson and Klocker (2005, p. 100) noted that there are some legitimate creative activities, and creative industries organisations, that are not profitable and they ‘cannot be easily translated into (capitalist) accumulation strategies.’

Similarly, O'Connor (2010a), in his analysis of Australian artists’ views regarding the relationship between arts and the creative industries, indicated that many artists feel that creative practice is very hard to reduce into a purely industrial process. In this way, O'Connor (2010a) presented cases whereupon artists criticised the creative industries, as they were perceived to oversimplify the problematic and creative aspects of arts practice; and in place of this was an incorrect association of arts as an economic process. O'Connor (2010a) noted that some artists are reticent to view their
work as wholly commercial and, as a result, there is a perception by artists that they are at odds with the political language of creative industries policy.

These criticisms made by researchers and practitioners concerning the limitations and gaps present within creative industries policies highlight some of the structural ambiguities that are present within the sector in a more general sense. Linked to both the Bourdieuan theoretical discussion presented earlier within this chapter and the neo-liberal criticism of creative industries policies, many researchers indicate that the way in which creative goods and services generate value is distinct from other industrial sectors (Caves, 2000; Potts et al., 2008). Further, researchers argue that extant policy has paid little attention to the structural considerations that distinguish the creative industries from other economic sectors (Banks & Hesmondhalgh, 2009; Poettschacher, 2010).

A primary feature that distinguishes the creative industries from other sectors within contemporary economies concerns the nature of creative work. While a general recent trend has seen an increase in the casualisation labour across most industries, within the creative industries, temporary, short-term and contract-based working arrangements are the norm (Cunningham & Higgs, 2009). This structural component of the creative sector brings with it significant labour challenges for creative workers.

2.8 Labour outcomes within the creative industries

Research and commentary stemming from the early phase of the roll of creative industries policies (1994-2005) position the labour outcomes facing creative workers
in a positive light. To this end, Florida (2002) elevates the status of creative workers by labelling them as the creative class. Additional labels, such as ‘dynamic’ and ‘innovative’, presented in early creative industries policy and commentary situate creative workers as being at the vanguard of the knowledge economy (Banks & Hesmondhalgh, 2009). In this way, creative workers are viewed as being ‘liberated’ from the humdrum and inflexible working arrangements associated with traditional working structures present across other industries. Hence, creative workers are also categorised as a new kind of ‘no-collar worker’ (Ross, 2003). However, the reality faced by creative workers may be markedly different, and research has more recently focused on the pitfalls associated with precarious, contract-based work, which is also often poorly renumerated (Blair, 2001; De Peuter, 2011; Hesmondhalgh & Baker, 2010; Huws, 2006; Ross, 2003).

Many prominent creative industries researchers have sought to more adequately detail the challenging labour situation faced by creative workers. Across this literature consistent themes have emerged, and these can be delineated under the constructs of creative labour precarity, exploitation and earnings satisfaction. These constructs for the dependent variables of this study, and are explored in the following paragraphs.

2.8.1 Creative Labour Precarity

Creative work is often project based and short term in nature. This reduces the long-term financial commitments usually absorbed by organisations in other sectors (De Peuter, 2011). Within the creative sector, creative workers typically operate as subcontractors, moving from one project to the next, in a quest for a consistent and
sustainable income. This situation is termed, labour precarity, which is defined as a ‘non-continuity of employment, lack of employment protections and exclusion from standard employment benefits’ (Burgess & Campbell, 1998, p. 7). Davies and Sigthorsson (2013, p. 33) also note that creative labour precarity exists when ‘workers themselves take on the risks and responsibilities that otherwise would be assumed by the employer.’ Davies and Sigthorsson (2013, p. 31) go on to describe the nature of labour precarity as it appears specifically within the context of the creative industries as:

The strains on the individuals (usually self-employed contractors, responsible for their own pensions, unemployment, taxes, and health insurance), the demands that ‘flexible’ working hours place on the workers’ time and home lives, the intense competition for jobs in the more glamorous sectors of the creative industries, and the constant threat of one’s skills becoming outdated with new technologies coming along.

In an effort to achieve a consistent income in an environment of short-term contracts, creative workers are compelled to look for, and undertake simultaneous, multiple employment (Throsby & Zednik, 2011). Hesmondhalgh and Baker (2010, p. 12) indicate that this constant search for additional work results in ‘nervousness, anxiety and panic’ on the part of creative workers. Being faced with the stress of non-continuous employment research also indicates that creative workers self-exploit themselves by accepting lower pay, as well as volunteering for work, in order to retain or access employment opportunities (Hesmondhalgh & Baker, 2010).

Another trend within the creative sector that perpetuates labour precarity concerns the process and outcomes created when graduate-creative workers enter the industry. Creative workers, in the main, possess tertiary education qualifications (Cunningham et al., 2010; Throsby & Zednik, 2010). Despite this, after graduating, creative workers
are often compelled to ‘volunteer’ to undertake a ‘zero wage internship’ in order to generate a portfolio of work that they can use to begin to acquire paid contracts (De Peuter, 2011; Robert, 2005). This situation creates uncertainty for experienced creative workers who have to compete with graduates, that possess similar skills, but are willing to work for free (Baker & Hesmondhalgh, 2013).

### 2.8.2 Exploitation

Hesmondhalgh and Baker (2010) argue that people working in the creative industries are highly vulnerable to exploitation. Exploitation has been defined as ‘the difference between labour’s marginal product and its real wage’ (Perksy & Tsang, 1974, p. 51), yet within the creative industries the term has a stronger connotation with a dissatisfaction, on the part of creative workers, at being compelled to work under poor and arduous conditions for comparatively poor pay (Hesmondhalgh, 2010; Hesmondhalgh & Baker, 2010; McRobbie, 2002).

McRobbie (2002) suggest that creative workers are caught between a pleasure and pain axis. On the one hand, creative workers are said to obtain a heightened experience of worker autonomy as, owing to their subcontracting working arrangements, they have a perceivable degree of freedom and flexibility in selecting work opportunities. On the other hand, in an effort to generate a sustainable livelihood, a creative worker may become indentured, as they are compelled to work within a market where poor work conditions and income are the norm. Such conditions take the form of working long hours without breaks (Ross, 2003), as well as undertaking poorly paid creative work out of a necessity for income
(Hesmondhalgh & Baker, 2010). Hesmondhalgh and Baker (2010, p. 13) argue that this situation presents as a ‘very complicated version of freedom’ for creative workers. In this way, and within this study, creative labour exploitation represents dissatisfaction with being compelled to work under poor conditions.

2.8.3 Earnings satisfaction

Earnings satisfaction, as it is conceptualised within this study, focuses on the level of satisfaction that results from undertaking creative work, rather than a specific monetary value. Research indicates that creative workers experience significant dissatisfaction with the financial returns resulting from creative work (Caves, 2000; Cunningham, 2011; Throsby & Zednik, 2011). Caves (2000) argues that creative workers become dissatisfied with the economic returns associated with their work as a result of coordinating and/or occupying multiple positions along the creative product production line. While creative workers often possess specialist skills, in the absence of employment opportunities within multirole organisations, these workers are required to undertake multiple processes; or coordinate with others to generate a product. The quality involved in the processes undertaken outside of the creative worker’s specialty can greatly impact on the potential economic returns generated by the product (Caves, 2000). In response, creative workers that lack skills outside of their speciality, or lack a coordinative team to deliver a product, experience earnings dissatisfaction as the input directed into their specialisation is devalued by limitations present in other processes.
Similarly, creative workers are often motivated to generate products and services of significant intrinsic value with respect to their originality and technical proficiency (Caves, 2000). The resources and capital needed to manufacture such products is intensive, and doesn’t easily fit within the working structures of standard employment contracts. Caves (2000, p. 78) argues that ‘given the elastic supply of would-be-artists, their competition will depress the average wage earned from creative work below the wage of humdrum labour.’ In effect, creative workers accept lower wages than ‘offered by humdrum jobs.’ As a consequence, creative workers undertake additional work in other sectors, such as the education sector, as non-creative work is typically more lucrative (Throsby & Zednik, 2011). Hence, creative workers struggle to generate significant economic returns from their work, and this acts to diminish their perceptions of earnings satisfaction (Weeds, 2012).

2.8.4 Interplay between Exploitation, Labour Precarity and Earnings Satisfaction

The constructs of creative labour precarity, exploitation and earnings satisfaction are linked. However, it is likely that there are some causal relationships between the three factors. In the first instance, if a creative worker receives employment in the form of a secure position or ongoing contract, with fair financial remuneration, it is likely they will not perceive their situation as precarious, and they will be more satisfied with the earnings they receive (as their labour input is being adequately renumerated in the form ongoing employment). Lastly, they will not be required to work under arduous conditions for poor pay. Hence, it is hypothesised that labour precarity reduces
perceptions of earnings satisfaction, and enhances exploitation; in addition, earnings satisfaction reduces exploitation:

\[ H1: \text{Labour precarity reduces earnings satisfaction and enhances exploitation;} \]
\[ \text{and, earnings satisfaction reduces exploitation.} \]

### 2.8.5 Macro Causes of poor labour outcomes for creative workers

Research attributes the poor labour outcomes associated with creative work to a variety of reasons, stemming from different levels of analysis. At a macro level, researchers argue that institutional and policy trends have generated a climate of exploitation and precarity for creative workers (Banks & Hesmondhalgh, 2009; De Peuter, 2011).

Creative industries policies are criticised for painting a positive and overly-simplified picture of the nature of and outcomes resulting from creative work (Banks & Hesmondhalgh, 2009). To this end, some policies position creative work as being ‘particularly cheap,’ as well as ‘fun, leisurely and wealth generating’ (Banks & Hesmondhalgh, 2009, p. 424). Such a poor representation of creative work generates misconceptions in the economy in general, and in existing workplaces that may have, or be looking to acquire, creative work. Furthermore, policies that present an oversimplified message concerning the nature of creative work may attract new creative workers to the sector, yet produce labour outcomes that may be significantly different from initial expectations. Thus, Banks and Hesmondhalgh (2009, p. 428) argue that the representation of creative work within policy is in line with the ‘business-driven, economic agenda’ of neo-liberalism, and is of ‘serious concern.’
From an institutional perspective, De Peuter (2011) discusses the way in which industrial structures present within the information communication technology sector have become absorbed with the creative industries. De Peuter (2011) notes that the 1990s saw the breakup of large technology organisations that were previously responsible for the near-total in-house development of (particularly digital) products into small, specialised owner-operated/subcontracting businesses. This process acts to ‘transfer the market risk to the individual worker and to reduce indirect labour costs’ (De Peuter, 2011, p. 420). As an outcome, the microfirms responsible for delivering components of digital products are required to compete to win ‘bite-sized jobs for micropayments’ (De Peuter, 2011, p. 419).

Such subcontracting and micropayment structures were replicated across much of the creative industries, particularly within the fields of popular music production, as well as the design and web-based multimedia segments. This trend is also evident within the temporary organisations that form to undertake project based work across the sector (De Peuter, 2011). Thus, under previous industrial arrangements concerning the production of cultural and creative goods, larger organisations, such as theatre companies, had provision for permanent employment; however, within the current climate, such organisational forms are cost prohibitive (De Peuter, 2011).

As a result of institutional change, the creative industries are, for the most part, protected from unionization (Banks & Hesmondhalgh, 2009; De Peuter, 2011; Hesmondhalgh & Baker, 2010). Without effective unions, there is coercion that exists
on an industrial scale, which requires creative workers to take on entrepreneurial organisational structures (i.e. subcontractors, temporary portfolio-based jobs and small and micro-business) (De Peuter, 2011). Within this entrepreneurial context, creative workers start from a position of disadvantage as their focus and skill-set is more directed towards artistic and creative pursuits, rather than business organisation (Caves, 2000).

2.9 Micro causes of creative labour outcomes: Organisational Business Acumen

In general, creative industries discourse accentuates the entrepreneurial qualities of creative work (Carey & Naudin, 2006; Caves, 2000; Coulson, 2012; Cunningham, 2005; Parkman et al., 2012). Despite this, many researchers note a reticence on the part of creative workers to embrace business management and entrepreneurial competencies related to their work (Beckman, 2007; Caves, 2000; O'Connor, 2010a).

Research exploring the nature business management for creative workers in different countries indicates that low levels of organisational business acumen appears to be a global issue (Cunningham, 2009). Research exploring creative enterprise operations in Europe by Crombie and Hagoort (2010, p. 11) found that ‘it appears that market entry, as well as other determining barriers to success, is directly inhibited by knowledge-obstructing factors such as the lack of business skills.’ Similarly, research from Australia by Throsby and Zednik (2010) indicates that many Australian performing artists do not rate their business skills highly.

We noted that 72 percent of artists work as freelancers or are self-employed in their principal artistic occupation. As such, they require a certain level of
business acumen in order to be able to organize and keep track of work-related issues… Overall, half of them believe their skills to be good or excellent, but it is a sobering thought that more than one-third of artists describe their skills only as adequate, and a further 14 percent regard their business skills as inadequate.

Throsby and Zednik (2010, p. 59)

Crombie and Hagoort (2010) indicate that the business acumen required by creative enterprises to exploit market opportunities encompass effective management skills, financial acumen, administrative ability (procedural competency), timeliness and professionalism. Ball (2003), repeating many of these themes, also suggests that creative workers need to be able to network, collaborate and negotiate with clients and other colleagues in the process of completing creative activities. Drawing from these, organisational business acumen is defined in this study as:

A specific skill set encompassing general business administration, financial and communication management skills, possessed by creative workers and embedded within creative organisations, that enables market entry for creative products and services.

Adapted from Crombie and Hagoort (2010, p. 12)

The relationship between organisational business acumen and labour outcomes is generative (Rae, 2004). To this end, as creative workers gain more experience through their career, they are likely to enhance their levels of business acumen. However, the concept needs to be considered as separate, though linked to, a creative worker’s labour outcomes.

The development of organisational business acumen within the creative industries appears to be largely de-institutionalised (Ball, 2003; Carey & Naudin, 2006), despite a general rise in the business components present within many tertiary creative industries courses. Rae (2004, p. 495) argues that the acquisition of business and
entrepreneurial skills by creative workers is largely undertaken informally, through ‘contextual learning’, ‘personal and social emergence’ and collaborative business activities (which he terms ‘negotiated enterprise’). Rae (2004, p. 494) indicates that context learning occurs through creative workers’ ‘immersion within the industry or community.’ Similarly, ‘personal and social emergence’ involves the generation of an identity relative to a creative worker’s relationship with their social networks. Finally, the ‘negotiated enterprise,’ owing to the highly networked nature of creative work, involves creative workers partnering and collaborating with colleagues to complete projects. Through these processes, a creative worker develops ‘informal and intuitive’ business skills (Rae, 2004, p. 499). Notwithstanding the informal approaches by which a creative worker develops business skills, Carey and Naudin (2006) call for advancement in the enterprise curriculum provided for creative workers, noting that the realities of the creative industries market place are poorly understood by many within, and outside of the sector.

From a theoretical perspective, as noted in this Second Chapter, organisational business acumen can be considered as a form of capital, with an increasingly relevant application within the market-oriented context of the creative industries. In this way, the presence of higher levels organisational business acumen in creative workers suggests a willingness to participate in Bourdieu’s (1985) conceptualisation of the mode of ‘large-scale production’ within the cultural field; resulting in a creative worker’s tacit or active acceptance and engagement with a market logic that is typically associated with other industries. Similarly, according to the resource-based view of the firm, organisational business acumen presents as a resource that can enhance the process of production as well as distinguish a creative worker from others.
within a field, who may not possess such a resource. As Crombie and Hagoort (2010) indicate that business skills facilitate market access for creative enterprises, this study hypothesises that a creative worker’s organisational business acumen reduces their perceptions labour precarity and exploitation, and enhances their earnings satisfaction:

H2: Organisational business acumen reduces labour precarity and exploitation, and enhances the earnings satisfaction for creative workers.

The hypothesised impact of organisational business acumen on labour outcomes, as well as the hypothesised interplay between earnings satisfaction, exploitation and labour precarity, of creative workers, is modelled in Figure 3.1. For consistency, this model, including the faded constructs and relationships, is henceforth referred to as the primary model.

The hypothetical model above accounts for the first, primary research question:
PRQ1: What is the impact of organisational business acumen on the labour outcomes of creative workers?

Research indicates that organisational business acumen is not the only factor present within the micro unit of analysis that impacts on the labour outcomes of creative workers. Social networks structures appear to dominate the supply and demand structures present within the creative industries (Potts et al., 2008). The theoretical impact of social network structures is discussed in the following section. However, as hypothetical models are required to account for the impact of potential constructs on dependent variables (Hair, Black, Babin, & Anderson, 2010), the above model includes the social network structure factors tested in this study (these are represented as faded circles and arrows). Hypotheses for these relationships are delivered in the following section.

2.10 The Creative Industries and Social networks

The pervasiveness of social networks for the supply and demand structures present within the creative industries distinguishes it from all other sectors of the economy (Potts et al., 2008). Rather than operating through a standard market generation process associated with other industries, Potts et al. (2008) argue that creative goods generate value as they diffuse through social networks. Potts et al. (2008, p. 171) hence, propose that the creative industries more or less function through ‘social network markets.’ These authors offer a social network market definition of the creative industries, which views the sector as:

The set of agents in a market characterized by adoption of novel ideas within social networks for production and consumption.

Potts et al. (2008, p. 171)

Further, these authors assert that:
The creative industries are the set of economic activities that involve the creation and maintenance of social networks and the generation of value through production and consumption of network-valorized choices in these networks. 

Potts et al. (2008, p. 174)

The social network market conceptualisation of the creative industries is useful in providing a novel analytical frame from which to observe key trends present within the sector (Potts et al., 2008). The social network market conceptualisation also helps in clarifying the way in which the distinction between producers and consumers is more nuanced in place of more intimate collaborative relationships. In this way, Potts et al. (2008) suggest that creative producers generate novel goods and services as a result of their relationship to, and with, a network of people with tastes that are shared and exchanged across a social network. Thus, while a known total market size cannot be anticipated before the development of a creative product, by embedding a creative product within a social network of people, and through a production process that is reflexive to the network, a creative producer can conceive an initial market size, based on the boundaries of the network, for a particular creative product.

A social network market understanding of the creative industries also helps to explain some of the other sectoral anomalies. For example, Caves (2000) identifies an economic property restricted to the creative industries which he terms the infinite variety principle. The infinite variety principle holds that the value ascribed to a creative product isn’t necessarily dependant on the cost of production, as in normal markets, instead all creative products are valued uniquely. The same principle explains how, for example, punk music has as much potential to generate revenue as orchestral music, which by contrast has a larger cost of production. The principle also helps to explain how demand is present for creative products such as cult and b-grade
movies that stretch, and in some cases go against, identified commercial norms that underpin mass-market film productions. In a situation whereby taste for distinct and unique products is generated within the confines of a social network then, the social network market position of Potts et al. (2008) explains how the size of a product’s market is not necessarily tied to its production cost, but rather to a social network market.

The social network market position of Potts et al. (2008) can be regarded as an expanded application of the ‘field of cultural production’ theory of Bourdieu (1983) to the case of the creative industries. Similarly, Bourdieu (1983) notes that, within the 19th century French literary arts field, cultural producers were tied to the social group, with socially confined tastes, who assign a market value corresponding to their tastes and social position. However, the social network markets of the creative industries by contrast, operate in a more network centric and globalised age, owing to the advent of web-based technology (Potts et al., 2008). In effect, this means that the field of cultural production as it is presented in modern creative industries, by comparison to how it appears in Bourdieu’s (1983) appraisal of the 19th century French literary arts field, is populated more heavily by niche markets. Under the conceptualisation of Potts et al. (2008), these niche markets are comprised of social networks that link people with each other on the basis that they share similar tastes.

While the social network market conceptualisation is useful in generating an understanding of market size, unlike Bourdieu’s (1983) field of cultural production theory, it fails to conceptualise the consecration process of a creative product. As a result, the social network market conceptualisation is limited in its ability to predict
whether the symbolic value of a creative good will be assigned a market value. However, it is useful in distinguishing the production processes present within the creative industries from that of other industries.

2.10.1 Social network markets and creative labour

The social network market conceptualisation of the creative industries is also useful in explaining the processes by which creative workers have access to employment opportunities. Thus, while social network markets help to explain the demand structures of the creative industries, the concept is equally applicable in determining the collaborative and network-based supply side dynamics (Potts et al., 2008). There is a plethora of research that indicates that labour opportunities within the creative industries are, more often than not, diffused through the social networks structures held by creative workers (Belussi & Sedita, 2008; Blair, 2001, 2009; Coulson, 2012; Hesmondhalgh & Baker, 2010). In this regard, Blair (2001) notes that entry into some creative industries is usually achieved through a network associate who already is active in creative work. Belussi and Sedita (2008) find that creative workers mitigate job insecurity that comes from only having short-term and temporary employment contract options, by collaborating with as many other locally embedded creative workers and organisations as possible to enhance their chances of continual employment. Hesmondhalgh and Baker (2010) indicate that socialising and networking is an essential step to accessing future business opportunities for creative workers. Finally, Coulson (2012) notes that creative workers are generally collaborative, yet they often seek to re-engage with particular people and organisations whom they have an existing and positive affiliation with. Hence, an
application of the social network market conceptualisation of Potts et al. (2008) to the
labour structures present within the creative industries appears to be appropriate.

While job opportunities may manifest through network contact between creative
workers, as noted above however, research also points out that the quality of labour
opportunities can be particularly poor within the creative sector (Baker &
Hesmondhalgh, 2013; Hesmondhalgh & Baker, 2010). In this way, social networks
may act to perpetuate poor labour outcomes, as the quality of work opportunities that
diffused through social connections may be influenced by the nature (structure and
quality) of such connections.

The social networks structures held by actors may enhance the market and labour
outcomes they achieve (Belussi & Sedita, 2008; Giuliani, 2013; Gulati et al., 2011).
While research exploring the role of networks has generally focussed on the impact of
specific relationships for actor outcomes, research has recently shifted to investigating
the impact of particular structural properties of networks on actor outcomes. In line
with this approach, this study investigates the impact of structural components
including creative workers’ network size, non-local networks, structural hole and
clustering on their labour outcomes. Accordingly, the following paragraphs
investigate empirical literature pertaining to these individual structural dimensions.
This section extends the theoretical appraisal of network structures provided at the
beginning of this chapter to provide specific empirical evidence concerning the
impact of structural dimensions on market and labour outcomes.
2.10.2 The Impact of Network Size

Empirical research undertaken in non-creative industries contexts indicates that an actor’s network size can enhance their market outcomes. Thus, Baum, Calabrese, and Silverman (2000) indicate that firms with large alliance networks generally have more innovation in the biotechnology industry. Raz and Gloor (2007) note that software start-ups with large networks have improved survival rates. Semrau and Werner (2013) find that the size of an entrepreneur’s network is more significant for accessing resources than the quality of relationships they hold with network members. Furthermore, Watson (2007), in his study of Australian small-to-medium sized firms, finds that network size enhances the survival and growth rates of companies to a point; however this effect fades away when networks get too big. This is because the investment required to maintain very large networks is more than the benefits that result from its membership (Semrau & Werner, 2013).

Several studies have indicated no significant relationship between social network size and performance outcomes for actors for firms. Thus, the study of Swedish firms by Johannisson (1996) indicated that network size had no impact on firm performance, however he attributed this to the restrictive geography of Sweden. Similarly, Batjargal (2006) found no significant relationship between network size and firm growth, however this may be due to the small sample size (n = 56) used in this study.

Within the creative industries, Belussi and Sedita (2008) indicate that creative workers seek to develop large networks, comprised of other creative people and organisations, to access employment opportunities in a market of seasonal performing
arts employment. Applying this to creative workers more generally, it is hypothesised here that the size of a creative worker’s network enhances the labour outcomes they experience:

H3: A creative worker’s network size reduces their labour precarity and exploitation, and enhances their earnings satisfaction.

2.10.3 The Impact of Non-Local Networks

In comparison to network size, there are few empirical studies that investigate the impact of the network contacts that an actor possesses from outside of their immediate region (i.e. non-local networks). From the few studies completed, Chen (2003) finds that non-local networks have a positive effect on the internationalization of firms. Gertler and Levitte (2005) assert that non-local networks stimulate innovation through access to diverse knowledge sets, as well as enhance the commercial viability of trade products for biotechnology firms. Furthermore, Boschma and Ter Wal (2007) conclude that non-local firm connections enhance the level of market knowledge and innovation for firms in a textile manufacturing cluster. Within the context of the creative industries, Hill (2007) suggests that non-local networks have the potential to significantly and positively impact on the operations of festivals by giving them access to other network resources.

Despite the lack of studies examining the specific relationship between non-local networks and labour precarity, and acknowledging that empirical research indicates that non-local networks generate positive outcomes for actors, it is hypothesised that a creative worker’s non-local networks enhance their labour outcomes:
H4: Non-local networks enhance earnings satisfaction, and reduce labour precarity and exploitation for creative workers.

2.10.4 The Impact of Structural Holes

As noted, structural holes comprise bridging positions between two or more actors or networks. Network actors that occupy these positions play a significant role in diffusing important information to other network actors, and empirical research indicates that actors behaving as structural holes achieve enhanced market outcomes. To this end, Stam and Elfring (2008) find that start-up software companies that occupy structural hole position have enhanced firm performance. Furthermore, Batjargal (2012) found that Chinese and Russian firms that occupy structural hole positions appear to have significantly enhanced profits for their first year of operation.

There are no specific empirical studies exploring the impact of structural holes on the labour outcomes of creative workers. However, empirical research and theory indicates that a positive relationship between structural holes and market outcomes is likely to exist. Hence, a hypothesised positive relationship between a creative worker’s structural hole position and labour outcomes is posited here:

H5: Structural holes enhance earnings satisfaction, and reduce labour precarity and exploitation, for creative workers.

2.10.5 The Impact of Cluster Engagement

The clustering concept has received significant attention within the context of the creative industries. Cunningham (2002, p. 63) first flagged that ‘clusters are the
dominant matrix to understand the creative industries.’ While others have challenged the idea that the clusters concept, in isolation, solely accounts for the market supply structures present within the creative industries (Ninan, 2005; Pratt, 2004). Clustering has provided a useful frame from which explore the interactions of creative workers, particularly in cities and urban areas (Cooke & Lazzeretti, 2008; De Propris et al., 2009; Felton et al., 2010). Furthermore, within the context of the creative industries, industry clusters have received their own title, that of the ‘creative cluster.’

Empirical research from the creative industries indicates that creative workers tend to cluster in cities and regional centres (Boix et al., 2011; De Propris et al., 2009; De Propris & Wei, 2009; Lazzeretti, Boix, & Capone, 2008). As noted, by engaging in network exchanges with like firms in a regionally-embedded agglomeration, firms enhance their access to resources which stimulate innovation, and receive patronage spillovers as a result of regional branding (Brown et al., 2010; Porter, 1998).

Vang and Chaminade (2007) find, within a film cluster based in Toronto, that the agglomeration of significant creative competence in one place enhances firm performance in some niche film markets. Bagwell (2008), in his study of creative clusters in city fringe areas, indicates that some creative enterprises tend to acquire some positive spill-over from clustering, however this is not universal all firms. In addition, Bakhshi and McVittie (2009) use an econometric methodology to show that non-creative firms in creative clusters tend to innovate more as a result of their engagement with creative firms.
Creative clusters have been shown to be a central factor in the organisation of regional creative labour dynamics (Belussi & Sedita, 2008; van Heur, 2009). Perhaps most significantly for this study, Belussi and Sedita’s (2008) investigation into the Veneto Performing Arts Cluster indicates that creative workers, in an effort to mitigate the labour precarity that results from seasonal cultural production employment, tend to embed themselves within the region’s densely connected social networks. This behaviour allows them to accumulate information about forthcoming employment opportunities, as well as receive inbound benefits in the form of recommendations for jobs by others in their social network.

With reference to the results from the Belussi and Sedita (2008) study, it is hypothesised that creative workers who engage more heavily with clusters experience enhanced labour outcomes resulting from network contact:

H6: Cluster engagement enhances earnings satisfaction, and reduces labour precarity and exploitation, for creative workers.

2.10.6 Interplay of social network structures

Previous research within the field of entrepreneurial networks indicates that development within one aspect of a person’s network structure (such as size) is generally correlates with development in other structures (such as non-local networks) (Giuliani, 2013; Yang & Liu, 2012). To this end, Yang and Liu (2012) find the structural hole position of firms within a network is positively correlated with their network size. In addition, Giuliani (2013) concludes that firms with non-local networks generally engage more heavily in clusters, and tend to have larger network
sizes. Thus, it is hypothesised here that the social network structures of network size, non-local networks, structural hole, and cluster engagement will be positively related to each other:

H7: Network size, non-local networks, structural hole, and clustering will be positively and significantly related to each other for creative workers.

The hypothetical impact of the social network structures of network size, non-local networks, structural hole, and clustering, on labour outcomes including exploitation, labour precarity and earnings satisfaction, are displayed in the following model (Figure 3.2). As all theoretical relationships need to be accounted for in a hypothetical model (Hair et al., 2010), the relationships concerning organizational business acumen are also inputted in the below model (presented as a faded circle and arrows). It is hypothesised that organizational business acumen positively co-varies with the network structure factors (Hypothesis 9 – discussed in the following sections).

Figure 2.2: Primary Model (network structure constructs emphasised)
The hypothetical model in Figure 3.2 tests the first, secondary research question guiding this study:

SRQ1: Which network structures are more significant for the labour outcomes experienced by creative workers?

While this model is useful in theoretically examining which social network structures are more significant in enhancing the labour outcomes of creative workers, in reality, an actor’s network structure is comprised of the sum of all structural dimensions, and hence the full impact of a person’s social network structure requires that these dimensions be aggregated (Yang & Liu, 2012). To this end, different actors will possess heterogeneous developments in each of their different network structures (despite any correlation), and the weaknesses and strengths created by different configurations need to be accounted for. As an example, an actor with a medium-to-large sized network may have a great many non-local network connections, but may only cluster to a medium extent. In this way, the real impact of an actor’s network structure, on resulting performance measures, can only be acquired by aggregating the structural dimensions together (Yang & Liu, 2012).

As noted above, individual social network structures are hypothesised to enhance the labour outcomes of creative workers. Thus, an aggregated (also termed higher-order) social network structure construct, comprising network size, non-local networks, cluster and structural hole, is also hypothesised to enhance the labour outcomes of creative workers.
H8: The aggregate of a creative worker’s social network structure, comprising network size, non-local networks, structural hole and clustering, enhances earnings satisfaction, and reduces labour precarity and exploitation.

This hypothetical relationship is modelled in Figure 3.3. As this model is distinct from the ‘primary model’ used above, it is henceforth termed the ‘final model.’

Figure 2.3: Final Model (social network structure higher-order variable emphasised)

The syntax involved in aggregating constructs into higher-order variables requires the individual constructs to be positively correlated (Hair et al., 2010). Thus, the hypothetical model displayed in Figure 3.3, which functions to test Hypothesis 8, is only possible if Hypothesis 7 is confirmed. The above model maps the second primary research question posed in this thesis:

PRQ2: What is the impact of social network structure on the labour outcomes of creative workers?
2.11 Co-varying Organisational business acumen and Social Network Structure

The relationship between organisational business acumen and social network structure is iterative (Rae, 2004). Rae (2004) proposes that creative workers generate new business skills as a result of engagement with their social networks; similarly, creative workers generate new network contacts as a result of their business skills. In this way, Rae (2004) postulates that a creative worker’s business skills and their social networks combine to generate a collective impact on their business outcomes. Through an application of Rae’s (2004) position to the context of creative worker’s labour outcomes, this study hypothesises that organisational business acumen and social network structure are co-varied. Such a hypothetical model operationalises Rae’s (2004) proposition to test for a generative relationship between a creative worker’s social network structure and their levels of organisational business acumen. Furthermore, it is hypothesised that organisational business acumen has a significant indirect impact through social network structure, onto labour outcomes; and similarly social network structure has an indirect impact on organisational business acumen, and resultant labour outcomes (Hypothesis 9).

H9: Organisational business acumen and social network structure are co-varied and indirectly impact on the others’ relationship with creative labour outcomes

This hypothesis seeks to test the second, secondary research question posed in this study:
SRQ2: To what extent does the social network structure of a creative worker, and their organisational business acumen, impact on their labour outcomes?

The hypothetical model is displayed in Figure 2.4.
Figure 2.4: Final Model with all relationships and constructs emphasised
2.11 Synthesis – Hypothetical models

The above paragraphs used existing theory and empirical research to propose a set of hypothetical relationships between the constructs of organisational business acumen, social network structure and labour outcomes for creative workers. All of the hypothesised relationships were combined into one of two hypothetical models: the primary model, and the final model.

The primary and final models contrast slightly in relation to the treatment of social network structure. In the primary model network size, structural hole, cluster engagement and non-local networks are treated as individual variables, each with a hypothesised relationship to the dependent (labour outcomes) variables. Thus, the primary model is used to answer the second, secondary research question concerning the impact of individual network structures on the labour outcomes of creative workers. However, as a creative worker’s social network structure is comprised of the sum of heterogeneous, though correlated, structures (Yang & Liu, 2012), the final model aggregates the social network structure variables into one higher-order variable. This aggregation allows for the combined impact of social network structure on labour outcomes to be ascertained in the statistical testing that occurs in Chapter Four. In addition, the final model allows for an analysis concerning indirect effects that occur as a result of the positive relationship present between social network structure and organisational business acumen for the labour outcomes experience by creative workers.
2.11.1 Controlling for other factors impacting on labour outcomes: Sub-sector, capacity and experience

Control variables provide the means for quantitative research, which explores the relationships between a constant set of constructs, can be compared across different contexts (Becker, 2005). Becker (2005) asserts that the theoretical effects of control variables should be disclosed in empirical research, however he notes that this often does not occur.

The hypothetical models posed in this chapter, which underpin the quantitative analysis, as well as providing a lens from which to analyse the qualitative data, have the following control variables: years of experience within the creative industries (abbreviated to firm age), whether the creative worker operates at a full-time or part-time capacity (abbreviated to capacity) within the creative industries, and whether the creative worker operates in the music, art, film, design, web, fashion, literary arts, or across multiple sub-sectors (abbreviated to sub-sector).

2.11.1.1 Sub-sectors

There is a lack of empirical research exploring the differences between the labour outcomes of creative workers that operate in different subsectors. Most research to date has focussed on a specific sub-sector, such as the music industry (Coulson, 2012), or the performing arts (Belussi & Sedita, 2008; Throsby & Zednik, 2011), architecture (Parkman et al., 2012), as well as film and media (Blair, Grey, & Randle, 2001). Hesmondhalgh and Baker (2010, p. 17), who explore the work conditions of the television, recording and magazine sectors of the creative industries, find ‘no
evidence that particular industries or genres produce more positive or negative experiences than others.’ The study by Hesmondhalgh and Baker (2010) is limited in scope, and differences appear likely when the full array of previous research is taken into account, it is hypothesised that sub-sector will impact on the labour outcomes of creative workers:

Control Hypothesis 1: The sub-sector that a creative worker operates will impact on their labour outcomes

2.11.1.2 Capacity

As noted previously, creative workers often work in other sectors owing to the poor returns associated with creative work (Cunningham, 2011; Throsby & Zednik, 2011). Throsby and Zednik (2011) conclude that creative workers who undertake non-arts work often utilize their creative skills. In this way, non-arts work is not necessarily unappealing for creative workers. However, Throsby and Zednik (2011, pp. 12-13) note that:

For artists as a whole, the 20% of their working time that they spent on average on non-arts work in 2007-08 generated a substantially larger proportion (one-third) of their income... The factors preventing artists from reducing their non-arts commitments are overwhelmingly related to the economic circumstances in which artistic occupations are pursued.

It can hypothesised that creative workers who do not work full-time within the creative industries, do so, impart as result of the dissatisfaction of the economic (and likely labour) conditions they face:

Control Hypothesis 2: Creative workers who work part time within the creative sector experience poorer labour outcomes
2.11.1.3 Years of Experience

Hesmondhalgh and Baker (2010) indicate that, while skills and experience increase over time for creative workers, their labour outcomes typically remain poor, as undercutting by fresh graduates is a threat. However, Throsby and Zednik (2011) find that inexperienced and younger creative workers are more likely to find supplementary employment outside of the sector, than older creative workers. Throsby and Zednik (2011) further suggest that this might be because older, more established creative workers experience more employment security as a result of their accumulated portfolio of creative work. Taken together, the conclusions of Hesmondhalgh and Baker (2010) and Throsby and Zednik (2011) are contradictory; however, as the Throsby and Zednik (2011) study utilizes a larger sample size, it is hypothesised that the years of experience enhance the labour outcomes of creative workers:

Control Hypothesis 3: Years of experience enhance the labour outcomes of creative workers

2.12 Chapter Conclusion

This chapter has examined the theoretical and conceptual foundations underpinning this investigation of the role of organisational business acumen and social network structure on the labour outcomes of creative workers. A theoretical application of the resource based view of the firm, and Bourdieu’s (1983: 1986) forms of capital and field of cultural production theories has been applied to the context of creative workers. The chapter also outlined literature concerning the labour and social network dynamics present within the creative industries. The chapter concluded by posing the hypothetical models that underpin the research aims of this study. The following
chapter outlines the methodological approach taken to operationalise the primary and final hypothetical models.
Chapter Three – Methodology

3.1 Introduction

One of the primary objectives of academic research is to find answers to theoretical questions that are posed within a particular field of enquiry (Rubin, 1983). To achieve this, research is guided by established structures and philosophical assumptions regarding the nature of reality. In this way, new research is connected and contextualised within the framework of previously held understanding. This study seeks to develop new, empirically derived knowledge regarding the impact of organisational business acumen and social network structure on the labour outcomes of creative workers. In order to achieve this, the research design adopted by this study utilizes a mixed methods approach, comprising an initial pilot investigation, followed by an explanatory quantitative-qualitative design. The aim of this chapter is to detail the specific steps involved in each stage of this enquiry, linking this approach with previous enquiry and research philosophy where appropriate.

3.2 Methodology

The research design underpinning this study subscribes to the philosophical assumptions that are most closely aligned to the pragmatic research paradigm. Research paradigms are a philosophical position, and possess a distinctive belief system regarding the nature reality, and how it is perceived (Morgan, 2007). In turn, paradigms influence the way in which research is conducted. The pragmatist stance adopted in this thesis is operationalised through a mixed-methods enquiry that
investigates the impact of organisational business acumen and social network structure on the labour outcomes of creative workers.

3.3 Research Paradigm

Prior to the turn of the century, two, dominant research paradigms, being positivism and post-positivism on the one hand, and social constructivism/interpretivism on the other, have dominated debate concerning the nature of truth (ontology) and ways of understanding it (epistemology). Positivism is most commonly associated with a quantitative mode of enquiry. As an ontology, positivism emphasises reality as objective truth, independent of those observing it (Morgan, 2007). Interpretivism holds that meaning is constructed through a process of induction, which involves interaction with the world, and is subject to a person’s historical and social perspective.

3.3.1 Pragmatism

Pragmatism, as a paradigm, has been offered as an alternative to postpositivist and interpretivist worldviews. Creswell and Plano Clark (2007, p. 41) claim that the pragmatism paradigm:

Draws on many ideas, including “what works,” using diverse approaches, and valuing both objective and subjective knowledge.

Morgan (2007) proposes that the key features distinguishing the pragmatic approach from the postpositivist and interpretivist paradigms concerns its emphasis on abduction, intersubjectivity, and transferability. Morgan (2007, p. 71) describes abduction as a process of ‘moving back and forth between induction and deduction.’ This requires a closed-loop process whereby observations are converted into theories, and these theories are reassessed through replication. Intersubjectivity is the notion
that while there may be both a reality external to those observing it, and an individual reality partial to the observer’s social and historical construction, a researcher should aim to build a shared meaning between the two (Morgan, 2007).

Thus, pragmatism promotes the use of mixed methods (qualitative and quantitative approaches) and encourages researchers to draw comparisons between each method in order to derive overall summations. Through this process, pragmatism resolves the issue of incommensurability of quantitative and qualitative conclusions, which is the key factor dividing interpretivist and positivist approaches. Similarly, transferability refers to the degree to which research results are bound to a specific context, or generalizable. Pragmatism implores researchers to investigate the factors that affect whether results are transferrable to other contexts; as well as encouraging a replication of research approaches in other contexts (Morgan, 2007).

Johnson and Onwuegbuzie (2004) claim that the pragmatist paradigm may be regarded as an extension of both postpositivist and interpretivist approaches, rather than an antithesis to these. This is because the features of pragmatism (i.e. abduction, intersubjectivity and transferability) resolve the duality that exists between postpositivism and interpretivism. Morgan (2007, p. 66) argues that this duality is resolved through the application of a core tenant of pragmatism, being the ‘workability’ criteria. To this end, Morgan (2007) insists that pragmatism, as a research paradigm, is concerned with research that investigates the ‘workability’ (i.e. the degree to which research can be functionally operationalised) of any potential line of action, or the basis for a warranted assertion. Philosophical assumptions regarding the nature of truth, applied to a particular line of enquiry, are thus only as important
insofar as it is useful in establishing a warranted assertion or conclusions from research findings.

As a methodology, pragmatism has been proposed as a “best” worldview for mixed methods research (Creswell & Plano Clark, 2007, p. 43). This is because it allows for a research approach that incorporates both quantitative and qualitative enquiry. To this, Johnson and Onwuegbuzie (2004, p. 14) state that:

A key feature of mixed methods research is its methodological pluralism or eclecticism, which frequently results in superior research (compared to monomethod research).

This study adopts a mixed methods approach to explore the impact of creative workers’ organisational business acumen and social network structure on their labour outcomes. An outline of the mixed methods approach, and justification for its adoption, is provided in the following section.

3.4 Mixed Methods

Creswell and Tashakkori (2007) argue that, as a design framework, the mixed methods approach concerns the process and outcomes of using both qualitative and quantitative methods and types of data. Creswell (2009) proposes that mixed methods research has come about as researchers have sought to neutralize or cancel the biases associated with using only one method in isolation. However, results that are derived through qualitative and quantitative approaches need to be assessed for convergence. In mixed methods research, the process for investigating data convergence is known as triangulation (Denzin, 1978; Creswell, 2009).
In addition, Creswell and Plano Clark (2007, p. 5) claim that researchers who conduct mixed methods research are involved in:

- The collection and rigorous analysis of both qualitative and quantitative data (based on research questions);
- Mixing (or integrating or linking) the two forms of data concurrently by combination or merging, sequentially by having once build on the other, or embedding one within the other;
- Prioritising one or both forms of data (in terms of what the research emphasises)
- A single or multiple phased program of study
- Embedding research within a philosophical world view and theoretical lenses; and
- Combining procedures into specific research design that directs the plan for conducting the study.

Creswell and Plano Clark (2007, p. 8) note that the use of a mixed methods approach is preferred when a line of research enquiry has one or more of the following features:

- The research problems suited for mixed methods are those in which one data source may be insufficient,
- Results need to be explained,
- Exploratory findings need to be generalised,
- A second method is needed to enhance a primary method,
- A theoretical stance needs to be employed, and
- An overall research can be best addressed with multiple phases, or projects.

This thesis adopts an explanatory mixed methods design to understand the role of organisational business acumen and social network structure on the labour outcomes of creative industries. This design is augmented slightly through the use of a pilot study to inform the latter quantitative and qualitative data collection and analysis processes.

### 3.4.1 Explanatory Mixed Methods Design

Figure 3.1 outlines the way in which the pilot study and primary study phases link together.
Creswell and Plano Clark (2007) contend that the explanatory design approach emphasises the quantitative research method over the qualitative, as the qualitative method (proceeding the quantitative method) is used to explain results derived from the quantitative analysis. The explanatory design is used as a mechanism to explain the trends found in quantitative analysis in more detail than reductionist approaches can provide (Creswell and Plano Clark, 2007). For this reason, Creswell and Plano Clark (2007) suggest that the quantitative phase is more closely aligned to a postpositivist framework, and that the qualitative phase is more closely aligned to a constructivist framework. However, in practice, convergence between the two perspectives is necessary in developing an overall analysis, and this convergence is achieved through the ‘workability’ criteria of pragmatism (Johnson & Onwuegbuzie, 2004).
Under the explanatory design, the results from quantitative analysis are used to make decisions about the qualitative research questions, sampling and data collection. Creswell and Plano Clark (2007) contend that the dominant reason for adopting the explanatory design is to explain quantitative statistical significance (or insignificance), positive-performing exemplars, outlier results, or to form groups based on quantitative results and follow up with groups through qualitative enquiry. Hence, this design lends itself to emergent approaches, consistent with the research aim pertaining to the study conducted within this thesis (Creswell and Plano Clark, 2007).

The explanatory design process of Creswell and Plano Clark (2007, p. 84) is utilised in this study to answer the following research questions:

PRQ1: What is the impact of organisational business acumen on the labour outcomes of creative workers?

PRQ2: What is the impact of social network structure on the labour outcomes of creative workers?

SRQ1: Which network structures are more significant for the labour outcomes experienced by creative workers?

SRQ2: To what extent does the social network structure of a creative worker, together with their organisational business acumen, impact on their labour outcomes?

The research questions that this study adopts are partial to quantitative analysis, as they focus on measuring the constructs of organisational business acumen, social
network structure and labour outcomes, and examining causality between these factors. This approach represents response to an observed paucity of quantitative research investigating causal factors for the labour outcomes of creative workers. The study is thus exploratory, and benefits significantly from its supplementary qualitative component. To this end, the qualitative data is used in this study to triangulate the results derived through the quantitative analysis.

This study separates the quantitative and qualitative analysis across two chapters (Chapters Four and Five). Chapter Four reports on the results from the quantitative analysis. Chapter Five uses overarching findings found in the quantitative analysis as themes to synthesize the qualitative data. Through this, the qualitative analysis seeks to consolidate, compare, integrate and triangulate the quantitative results.

3.5 Research design

Having discussed the methodological considerations pertaining to this study, this chapter moves to detail the application of the explanatory design of Creswell and Plano Clark (2007) to the investigation concerning the impact of organisational business acumen and social network structure on the labour outcomes of creative workers. In addition, the chapter outlines the relationship between the preceding pilot investigation, and the primary research (quantitative -> qualitative) design.

3.6 Phase 1 - The Pilot Study

The pilot investigation used in this study involved an initial and rudimentary investigation examining potential links between creative workers’ social network
structure and their labour outcomes. The investigation took place within the context of a creative cluster based in Queensland, Australia. A single case study design was used as a research framework to guide the investigation. As part of this study, social network data that mapped the interdependencies (types of relationships) between cluster members was collected through a sociogram survey and analysed using social network analysis (SNA). This network data was compared through means-score analysis with observational data concerning how active creative workers within the cluster were over a twelve-month period. The analysis enabled preliminary results to be drawn concerning the second, primary research question:

**PRQ2:** What is the impact of social network structure on the labour outcomes of creative workers?

The following paragraphs outline the method, sample, data collection and analysis employed in the pilot investigation.

### 3.6.1.1 Method

A case study method was utilised as a framework to guide the collection of data pertaining to the social network dynamics present within the studied cluster site. A case study is defined by Yin (2014, p. 237) as ‘a study that investigates a contemporary phenomenon in depth and in its real-world context.’ The specific method used to collect data was developed from the cluster case analysis toolbox of Royer et al. (2009).

The ‘cluster case analysis toolbox’ of Royer et al. (2009) proposes a set of research protocols and guidelines for investigating cluster operations under the resource-based
view of clusters (reviewed in Chapter Two). Royer et al. (2009) indicate that cluster case studies contain the following processes:

1) Locate, identify and profile horizontal, vertical and lateral cluster members,
2) Account for cluster activity pertaining to firms by mapping types of relationships and interdependencies that exist between cluster members, and
3) Analyse the internal dynamics of the cluster resulting in rent generation.

(summarised from Royer et al., 2009, pp. 11-12)

These three steps were applied to the cluster case site to develop base-level data concerning the function of social network structures for creative workers.

3.6.1.2 SAMPLING FRAME

Brown et al. (2010) indicate that clusters are built around a central product or service. To this end, these authors note that horizontal, vertical and lateral cluster members can be identified by their engagement with the production of a central product within a geographical area. The central product of the case site used in this investigation was music. Within this cluster, the production of music occurred in two forms: a recorded form produced by a music studio within the cluster, and live music performances that occurred at entertainment venues and festivals located within the cluster. Those who produced this music, i.e. the musicians and musical groups, were categorised as the cluster’s horizontal actors. Those who provided a platform for the distribution of the music, thus venues, festivals and studios, were identified as the cluster’s vertical actors. In addition, another vertical actor included a music manager, that operated on behalf of music groups to organise performance opportunities. As noted in Chapter Two, lateral actors in a creative cluster include organisations, such as education bodies and government agencies, pertaining to the central cluster product.
A total of twenty-five cluster members were identified through the cluster identification process (displayed in Table 3.2). This included fourteen horizontal actors comprised of six musical ensembles (bands), five solo musicians, and three disk-jockeys (DJs). Ten vertical actors were identified, including: four venues (bars) that hosted musical performances, two regionally embedded annual music festivals, one music manager company, one market (open-air performance venue), and one recording studio. The cluster case site also had one lateral actor that was a government-funded economic development body. The pseudonyms used to identify these firms are listed in the following table.

Table 3.2: Pseudonyms used to represent cluster sample

<table>
<thead>
<tr>
<th></th>
<th>Horizontal Actors</th>
<th>Vertical Actors</th>
<th>Lateral Actors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Music Groups</td>
<td>Solo Musicians</td>
<td>DJs</td>
</tr>
<tr>
<td>1</td>
<td>Band 1</td>
<td>Singer 1</td>
<td>DJ 1</td>
</tr>
<tr>
<td>2</td>
<td>Band 2</td>
<td>Singer 2</td>
<td>DJ 2</td>
</tr>
<tr>
<td>3</td>
<td>Band 3</td>
<td>Singer 3</td>
<td>DJ 3</td>
</tr>
<tr>
<td>4</td>
<td>Band 4</td>
<td>Singer 4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Band 5</td>
<td>Singer 5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Band 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The process for identifying cluster members in the case site involved a snowball sampling mechanism embedded within an online social network mapping survey, which was distributed to identify cluster members. Neuman (2003, p. 213) defines snowball sampling as:

A non-random sample in which the researcher begins with one case, and then based on information about interrelationships from that case, identifies other cases, and repeats the process again and again.
The first cluster member identified in the studied cluster case was a lateral actor (mapped as lateral actor 1 in the following supplementary study), which was a government funded economic development agency. The agency identified several other cluster members belonging to the local music supply chain, and the online social network mapping survey was offered to these members. This process continued as new cluster members were identified, until no new cluster members were identified.

3.6.1.3 DATA COLLECTION TOOLS

3.6.1.3.1 Sociogram

As mentioned above, the primary data collection tool used to locate, describe and map relationships between cluster members was an online social network mapping survey. The survey collected cluster member profile information and sociogram (network) data. Profile information included each respondent’s stage/band name, as well as general biographical information concerning their music and music related experience.

A sociogram maps the ‘interaction patterns and relationships of small groups’ (McMurray et al., 2004, p. 114). In sociograms, survey respondents identify other network members with whom they have relationships from a list. If a respondent has not previously identified a network member, this person can be added to the total network list.

3.6.1.3.2 Mapping types of relationships
Table 3.3: Sociogram Question set used to establish types of interdependencies with cluster members

<table>
<thead>
<tr>
<th>Identify cluster members who you have an existing relationship with</th>
<th>In what ways are you connected to this cluster member?</th>
<th>We are friends</th>
<th>We have occasionally transacted financially</th>
<th>We have an ongoing commercial relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster Actor 1</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
</tr>
<tr>
<td>Cluster Actor 2</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
</tr>
<tr>
<td>Cluster Actor 3</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
</tr>
<tr>
<td>Cluster Actor “n”</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
<td>Yes/no</td>
</tr>
</tbody>
</table>

The social network mapping survey used a matrix of questions (as displayed in Table 3.3) to identify existing connection types (interdependencies), and the nature of these connections (e.g. friends, occasional financial relationship and/or ongoing commercial relationship), between cluster members and the survey respondents. The questions used to map the interdependencies were developed from a study by Keast (2001), who explored the interdependencies between public service delivery agencies. The research tool of Keast (2001) has been previously integrated within the resource-based view of clusters conceptualisation of Brown et al. (2010), and was itself evolved from the social network mapping tools used by Provan and Milward (1995).

3.6.1.5 Observations

In addition to the online survey, structured observations were collected concerning the amount of local paid performances conducted the cluster’s horizontal actors over a twelve-month period. McMurray et al. (2004, p. 198) define structured observations as ‘making observations that are both objective and realistic.’ These observations were collected through the act of observing the performance schedules of venues and festivals, local to the cluster. This activity was logged in the form of research field notes. Data concerning the first observation was used to ascribe each cluster member
a local activity level score and horizontal members of the studied cluster were
categorised in one of three following activity level descriptors:

- Highly active: indicating that the horizontal member of the cluster had
  performed more than six times over the past twelve month period in the
  venues and/or festivals belonging to the cluster
- Active: indicating that the horizontal member of the cluster had performed
  between three and six times over the past twelve month period in the
  venues and/or festivals belonging to the cluster
- Not active: indicating that the horizontal member of the cluster had
  performed less than two times in the past twelve month period in the
  venues and/or festivals belonging to the cluster

The activity levels were not adjusted for income sustainability as different sets of
actors were charging, and receiving, significantly different increments of payment.
Different venues were charging often-incomparable payment structures. For example,
band and DJ performers generally received higher payments in comparison to solo
musicians. Further, payment for festival performances were vastly different to the fees
offered to those occupied weekly residency positions. Furthermore, with respect to the
size, regional location and amount of venues available to perform in within the cluster
confines, the labels of ‘highly active,’ ‘active’ and ‘not action’ are relative. Clusters
located in more urban and inner-city regions are likely to provide more opportunities
for performance.

3.6.1.6 Data Analysis

3.6.1.2 Network Data Analysis
Analysis of the sociogram data utilised social network mapping software – NetDraw, and social network analysis software – UCITNET 6.0. The NetDraw and UCINET 6.0 programs, developed by Borgatti, Everett, and Freeman (2002), to map sociometric data and automate specific network analysis algorithms. The software was used to both map the relationships for the studied cluster, as well as derive scores for actor-specific network data pertaining to individual social network structure variables: cluster network size and the structural hole position within the cluster. Data concerning actors’ non-local networks was not collected in the pilot study because network structures fell outside of the scope of cluster analysis. In addition, cluster engagement was not quantified beyond inclusion within the analysis. Future SNA studies examining regional creative labour distribution should account for a broader array of impact variables (such as non-local networks) as these is shown to be significant (see Chapter Four).

The network size for each horizontal actor within the cluster was calculated using the degree centrality algorithm in UCINET 6.0. Degree centrality is defined by Borgatti (2005, p. 62) as ‘the number of ties incident upon a node’ and, in this way, is directly representative of the size of an actor’s network within the cluster. UCINET 6.0 generates two scores pertaining to a network actor’s degree centrality, these are: a) outdegree which represents the number of ties that an actor identifies as possessing to other network actors, and b) indegree which represents the number of other network actors who identify as having a tie with a focal actor. A composite variable representing the overall percentile rank of each actor was generated through averaging the outdegree and indegree percentile rankings for cluster members. This process is comprehensively described in the following supplementary study.
The structural hole position of each horizontal actor was calculated using the three structural hole algorithm generators of UCINET 6.0. These algorithms correspond to a network actor’s:

i) Effective network size,

ii) Efficiency

iii) Constraint

Effective network size represents the ‘number of alters that a focal actor has, minus the average number of ties that each other network actors has’ (Hanneman & Riddle, 2005, p. 8). Thus, those network members that possess a high effective network size represent the bridges within a network by which members access each other. The efficiency algorithm normalizes ‘the effective size of network actor’s network by it’s actual size’ (Hanneman & Riddle, 2005, p. 8). In this way, the efficiency measure indicates ‘how much impact ego is getting for each unit invested in’ (Hanneman & Riddle, 2005, p. 8). Thus, a network actor that acts as a bridge for (at least one) other network member(s) is more important than the network actor that bridges multiple redundant positions. Constraint provides a measure that ‘taps the extent to which a network actor’s connections are to others who are connected to one another’ (Hanneman & Riddle, 2005, p. 8). Network members with higher constraint levels have multiple network pathways by which to access resources. A composite variable representing the average structural hole position was developed by averaging the percentile rank of each cluster member’s effective network size, efficiency and constraint scores

4.6.1.4 OBSERVATIONAL DATA ANALYSIS
The observations concerning the number of performances conducted by each music group (and hosted by each venue) in the cluster was reduced from a numeric count, into categorical data. Categorical data assigns data into categories (Field, 2013). In this study, horizontal members of the cluster were categorised as being either ‘very active’, ‘active’ or ‘not active,’ corresponding to how often they performed locally within the twelve-month period and defined in section 4.5.1.5. The reduction of data allowed for simplified mechanism to compare the average network structures scores of different network actors corresponding to their activity categorization.

### 3.6.1.3 Linking Observation and Network Data

The average percentile score representing the network size and structural hole position of actors examined within this study were tabulated against their local activity level. Frequency analysis was conducted to determine links between the social network structure data and activity levels of cluster members. The validity of this data analysis method corresponds to the limited scope of the pilot study, and is discussed in the following paragraph.

### 3.6.2 Validity, Reliability and Ethical Considerations

Yin (2014) identifies three dimensions of validity relevant to research, these are construct validity, internal validity and external validity. Construct validity is an assessment of the degree to which concepts are contained within operational measures (Yin, 2014). Further, Yin (2014) notes that, as case studies seek to analyse a range of data in order to develop valid conclusions concerning constructs, identifying the boundaries of where one construct finishes and another begins is particularly
challenging. However, in the case of this pilot research project, and with reference to its limited scope of analysis, the constructs explored were easily identifiable and measurable. This was because the data collection, including observations and network mapping, was limited to well-defined and reducible quantitative data.

Internal validity is a measure of the degree to which a causal relationship (i.e. whereby certain conditions are believed to lead to outcomes) can be established as over that of an otherwise spurious relationship (Yin, 2014). Hence, internal validity is particularly relevant for explanatory and causal studies. However, in exploratory research, such as this pilot investigation, internal validity can be difficult to establish (Yin, 2014). Rather than seeking to reach a conclusive level of internal validity, the aim of the pilot study was to observe whether a ‘general trend’ is evident linking social network structure factors with local performance activity in order to provide a robust platform to undertake the proceeding quantitative study.

The internal validity of case study research is enhanced when i) pattern matching is conducted, ii) explanations are built comprehensively, iii) rival explanations are addressed, and iv) a connection of logic between established theory and observation is undertaken (Yin, 2014). The pilot case study undertook pattern matching between the collected observations (field notes) and the sociogram data. Furthermore, explanations were grounded in theory, with rival explanations explored. On balance, noting the small scale of the pilot study, internal validity was sufficient to warrant the further research conducted through the proceeding quantitative and qualitative phases.
External validity concerns the ability of conclusions, drawn from a particular study, to be applicable beyond the immediate research context (Yin, 2014). In single-case studies, such as the pilot research discussed here, external validity is enhanced through a strong connection with theory; however, it is acknowledged that external validity is generally a challenge when a single case design is adopted (Yin, 2014). While the pilot study was grounded in theory concerning the social network dynamics of creative work (as discussed in Chapters Two), the external validity of the pilot study was limited. This is particularly due to the use of a small sample size, and the possibility that observed trends were impacted by case-specific variables that may or may not be present in other creative cluster sites. In contrast, the external validity of the proceeding quantitative and qualitative phases of this thesis sought to develop conclusions that were more generalisable.

Reliability is an assessment of the degree to which the conclusions drawn from a study would be the consistent if other comparable research was to undertake the same processes (Yin, 2014). In practice, ensuring that an objective research project is reliable involves acknowledging and limiting the impact of bias from both the researcher, as well as the research participants, all of which may influence or change the nature of what is being perceived. In the case of this pilot investigation, pattern matching between the data collected from respondents, and the data observed by the researcher, was used to assess the accuracy of collected data. However, social network research, in general, suffers from a significant reliability issue concerning a network actor’s ability to recall the relationships they have with other network actors (Burt & Ronchi, 1994). The chance of inaccuracies is increased when social networks are large. While the network in the context of this investigation was confined to the
boundaries of the geographical cluster and was thus relatively small, there was still a chance that inaccuracies were present. This reliability consideration prompted an alternative network data collection strategy in the proceeding quantitative study.

The pilot study, and research tools used to collect the data, were subject to expedited ethical research review and clearance by Southern Cross University (approval number ECN-15-047). As part of the conditions for research, all participants (in this instance - cluster members) were de-identified in the analysis and presentation of results.

3.7 Phase 2 – Quantitative Study

3.7.1 Overview

The second phase of the research design, used to examine the impact of organisation business acumen and social network structure on the labour outcomes of creative workers, adopted a quantitative approach. This component formed the primary phase of the explanatory mixed methods design template of Creswell (2009). The aim of quantitative analysis is to observe patterns and relationships within numeric data using statistical reasoning (McMurray et al., 2004).

The quantitative component conducted as part of this study analysed 271 responses to a randomly administered survey targeting Australian creative workers. The survey used psychometric measures to collect data concerning respondents’ levels of organisational business acumen and social network structure (network size, cluster
engagement, non-local networks and structural hole), and labour outcomes (exploitation, earnings satisfaction and labour precarity). Psychometric measures seek to quantify the presence of abstract constructs in survey respondents (Hinkin, 1998). This is achieved through the development of multiple questions (termed items) that represent observable dimensions of a construct, which are converted into numeric data, in this case, through the use of a Likert Scale. To this end, survey respondents indicated their affinity to a particular survey question by rating it on the Likert Scale (ranging from one-to-five in this instance) (Hinkin, 1998).

When a sample of respondents is large enough, the reliability and validity concerning how well the numeric data represents a construct can be assessed using exploratory and confirmatory factor analysis (Hinkin, 1998). Factor analysis uses a number of statistical tests to identify and remove items that have a low correlation to a construct; further item removal is achieved through factor analysis when items are too strongly correlated to one, or more, other factors, in order to reduce the chance of multicollinearity. Multicollinearity exists when one or more items from one construct are very closely (and linearly) related with another construct (Field, 2013). If multicollinearity exists between factors used in quantitative studies, the findings generated through analysis are not adequate, as the constructs are too similar and cannot be separated from each other, thus the cause, and effect, is not discernable. The results of the exploratory and confirmatory factor analysis for the constructs examined as part of the quantitative study are presented at the beginning of Chapter Four.
3.7.2 Parameters of Robust Quantitative Analysis

Valid factors representing one theoretical construct can undergo multivariate analysis to assess the probability that there is a significant relationship present with other constructs (Ping, 2004). Statistical significance testing assesses the probability that a relationship between two or more factors is not due to chance (Neuman, 2003), and hence the constructs are linked (i.e. the presence of one construct is coupled with the presence of another, strongly related construct).

Statistical significance testing typically occurs at the .05 level, which mean that ‘there is a 95 per cent chance that the sample results are not due to chance factors alone, but reflect the population accurately’ (Neuman, 2003, p. 371). Hence, a relationship between two or more factors is said to be statistically significant if the p-value score is below .05. However, notwithstanding the validity and reliability of a construct, there are a number of other conditions that need to be satisfied in order for statistically significant relationships to be observed accurately. Such conditions relate to:

- The distribution of each factor
- The total sample size used to test a theoretical model
- The presence of controlling factors (such as demographic and contextual variables) that may affect a relationship between two or more variables
- The premise or proposition of a theory that contextualises the relationship between two or more factors

These parameters are applied to the data used to undertake the quantitative study pertaining to this thesis in the following paragraphs.
3.7.2.1 Distribution

When a sample of respondents provides quantitative data concerning a particular construct, or set of constructs, this data is reduced to measures of central tendency that numerically represent the construct. The numerical representation of a construct is referred to as a variable. Two of the most important measures of central tendency used to represent a variable, in analysis, are the standard deviation (Kalleberg, Marsden, Aldrich, & Cassell) and the mean score (Neuman, 2003). The SD and mean of one variable are able to be compared with another variable when both variables are normally distributed. A variable that is normally distributed presents as a bell curve shape when the distribution of responses are mapped, and has a kurtosis and skewness score of between -2 and +2 (McMurray et al., 2004). Kurtosis ‘measures the degree to which scores cluster in the tails of a frequency distribution, and skewness is ‘a measure of the symmetry of a frequency distribution’ (Field, 2013, pp. 878, 884). For the analysis of parametric data using statistical reasoning, ‘it is a requirement that the data not be too skewed or too far from a normal distribution’ (McMurray et al., 2004, p. 132). Normality testing was undertaken for the measures used in the quantitative study. Results from the normality testing are detailed prior to the presentation of quantitative models in Chapter Four.

3.7.2.2 Sample Size: Sample Representativeness

The sample size used in quantitative research can have a significant impact on how generalisable the results are to an entire population. Where possible, the sample used in quantitative research should seek to be representative of a population (Neuman, 2003). In the situation where the total number of a population is known, a researcher typically adopts a simple random sampling technique to select a portion of the
population in an unbiased manner (Neuman, 2003). However, a simple random sampling approach requires that the total population is known and contactable.

The population of Australian creative workers is estimated to be above 100,000 persons, but an accurate number is not known (Cunningham et al., 2010). When organisational research is conducted in contexts where a total population list cannot be constructed, a convenience sampling approach is often adopted (Kalleberg et al., 1990). Neuman (2003) describes convenience sampling as a process of getting ‘any cases in any matter that is convenient.’ Research that adopts a convenience sampling approach endeavours to undertake multiple replications of an original study using other samples. Through this mechanism, the applicability of original findings to the population can be assessed (McMurray et al., 2004).

Respondents to the quantitative survey used in this study were, for the most part, random. However, the total sample size was only n=271, thus the representativeness of this sample to the population of Australian creative workers is hence difficult to determine accurately. Despite this, the sample size of 271 individuals provides an adequate sample to undertake an initial quantitative analysis of the social network structure and organisational business acumen factors that impact on the labour outcomes of creative workers.

3.7.2.3 Sample Size: Analysis Accuracy

The sample of respondents used in quantitative analysis may also impact on the representativeness of generated results to a population. As a general rule, the sample
used to test relationships between constructs should not be too large nor too small (Hinkin, 1998).

A key issue with creative industries statistics in Australia (the context of this study) is that group data has not been collected in national (ABS) statistics. At present, advertising and media jobs are grouped with other industries (retail), performing arts jobs are accounted for, but only equate to an approximated 55,000; and data freelance/self-employed statistics within creative fields are not known. Cunningham et al. (2010) have estimated that there are above 100,000 creative workers operating in Australia, however specific group sizes/ages and genders are not given. This issue is more pronounced in Australia, than in other countries such as the United Kingdom since it has amended their data collection strategies for the creative industries (Cunningham et al., 2011).

Samples that are too large or too small can result in the generation of a type one or type two error. A type one error occurs when a researcher observes a significant link between two or more factors in a sample that would not exist in the population (Neuman, 2003). In contrast, a type two error exists when no significant relationship is found between tested items, in a sample, however such a relationship exists in the population (Neuman, 2003). Similarly, samples that are small may possess a disproportionate distribution of one factor, and researchers adopt random (as opposed to selective) samples to ensure the distribution more adequately reflects the population. As an example of a type one error, if a researcher sought to investigate the relationship between intelligence levels and pay scales for Australian employees, and used a very small sample of respondents who (by chance) happened to be highly
intelligent to undertake the research, the relationships between the two constructs present within this small and select sample would not likely reflect the entire population. Hence, the researcher is at risk of making a type one error.

In addition, the relatedness between factors is known to increase when sample sizes are above 500 (Hair et al., 2010). This is because, as sample sizes increase, the likelihood that they exhibit a perfectly normal distribution is enhanced, and this gives the impression that two constructs are statistically related in quantitative analysis, yet such a relationship may not exist in reality (thereby creating a type one error). The sample size, used to conduct the quantitative analysis pertaining to this study, of n=271 was neither too small, nor too large, for analysis. However, as noted above, the representativeness of this sample to the entire population of creative workers is difficult to establish.

The kind of multivariate analysis adopted by researchers has different stipulations regarding optimal sample sizes. Structural equation modelling (SEM) is used in this study to observe relatedness between variables. However, the sample size used to conduct SEM analysis can impact on the goodness of fit indices, as well as the accuracy of generated results. The goodness of fit indices are a set of statistical test that indicates the degree to which data used in analysis fits the tested hypothetical model, and provides an indication of the validity of statistical testing. At a minimum, Hair et al. (2010) recommends a sample size of 200 for SEM analysis, with a larger sample size needed when models involve many factors or are complex. The final model adopted in this thesis for quantitative analysis used a higher-order variable (for social network structure), which increased the complexity of the model. With this
taken into consideration, the sample of n=271 used for SEM analysis presents as acceptable, though a slightly larger sample size would be optimal.

The sample size used in quantitative studies may also impact on the accuracy of factor analysis processes. With reference to the sample size needed to conduct a valid factor analysis, Hinkin (1998, p. 110) noted that ‘recommendations for item-to-response ratios range from 1:4 (Rummel, 1970) to at least 1:10 (Schwab, 1980).’ Field (2013), summarizing previous approaches to factor analysis sample size requirements, concluded that ‘a sample size of 300 or more will probably provide a stable factor solution.’ The sample size used in the factor analysis conducted as part of this study, of n = 271, was close to the optimal level of 300 as suggested by Field (2013). Furthermore, the items-to-response ratio employed in the factor analysis was 48 items to 271 responses, which equated to a 1:6 item-to-response ratio. This ratio was above the minimum suggestion of Rummel (1970).

3.7.2.4 Control variables

For a relationship between two or more constructs to be accurately determined in statistical analysis, potential effects caused by ‘alternative explanations’ must be controlled for (Neuman, 2003, p. 362). In SEM analysis, theoretical models use control variables to ensure that effects created by ‘alternative explanations’ are accounted for. As noted in Chapter Two, control variables also provide the means by which quantitative research exploring the relationships between tested constructs can be compared (Becker, 2005). This is achieved through the replication of survey items across different sample groups, while the original control variables are retained,
allowing conclusions to be comparable. As noted in Chapter Two, the quantitative analysis used in this thesis adopt three control variables: firm age, capacity and subsector.

### 3.7.2.5 Theoretical Relationship

For a statistical relationship between two or more factors to be valid, the reasoning for such a relationship must be grounded in theory. In nature, significant correlations between unrelated factors can occur randomly. Thus, to support evidence that a significant relationship is true, and not the result of a random or spurious effect, a hypothetical relationship between two or more variables must be grounded in theory (Hair et al., 2010). In Chapter Two a theoretical and conceptual outline was provided concerning the constructs: organisational business acumen, social network structure and labour outcomes, and the relationships present between them. The hypothesis drawn are therefore based in theory.

### 3.7.2.6 Method of Analysis

This quantitative study conducted in this thesis analysed responses from an online, self-report survey that employed psychometric questions to measure the levels of organisational business acumen, social network structure and labour outcomes for a sample of Australian creative workers. The survey questionnaire measurement development framework of Hinkin (1998) was used to develop survey questions. The collected data was tested to ensure that items presented as normally distributed (normality testing is presented in Chapter Four). The original scales were refined through exploratory and confirmatory factor analysis, and then subjected to SEM
analysis. SEM combines confirmatory factor and regression analysis to provide a highly advanced and rigorous mechanism to test hypothetical relationships between variables (McMurray et al., 2004). In addition, SEM allows for the simultaneous measurement of relationships between constructs, as well as an indication of how well the sampled data fits a model (Field, 2013). For this reason, it is generally regarded as one of the most advanced forms of multivariate analysis.

In SEM analysis, the hypothetical paths representing theoretical relationships between examined variables is analysed simultaneously, and the strength and significance of the paths is observed (McMurray et al., 2004). In addition, SEM analysis has advanced capability in identifying indirect effects caused by mediator and variable combinations (Hair et al., 2010). The second, secondary research question (SRQ2) used in this study investigates the combined, indirect effect generated by social network structure and organisational business acumen on labour outcomes. Hence, SEM provides a robust and advantageous analytical platform from which to investigate an answer for this question.

3.7.2.7 Justification for the Psychometric Estimation Method

As noted in Chapter Two, researchers investigating the structural components of social networks have traditionally utilised a social network analysis (SNA) method (as per the pilot investigation of this thesis). However, more recently, the psychometric estimation method for ascertaining network structure has been employed in multivariate analysis research, as the method possesses several advantages over SNA.
As an analysis method, SNA provides an advanced mechanism to investigate the structural elements of social networks (Borgatti & Halgin, 2011). However, SNA suffers from a methodological limitation of scale, as a) collecting data for large networks becomes challenging and is prone to inaccuracies (Butts, 2003; Ferligoj & Hlebec, 1999; Kogovsek & Ferligoj, 2005), and b) the sampling frame is non-random (termed ‘fixed node’), which impedes its transferability (Robins et al., 2006). Furthermore, as the data representing distributions of network structures can vary significantly from highly connected actors to actors that possess relatively few connections, the data can possess non-parametric properties, thereby increasing the complexity of its use in multivariate analysis. Finally, SNA in isolation cannot statistically account for the effects generated by other non-network variables (such as organisational business acumen in the case of this thesis).

To overcome the limitations associated with the use of SNA, researchers have turned to the psychometric approximation method to compare the impact of different network structure resources of randomly selected actors on outcomes by using multivariate analysis. However, the approach is limited in its ability to derive information about specific network microstructures (such as strong and weak ties). In summary, the psychometric approximation method adopted in this quantitative study allowed for the capture and analysis of parametric network and non-network data, and hypothetical relationships between constructs to be tested.

3.7.2.8 Sampling Frame

The quantitative study used an online survey that was made available to a database of 750 Australian creative workers. The database was constructed through a search of
online creative industries advertising websites, as well as registries of Australian-based creative industries networks. A list of websites used to generate the database is provided in table 3.4.

Table 3.4: Websites used to generate database used in quantitative analysis

<table>
<thead>
<tr>
<th>Website Hosting Body</th>
<th>Description</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple J Unearthed</td>
<td>Registry for emerging contemporary musicians based in Australia. The website is linked to an online radio station – Triple J unearthed – that is funded as part of Australia’s national broadcaster network.</td>
<td><a href="http://www.triplejunearted.com">www.triplejunearted.com</a></td>
</tr>
<tr>
<td>The Loop (Australia)</td>
<td>The Loop is an online registry of Australian creative workers, spanning visual arts, photography, film, illustration and graphic design.</td>
<td><a href="http://www.theloop.com.au">www.theloop.com.au</a></td>
</tr>
<tr>
<td>Creative Arts Network Western Australia</td>
<td>The Creative Arts Network Western Australia provides a community artist network and undertakes productions and education in the area of creative industries in regional and urban communities in Western Australia.</td>
<td><a href="http://www.canwa.com.au">www.canwa.com.au</a></td>
</tr>
<tr>
<td>Blue Mountains Artists Network</td>
<td>The Blue Mountains Artists Network provides a registry of visual artists and designers based in the Blue Mountains region of New South Wales, Australia.</td>
<td><a href="http://www.bman.org.au">www.bman.org.au</a></td>
</tr>
<tr>
<td>Northern Rivers Creative</td>
<td>The Northern Rivers Creative provides an online registry of writers, performing and visual artists, fashion designers, digital (Merriam-Webster.com), music and film-based media. Registry members are based in the Northern Rivers Region of New South Wales, Australia.</td>
<td><a href="https://artsnorthernrivers.com.au/nrc/">https://artsnorthernrivers.com.au/nrc/</a></td>
</tr>
<tr>
<td>The Southern Gold Coast Music Hub</td>
<td>The Southern Gold Coast Music hub provides an online registry of musicians and affiliated businesses that are based in the city of the Gold Coast, Queensland, Australia</td>
<td><a href="http://www.sgcmusichub.com">www.sgcmusichub.com</a></td>
</tr>
<tr>
<td>Rabbit and Cocoon</td>
<td>Rabbit and Cocoon is an artist precinct based in the city of the Gold Coast. The precinct is made up of forty arts, fashion, web, design and film based businesses, and also acts as a performance space for musicians and other performing artists.</td>
<td><a href="http://rabbitandcocoon.com/spaces/">http://rabbitandcocoon.com/spaces/</a></td>
</tr>
</tbody>
</table>

Where available, publicly available email contact information of Australian creative workers was collected from these websites, and invitations were sent out to potential
respondents to participate in the research. In addition, respondents to the survey were given the option to provide the contact information of other creative workers with whom they were connected. This mechanism provided a snowball sampling mechanism that, despite not achieving a great response rate, was nevertheless useful in requisitioning responses from creative workers whom did not appear in the original database.

A total of 750 emails were sent to the database with a description of the research and a link to the online questionnaire. 318 responses were received, however this included 47 responses that were almost entirely incomplete (respondents accessed the online questionnaire site without responding). The remaining sample size was 271 respondents (36.1%). Of the sample of 271 creative workers, 31.7% worked in the visual arts and graphic design, 25.8% worked in music, 25.8% worked across multiple art forms, 7.4% worked in the literary arts, 5.9% worked in film, and the remaining 3.4% worked in web design. Furthermore, 1.5% of the sample worked in the creative industries for between 0-12 months, 6.6% between 1-3 years, 20.3% between 4-7 years, 22.9% between 8-14 years and 48.7% for 15 or more years. 73.5% of the sample identified as working in a fulltime capacity within the creative sector, whereas 26.5% worked only part of the time in the sector. No sampled item had more than 3.0% data missing. In the instances where data was absent, the item mean was used in its place (Hair et al., 2010).

3.7.2.9 Measure development
Developing valid and effective psychometric scales to measure the presence of abstract constructs within a sample is a complex process (Hinkin, 1998). For this reason, Hinkin (1998) recommends that, where possible, surveys make use of pre-existing scales that have undergone validation processes. However, as a result of the paucity of behavioural quantitative research within the context of the creative industries, the literature review conducted as part of this study yielded no appropriate quantitative scales corresponding to the constructs under investigation. In the related field of entrepreneurial networks, two pre-validated scales were identified that had some conceptual relatedness to the network size and structural hole constructs as they are conceptualised within the context of this study. However, these scales, developed by Yang and Liu (2012), were heavily contextualised within the context of the manufacturing industry and, as such, the language used in these scales was deemed to have poor face validity for the context of the creative industries (this is discussed further in reference to the redevelopment of these scales in the following chapter). Thus, in the absence of applicable pre-validated measures, the survey questionnaire measurement development framework of Hinkin (1998) was used to generate psychometric scales corresponding to the constructs under examination within this study.

The ‘survey questionnaire measurement development framework’ of Hinkin (1998) outlines a six step process to generate valid and reliable survey items. The stages of this framework are provided below:

1) Item Generation
2) Questionnaire Administration
3) Initial Item Reduction (exploratory factor analysis)
4) Confirmatory Factor Analysis
5) Convergent/Discriminant Validity
6) Replication

(Hinkin, 1998, p. 106)
The application of the ‘survey questionnaire measurement development framework’ to the constructs of organisational business acumen, social network structure, and labour outcomes are discussed in the quantitative analysis chapter (Chapter Four). In addition, discussion concerning the statistical reliability of each of the developed measures is presented at the beginning of the Fourth Chapter.

3.7.2.10 LIMITATIONS OF THE SELF-REPORT SURVEY APPROACH

Research examining psychological and organisational factors has been generally reliant on self-report survey approaches. However, this approach is open to self-report bias as respondents may ‘respond in a way that makes them look as good as possible’ (Donaldson & Grant-Vallone, 2002, p. 247), or to please the researcher. Hence, a limitation of the quantitative study concerns its reliance on a self-report survey to inform the analysis.

Researchers can minimize the self-report bias in surveys when the level of sensitivity pertaining to a measured construct, as well as respondent characteristics and situational pressures is considered (Donaldson & Grant-Vallone, 2002). Moreover, the self-report survey method presents as appropriate on the condition that the measures used reflect an extensive literature review, and pattern matching is used to support interpretation of the data (Spector, 1994). The measures used in the quantitative study were developed from an extensive review of previous research (this is outlined further in Chapter Four). Furthermore, the results developed through the quantitative analysis were triangulated with the qualitative data. To this end, the statistically significant relationships generated through quantitative analysis formed
the themes that informed the coding of the qualitative data, and convergence and
divergence between the quantitative results and qualitative data was examined (this
process is discussed in Chapter Five of this thesis).

3.7.2.11 Ethical Framework for Quantitative Research

As the survey did not ask questions of an overly sensitive or personal nature, the
quantitative component of research conducted within this thesis was subject to
expedited ethical review and approval. The survey received clearance (ECN – 15-47)
from Southern Cross University. A stipulated requirement of this was that
respondents could not be identified in analysis and that participation would be
voluntary.

3.7.2.12 Summary of Quantitative Approach

In summary, the quantitative component of the research design adopted in this thesis
utilised SEM analysis to test the hypothetical relationships pertaining to sets of
constructs, which were measured through sets of psychometric scales. The constructs,
refined through exploratory and confirmatory factor analysis, correspond to
organisational business acumen, social network structure (network size, non-local
networks, cluster engagement and structural hole) and labour outcomes (labour
precarity, exploitation and earnings satisfaction) for creative workers. Further
discussion of the reliability of the quantitative data used in analysis is conducted in
Chapter Four.
3.8 Phase 3 – Qualitative Study

3.8.1 Overview

The qualitative study undertaken in this thesis analysed responses to semi-structured interviews conducted with fifteen Australian creative workers. As this qualitative phase corresponded to the final stage of the explanatory mixed methods design, it was primarily used as a vehicle to interpret and explain the findings resulting from the quantitative analysis. To this end, interview questions were generated following the completion of the quantitative analysis. In addition, results from the quantitative analysis were used as a reference to code and interpret the qualitative interview data.

3.8.2 Research Tool: Semi-structured interview

Semi-structured interviews are flexible and allow time for respondents and the interviewer to expand on points of interest (McMurray et al., 2004). Furthermore, a researcher may employ a range of question types in semi-structured interviews including: probing questions, closed questions, open-ended questions, leading questions and neutral questions (McMurray et al., 2004). These question types are examined in Table 3.4.

<table>
<thead>
<tr>
<th>Probing questions</th>
<th>Probing questions can require respondents to elaborate, clarify, repeat or reflect on an initial response to generate (McMurray et al., 2004).</th>
</tr>
</thead>
</table>

Table 3.4: Question types
Closed questions: Closed questions are specific and ‘generate yes or no responded’ (McMurray et al., 2004, p. 197).

Open questions: Open questions ask for ‘broad or general information’ about a topic (McMurray et al., 2004, p. 198). These questions seek to garner respondents’ extended opinions, perspectives, positions and/or interpretations regarding a given stimulus.

Leading questions: In leading questions, ‘the interviewer suggests explicitly or even implicitly what the answers should be’ (McMurray et al., 2004, p. 199).

Neutral questions: Neutral questions are not loaded, in that there is no right or wrong answer. Instead neutral questions seek to get accurate information from a respondent regarding their position on a given stimulus (McMurray et al., 2004).

The questions that were posed to respondents involved in the qualitative study of this thesis are listed in Table 3.5.

Table 3.5: Semi-structured interview questions

<table>
<thead>
<tr>
<th>Order</th>
<th>Question</th>
<th>Question type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Please tell me about what you do in the creative industries</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>2</td>
<td>What is the size of your social network?</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>3</td>
<td>Are you a receiver or ‘passer-on’ of information within your network?</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>4</td>
<td>Do you work with people from outside of the region?</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>5</td>
<td>Do you work at or belong to a creative cluster or precinct?</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>6</td>
<td>Are your friends also your colleagues?</td>
<td>Closed / Neutral</td>
</tr>
<tr>
<td>7</td>
<td>Describe the quality of your working conditions in the creative industries?</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>8</td>
<td>In your opinion, what are the factors that create these working conditions for you?</td>
<td>Open / Probing</td>
</tr>
<tr>
<td>9</td>
<td>Describe your pay conditions within the creative industries</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>10</td>
<td>In your opinion, what are the factors that create these pay conditions for you?</td>
<td>Open / Probing</td>
</tr>
<tr>
<td>11</td>
<td>Rate your business management skills – what are you good at in business? What needs improvement? Overall, how competent are you in the business side of creative industries work?</td>
<td>Open / Neutral</td>
</tr>
<tr>
<td>13</td>
<td>Do you think your social network has an influence on your working conditions within the creative industries? How/Please describe?</td>
<td>Open / Probing</td>
</tr>
<tr>
<td>14</td>
<td>Do you think your social network has an influence on your pay conditions within the creative industries? How/Please describe?</td>
<td>Open / Probing</td>
</tr>
<tr>
<td>15</td>
<td>Do you think your business skills have an influence on your working conditions within the creative industries? How/Please describe?</td>
<td>Open / Probing</td>
</tr>
<tr>
<td>16</td>
<td>What do you think has a bigger impact on your work conditions a) your business skills, or your social networks? Why?</td>
<td>Open / Probing</td>
</tr>
<tr>
<td>17</td>
<td>What things would improve your working conditions within the creative industries?</td>
<td>Open / Neutral</td>
</tr>
</tbody>
</table>
In addition to these, probing questions were pursued when responses to lines of enquiry warranted further elaboration. Of the fifteen interviews conducted, the shortest interview was twenty-seven minutes in duration, with the average length of interview was thirty-three minutes. The interviews were conducted in person, within business hours, and at the location of respondents’ places of business. The interviews were recorded on a tape/dictation device. Several questions required clarification for some respondents, for example the term ‘social network’ (question 2) had to be redefined for some respondents as it was often interpreted to pertain to a person’s online/social media interaction.

3.8.3 Sampling Frame

The respondents that participated in the qualitative study were invited to partake as a result of their involvement in the quantitative study. To ensure a spread of responses, qualitative respondents were selected from the quantitative sample on the basis there were differences in the primary subsectors that respondents worked in. In addition, consideration was given to ensure that respondents possessed a mix of different network structures. In this way, some respondents were selected as they had previously engaged with creative clusters, whereas others were selected as they had cultivated the development of non-local networks through their creative work.
Table 3.6: Characteristics of respondents

<table>
<thead>
<tr>
<th>Pseudonym, female/male</th>
<th>Age bracket</th>
<th>Primary Creative Field</th>
<th>Notes</th>
<th>Years of experience in the Creative Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>John (m)</td>
<td>20s</td>
<td>Film and web-media</td>
<td>Ran a creative enterprise within a creative precinct</td>
<td>Less than 5 years</td>
</tr>
<tr>
<td>Enriquez (m)</td>
<td>30s</td>
<td>Film and web-media</td>
<td>Ran a creative enterprise within a creative precinct; worked with network contacts from overseas</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Melanie (f)</td>
<td>20s</td>
<td>Music (and music event) management</td>
<td>Ran a creative enterprise within a creative precinct; had travelled overseas for creative work</td>
<td>Less than 5 years</td>
</tr>
<tr>
<td>Denise (f)</td>
<td>30s</td>
<td>Music Photography</td>
<td>Work extensively with international artists</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Peta (f)</td>
<td>40s</td>
<td>Music management</td>
<td>Had toured her artist in other regions</td>
<td>More than 10 years</td>
</tr>
<tr>
<td>Paul (m)</td>
<td>40s</td>
<td>Musician</td>
<td>Had toured in other regions and recorded internationally</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Herman (m)</td>
<td>30s</td>
<td>Graphic design</td>
<td>Ran a creative enterprise within a creative precinct</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Sally (f)</td>
<td>40s</td>
<td>Creative Event management and Craft</td>
<td>Ran a creative enterprise within a creative precinct; previously undertaken creative work in other capital cities</td>
<td>Less than 5 years</td>
</tr>
<tr>
<td>Ella (f)</td>
<td>40s</td>
<td>Fashion designer and Event Management</td>
<td>Ran a creative enterprise within a creative precinct</td>
<td>Less than 5 years</td>
</tr>
<tr>
<td>Nick (m)</td>
<td>30s</td>
<td>Musician</td>
<td>Had travelled overseas for creative work</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Ellen (f)</td>
<td>30s</td>
<td>DJ and events management</td>
<td>Had conducted creative work previously in other cities; ran a creative enterprise within a creative precinct</td>
<td>More than 10 years</td>
</tr>
<tr>
<td>Ruth (f)</td>
<td>30s</td>
<td>Web media &amp; design and events management</td>
<td>Average network size</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Jason (m)</td>
<td>40s</td>
<td>Music</td>
<td>Ran a creative enterprise within a creative precinct</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Sarah (f)</td>
<td>30s</td>
<td>Visual Arts</td>
<td>Possess non-local networks</td>
<td>Between 5 and 10 years</td>
</tr>
<tr>
<td>Tim (m)</td>
<td>20s</td>
<td>Film</td>
<td>Small network size</td>
<td>Less than 5 years</td>
</tr>
</tbody>
</table>

Table 3.6 presents a summary profile of each of the fifteen respondents. In all, the sample of creative workers consisted of independent filmmakers, musicians and music managers, freelance graphic designers, freelance event managers (music, film and performing arts), fashion workers and web designers. The names of the respondents have been replaced with a pseudonym.
3.8.4 Method of Analysis

Qualitative analysis investigates the manifest and latent content used in communication. Manifest content is ‘the meaning that is easily understood or recognised by the mind or that which is readily perceived by the senses’ (McMurray et al., 2004, p. 207). Latent content refers to the ‘meaning that is present but has not yet emerged or become visible’ (McMurray et al., 2004, p. 207). Yin (2012) proposes a five-phase cycle for extracting manifest and latent content from qualitative data. The framework of Yin (2012) is adopted in this study as it is largely integrative of previous qualitative analysis techniques, and it is synthesised for computer-assisted analysis. Correspondingly, NVIVO 10 software package was utilised in the qualitative analysis to assist in the generation and organisation of data.

Yin (2012, p. 178) proposes five recursive stages of qualitative analysis, these are:

1) Database Compilation,
2) Data Disassembly,
3) Data Reassembly,
4) Data Interpretation, and
5) Conclusion.

The progression between stages is complex, as progression in one stage may require formative stages to be updated. The following paragraphs outline each of these stages, and apply it to the qualitative study.
3.8.4.1 Data Compilation

Yin (2012) notes that, after data has been collected, it needs to be assembled and archived in a logical order. Such ordering may be chronological, theme-based, and may also require several copies of original data to be created to collate with related documents. Yin (2012) argues that whichever approach is taken, the compiled database must be systematic and accessible. The process also enables the researcher to re-familiarize themselves with the qualitative data, and this assists in the following data disassembly stage.

For this study, after the data was collected from the fifteen interview respondents in the form of audio recordings, the interviews were transcribed into written text. The documents were then imported into NVIVO 10 computer assisted qualitative data analysis software. NVIVO 10 automatically catalogues the sources alphabetically.

3.8.4.2 Data Disassembly

The data disassembly process involves the identification of codes and themes present within the qualitative data. Yin (2012) notes that this stage corresponds to the open coding process as defined by Strauss and Corbin (1998). In this stage, the data moves to a higher conceptual level as common themes found across multiple data are identified and extracted. Furthermore, Yin (2012, p. 191) suggests that, while researchers undertake data disassembly, they need to remain focused on observing the ‘broader meaning of the data.’ In this way, researchers need to examine the qualitative material for patterns, which will be used as markers in the data reassembly process.
The data disassembly phase of the research involved examining responses and highlighting initial ‘nodes’ (term used in NVIVO 10 to denote the assigning of a code or theme to a particular section of data). The four key findings derived from the quantitative analysis were initially used as markers to identify relevant sections of text in the qualitative data (the four key findings are presented in Chapter Five). After a process of review, more sub-nodes were identified, some of which were linked to these categories, and others that warranted their own, new category.

3.8.4.3 DATA REASSEMBLY

Data reassembly makes use of matrices and higher-order conceptual thinking to examine the latent meaning underpinning the initial codes identified from the previous data disassembly stage. Yin (2012) indicates that this process corresponds to the axial coding and selective coding processes of the grounded theory approach to qualitative analysis developed by Strauss and Corbin (1998). Through a process of developing new subcategories of codes, and linking codes with other subcategories and categories, qualitative researchers generate relationship arrays (hierarchical or complex) through the reassembly process (Yin, 2012). Relationship arrays can be used to compare and contrast positions concerning certain codes or themes, stemming from different data sources.

The data reassembly process requires an ‘increasing number of discretionary choices’ on the part of the research and is thus ‘vulnerable to unknown biases’ (Yin, 2012, p. 196). In order to reveal and minimize biases, Yin (2012, p. 196) suggests that the research may:
1) Make constant comparisons,
2) Watch for negative instances, and
3) Engage in rival thinking.

Making constant comparisons involves ‘watching for similarities and dissimilarities among the items in your data’ (Yin, 2012, p. 197). Negative instances involves ‘uncovering items that on the surface might have seemed similar but on closure examination appeared to be misfits’ (Yin, 2012, p. 197). Finally, rival thinking involves ‘searching for alternative explanations for initial observations’ (Yin, 2012, p. 197). In essence, these processes ensure that the formulation of coded data within arrays containing categories and subcategories is robust and considerate of alternative positions. When arrays are robust, ‘broader themes’ emerge across the data which inform the interpretation phase of analysis (Yin, 2012, p. 199).

The data reassembly phase applied in this qualitative study involved examining sections of coded text that discussed or elaborated on the quantitative findings. A comparison of different treatments concerning the quantitative findings presented by different interview respondents was undertaken to assess which sections of text presented the most comprehensive treatment and description of the theme. Text that appeared to be divergent or contrary to findings was also identified.

3.8.4.4 Data Interpretation

Yin (2012, p. 207) defines data interpretation as ‘the craft of giving your own meaning to your reassembled data and data arrays.’ In this phase, a narrative is developed that presents overarching themes, supported by empirical evidence, in a sequential manner. The data interpretation phase needs to balance the insight and
‘value-add’ offered on the part of the qualitative researcher, with acknowledgement of what others might interpret from the same data (Yin, 2012, p. 207). The data interpretation phase in this qualitative, along with the proceeding conclusion phase, is presented in Chapter Five.

3.8.4.5 Concluding phase

The concluding phase of qualitative research seeks to connect the interpretation phase with the study’s empirical findings (Yin, 2012). Furthermore, Yin (2012, p. 220) argues that as the conclusion seeks to refine the findings to a series of overarching statements, and presents as the ‘highest conceptual level’ of the qualitative analysis processes. In the conclusion, the broader significance of the study is captured, and implications for the research and practice are highlighted (Yin, 2012).

3.8.4.6 Summary of analysis method

As noted, the five-phase qualitative analysis method of Yin (2012) was adopted to organise and interpret semi-structured interview responses from fifteen creative workers. Interviews were transcribed, ordered, and subject to thematic coding. The results of this process are delivered in Chapter Five.

3.8.5 Ethical Consideration

The qualitative research phase of this study was subject to expedited ethical review, and was cleared by the ethical review board of Southern Cross University (reference code: ECN – 15-47). Participation in the research process was voluntary and
participants were informed regarding the nature of the research. Further all identifying features of respondents were removed or suppressed in the analysis phase. Accordingly, respondents were given pseudonyms (as presented in Table 4.6).

3.9 Chapter conclusion

This chapter has outlined the research paradigm and research methods used to examine the impact of organisational business acumen and social network structure on their labour outcomes of creative workers. A mixed methods approach was used to undertake this investigation, which encompassed an initial pilot investigation that used social network analysis, followed by an explanatory mixed methods design involving a quantitative study and qualitative study respectively. The quantitative study applied a set of developed psychometric scales that measured respondents’ organisational business acumen, social network structure and labour outcomes. The measures were validated through exploratory and confirmatory factor analysis and the sample used in study comprised 271 Australian creative workers. The final phase of the research design involved fifteen semi-structured interviews with respondents selected from the quantitative study. The five-phase qualitative analysis method of Yin (2012) was used to organise and interpret responses, in order to generate overarching conclusions and explain the findings from the quantitative enquiry.
3.10 Supplementary to Chapter 3 – Pilot Investigation Results

3.10.1 Introduction

This supplementary study presents findings from an initial, pilot investigation that examined the relationship between creative workers’ social network structures and their labour outcomes. A social network analysis method was adopted to undertake this study. The pilot nature of this study meant that a single-item (activity level) variable was used to represent the labour outcomes corresponding to each creative worker in the sample. The activity level was a reference to how often the creative workers, in this instance, musicians, undertook work within the cluster over a twelve-month period. The analysis in this supplementary study is structured around the cluster case research steps developed from Royer et al. (2009). The stages were:

1) Locate, identify and profile horizontal, vertical and lateral cluster members

2) Account for cluster activity

3) Map the types of relationships and interdependencies that exist between cluster members

In the following analysis, these steps are integrated, and are preceded by a brief contextual review of the creative cluster under examination. After this, the map of relationships between cluster members is presented, followed by a profiling of cluster members. The study concludes with an examination of the connection between network structure and activity levels for the creative workers used in the cluster.
3.10.2 Contextual review of the cluster site

The creative cluster under examination in this study emerged in the 1950s on the far South-East Coast of Queensland, Australia (Marshall, 2011). The creative cluster was originally comprised of musical groups (horizontal actors), as well as entertainment venues and festivals (vertical actors), which thrived off the affiliated tourism industry that underpinned the local economy. A high level of entertainment trade was maintained within the cluster until the 1980s, when it began to experience a slow decline. The decline was mostly due to development within neighbouring regions, which increasingly began to undergo similar tourism booms. Development in the neighbouring regions increased competition for non-proximal entertainment infrastructures, and saw increases in the alcohol tax and licensing fees for music venues and live music production within the cluster (Marshall, 2011). Despite the decline, music production, festivals and live entertainment within the region remained an important tourism anchor to the region, and, in 2010, a twelve-month cluster mapping study of the local music industry was conducted with support from the region’s economic development agency (lateral actor). The results that are published here were developed as part of that study.

3.10.2.1 Mapping Relationships and Interdependencies

A total of twenty-five enterprises attached to the local music supply chain were identified through a social network mapping survey. The following social network map in Figure 3.1.1 displays each of these cluster members, as well as the web of social network ties that connect them.
Figure 3.1.1: Social network map of cluster members
In Figure 3.1.1, the horizontal members of the cluster are presented as red circles (n = 14), the vertical members of the cluster are presented as blue squares (n = 10), and the lateral actor is presented as a green triangle (n = 1). The following three figures (Figure 3.2.1, Figure 3.3.1, and Figure 3.4.1) map the three types of interdependencies between cluster members being:

- We have an ongoing commercial relationship
- We have occasionally transacted financially
- We are friends
Figure 3.2.1: Interdependency Social Network: ongoing commercial relationship
As can be seen in Figure 3.2.1, there were relatively few ongoing commercial relationships present between cluster members. The relationship between Bar 2 and DJ3, as with the relationship between Café 1 and Singer 1, represented a weekly performance residency between these venues and actors. In addition, Management 1 represented Band 4 and Singer 4 in music management activities. Furthermore, Band 5 was housed in Studio 1, and had one of their members operating the recording facilities there. The financial relationships between Lateral Actor 1 and Festival 1, as well as Bar 4 and Café 1 with Festival 1, represented a contractual financial agreement. In the first instance, Lateral Actor 1 was the primary core funder/sponsor for festival 1. As part of that festival, Bar 4 and Café 1 held performance activities within their venues.
Figure 3.3.1: Interdependency Social Network: We have occasionally transacted financially
There were multiple, occasional financial interdependencies presented between cluster members. Perhaps the most notable occurred around Festival 1, which funded multiple artists and activities in local venues. A second notable hub of activity occurred around Bar 1, which formed a paid performance space for several horizontal cluster members. Finally, Studio 1 was also the recipient of financial transactions, most predominately in the form of recording services for Bands 3, 6, 5 and Singers 1, 2 and 5.
Figure 3.4.1: Interdependency Social Network: We are friends
Lateral actor 1 was the recipient of multiple friendship ties from the vertical actors of the cluster. In addition, several friendship chains existed between horizontal members, yet these relationships appeared to be non-redundant (i.e. they were not bridged by multiple pathways). Several horizontal actors (bands 3 and 6, and singer 5) did not identify any friendship ties with other members in the cluster, and hence possessed relationships with pure commercial intent (as displayed in the Figures 4.2 and 4.3).

3.10.2.2 Profiling cluster members and activity

The following section provides a profile of the respective horizontal, vertical and lateral actors of the cluster. The profiling for horizontal actors accounts for their level of activity, as well as their network size, and structural hole, percentile ranking scores (as noted at the beginning of Chapter Three). Horizontal actors that were designated as being highly active performed more than six times, over the twelve-month observation period within the cluster. Similarly, active horizontal actors performed between three and six times over the twelve-month period. Finally, not active horizontal actors performed two times or less over the twelve-month period.

3.10.2.3 Profiling horizontal actors of the clusters

Of the six music groups (Bands 1 through 6), Band 1 had the largest network size of any other horizontal actor. In addition, Band 1 was one of the most active horizontal actors within the cluster, performing weekly at the local markets (Market 1) as well as performing in Festival 1 and Bar 1. Band 5 was housed within the recording studio of the cluster, and had an ongoing commercial relationship with that firm. This band (5)
was also very active within the cluster, performing at both of the Festivals, and at Bar 1.

The three DJs belonging to the cluster were active performers over the 12-month period. To this end, DJ3 was highly active and acquired a weekly residency at Bar 2. The other two DJs were occasional performers, performing at Festival 2 and at other Bars, and collaborated more intensively with other horizontal actors within the cluster.

The five solo musicians (Singers 1-5) range in styles of music, experience and connectedness within the cluster. Further, two of the Singers (4 and 5) had an ongoing commercial relationship with (vertical actor) Management 1. Table 3.7 in the appendix compares a number of profile factors for each the music groups, DJs and singers belonging to the cluster.

3.10.2.4 Profiling Vertical Actors of the Clusters

While many of those who worked for the vertically integrated firms within the cluster could be classified as creative workers, the scope of analysis undertaken within this pilot investigation did not account for the activity of these firms. The key reason for this is the potential for incommensurability of the dependent variable, activity level (which is a count of the amount of performances undertaken over a twelve-month period), between horizontal actors and other cluster member types. Hence, social network structure variables are not explicitly stated in the following profiling of the non-horizontal members. Despite this, the vertical actors identified within the cluster
provided the horizontal actors with opportunities for performance, management and recordings infrastructure.

Of the 10 vertical actors identified within the cluster, four were ongoing performance venues (bars & cafes set up with a performance space), two were annual festivals, one was an artist management company, one was a recording studio, and one was a weekly local market that contained a performance space. Table 4.8 in the appendix provides a brief profile of each of the vertical actors of the cluster, and discusses the important relationships each held with other cluster members.

### 3.10.2.5 Profiling Lateral Actors of the Clusters

The cluster site had only one lateral actor. The lateral actor was an economic development agency that was funded by the local government for the purpose of stimulating economic development in the region. Table 4.9 outlines the features of the lateral actor.

Table 3.9: Profile of the Lateral Actor belonging to the Cluster.

<table>
<thead>
<tr>
<th>Lateral actor</th>
<th>Description of venue</th>
<th>Description of engagement with other cluster members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lateral actor 1</td>
<td>Lateral actor 1 is governed independently of local government, but receives its mandate and funding allocation through council. The funding for lateral actor 1 is generated from a special rates levy that is collected from firms (from all industries) located within the cluster boundaries.</td>
<td>Lateral actor 1 has ongoing relationships with festival 1 and 2, and has close ties with several musicians operating within the cluster.</td>
</tr>
</tbody>
</table>

3.10.3 Linking Network Structure and Activity Levels for Horizontal Actors within the Cluster

#### 3.10.3.1 Mapping the Network Size Rank of Each Horizontal Actor
Table 3.10 in the appendix highlights the scores and percentile ranks for the outdegree and indegree centrality measures for each of the horizontal members of the cluster. The Overall Percentile Rank for Network Size Measures represented how large an actor’s network size was, relative to all other horizontal members. 100% in both the indegree and outdegree rankings indicated that the member, in this instance Band 1, identified the greatest amount of other nodes they were connected to (outdegree), as well as being identified by the greatest amount of other nodes that declared a relationship with them (indegree). The outdegree and indegree scores were used to develop the percentile rankings that accounted for all relationships across the cluster (not only with other horizontal cluster members). When the indegree and outdegree percentile ranks were averaged for each member, a final percentile rank accounted for each member’s average degree centrality rank (representative of the network size within the cluster). As several cluster members scored equally, there were seven possible ranks assigned.

3.10.3.2 MAPPING THE STRUCTURAL HOLE RANK OF EACH HORIZONTAL ACTOR

Table 3.11 in the appendix highlights the percentile rank scores for effective network size, efficiency and constraint scores for each horizontal members of the cluster. The overall percentile rank for structural hole measures score (presented in the penultimate column of Table 3.11) indicates the average degree to which a horizontal actor occupied a structural hole position within the cluster. As can be seen, Singer 2 occupied had the highest structural hole ranking, followed by DJ 1.
### 3.10.3.3 Comparing Network Size and Structural Hole with Activity Levels

Table 3.12 provides the average overall network size and structural hole percentile ranking for each of the three activity level classifications (i.e. highly active, active and not active). The purpose of this comparison is to examine whether a trend can be established linking network size and structural hole with activity levels of the cluster actor.

Table 3.12: Average overall network size and structural hole percentile rank per activity level

<table>
<thead>
<tr>
<th>Horizontal Cluster Member Activity Level</th>
<th>Network Size Overall Percentile Rank</th>
<th>Structural Hole Overall Percentile Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Active</td>
<td>77%</td>
<td>51%</td>
</tr>
<tr>
<td>Active</td>
<td>57%</td>
<td>66%</td>
</tr>
<tr>
<td>Not Active</td>
<td>34%</td>
<td>49%</td>
</tr>
</tbody>
</table>

These relationships were mapped on the following Figure 4.5, a line graph.

Figure 3.5: Line Graph comparing activity levels with network structure variables

Table 3.13 and Figure 3.5 present a positive relationship between the overall network size percentile rank and the activity level achieved by horizontal actors. This indicates
that the horizontal cluster members, with larger networks, tended to perform more regularly over the twelve months period. In contrast, while highly active and active horizontal cluster members possessed higher structural hole scores than non-active members, active cluster members occupied better structural hole positions than highly active members. This result calls into question the ability of a cluster member’s structural hole position to determine, or proportionately influence their activity level.

Table 3.15 displays results from an ANOVA analysis (analysis of variance between groups).

Table 3.13: ANOVA of Network Size and Structural Hole against Activity Levels

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups:</td>
<td>.460</td>
<td>2</td>
<td>.230</td>
<td>5.532</td>
<td>.022</td>
</tr>
<tr>
<td>Within Groups:</td>
<td>.457</td>
<td>11</td>
<td>.042</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>.917</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Hole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups:</td>
<td>.073</td>
<td>2</td>
<td>.037</td>
<td>.454</td>
<td>.646</td>
</tr>
<tr>
<td>Within Groups:</td>
<td>.886</td>
<td>11</td>
<td>.081</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>.959</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The ANOVA analysis indicates that there was a significant difference (indicated by the .022 significance score) in the network size between the highly active, active and non-active members of the cluster; however, no such significant difference was present concerning actors’ structural hole ranking. Despite the small sample size used in this analysis, the results suggest that social network structures, particularly network size, may have some connection with activity level for horizontal actors within the cluster. Nevertheless, the impact of the network structure variables appears not to be consistent across all highly active and active cluster members. Tables 3.13 and 3.14, as well as the Figures 3.6 and 3.7, isolate the variance present between network size
and structural hole ranks for highly active and active horizontal cluster members respectively.

Table 3.14: Network Size and Structural Hole Ranks for Highly Active Cluster Members

<table>
<thead>
<tr>
<th>Horizontal Cluster Member</th>
<th>Highly Active Cluster Members</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Network Size Overall Percentile Rank</td>
<td>Structural Hole Overall Percentile Rank</td>
<td></td>
</tr>
<tr>
<td>Band 1</td>
<td>100%</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>Band 5</td>
<td>71%</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>DJ3</td>
<td>71%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Singer 1</td>
<td>71%</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>Singer 3</td>
<td>14%</td>
<td>73%</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.6: Line graph mapping Network Size and Structural Hole Ranks for Highly Active Cluster Members

Table 3.15: Network Size and Structural Hole Ranks for Active Cluster Members

<table>
<thead>
<tr>
<th>Horizontal Cluster Member</th>
<th>Active Cluster Members</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Network Size Overall Percentile Rank</td>
<td>Structural Hole Overall Percentile Rank</td>
<td></td>
</tr>
<tr>
<td>Band 6</td>
<td>29%</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>DJ1</td>
<td>86%</td>
<td>91%</td>
<td></td>
</tr>
<tr>
<td>DJ2</td>
<td>71%</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>Singer 2</td>
<td>43%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.7: Line graph mapping Network Size and Structural Hole Ranks for Active Cluster Members
Turning initially to the highly active cluster members (i.e. those who performed more than six times over the twelve-month observation period), four of the five members shared similarly high network size rankings. However, Singer 3 had a very small network size. This result does not rule out a connection between network size and activity level completely. However, the substantial variance that existed between Singer 3’s network size ranking and the network size ranking of the other highly active cluster members, indicates that other factors (in addition to network size) were likely to impact on the activity level of cluster members. More extreme variance between structural hole rankings can be perceived for the highly active cluster members, and this inconsistency challenges the notion that activity levels for cluster members are may be linked to their structural hole position.

Sizeable variance was also present for both network size and structural hole rankings for active cluster members. This variance is of concern and, as such, a direct connection between network structure variables and activity levels for musicians may be spurious in this case, as other unmeasured factors were likely to influence the observed activity levels. However, the small sample size used in this study was not enough to rule out the possibility of network structure effects for a larger population of creative workers.

### 3.10.4 Conclusion

It can be ascertained from this pilot investigation that highly active musicians in the cluster site tended to be highly connected. However, as there appeared to be substantial variance for the network size and structural hole rankings of highly active
and active cluster members, the data here indicates that the activity level of cluster members cannot be attributed singularly to these network structure variables. Furthermore, the rudimentary nature of the variables used in the pilot study analysis, namely activity level as a single-item categorical variable, is limited in its representativeness of creative workers’ labour outcomes. In addition, the notion of a possible cause and effect relationship between these variables is difficult to establish, as development in activity levels is likely to generate networks (and vice versa). Hence, in comparison to more robust measures of labour outcomes, causality is difficult to argue here. In light of the results, and the limitations of the pilot approach, the study here warrants robust expansion through investigating the potential impact of creative workers’ social network structure, and other possible variables, on labour outcomes. As that literature suggests that business acumen may also contribute to the labour outcomes experienced by creative workers (Crombie & Hagoort, 2010), the following chapter (Chapter Four) outlines results of an expanded, more robust study investigating the links between social network structure, organisational business acumen and labour outcomes for creative workers.
Chapter Four – Quantitative Results

This chapter presents the quantitative study investigating the impact organisational business acumen and social network structure on labour outcomes of creative workers. The chapter begins by outlining the processes involved in preparing and executing the quantitative study, including the development of the survey instruments, as well as the processes involved in the exploratory and confirmatory factor analysis. Following this, an examination of the adequacy of the data used to undertake SEM analysis is conducted. This chapter concludes by presenting the findings from the SEM analysis of hypothetical relationships posed in the primary and final models presented in Chapter Two.

4.1 Generating the Survey Instruments

The survey questionnaire measurement development framework of Hinkin (1998) was used in this study to develop psychometric constructs, in order to undertake valid and robust statistical analysis. This section begins by detailing the application of the Hinkin (1998) framework to this quantitative study. As listed in the methods chapter, the framework of Hinkin (1998) involves six steps, and begins with the process of generating initial items.
4.1.1 Step 1: Item Generation

The constructs tested in this study have undergone initial conceptual development in existing literature, predominantly through qualitative research (as outlined in Chapter Two). Hence, a deductive approach was used to develop items corresponding to each of the constructs: organisational business acumen, network size, non-local networks, cluster membership and structural hole, as well as labour precarity, exploitation and earnings satisfaction.

4.1.1.1 Item Scaling

A five-point Likert scale was chosen for the quantitative survey. Hinkin (1998, p. 110) notes that ‘Cronbach’s Alpha reliability with Likert scales has been shown to increase up to the use of five points, but then it levels off.’ Cronbach’s Alpha is one common measure of the statistical reliability of a construct. In addition, while seven-point and nine-point Likert scales can produce better variance scores in comparison to five-point scales, larger scales can disengage respondents. The five-point intervals used in this study were: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree.

4.1.1.2 Validity Assessment and Item Structure

Newly constructed survey items need to possess face validity and content validity. Face validity concerns the degree to which ‘the indicator really measures the construct’ (Neuman, 2003, p. 192). To enhance the face validity of items, Hinkin (1998, p. 108) recommends that survey questions be worded simply, and the ‘language used should be familiar to the target respondents.’ Content validity
considers the degree to which the full content of a construct is represented within a scale Neuman (2003, p. 192). Hinkin (1998) indicates that the development of psychometric scales must be informed by an extensive review of literature concerning the content of constructs. Finally, Hinkin (1998) suggests that researchers may seek to undertake a pre-test whereupon items are administered to a small sample group to ascertain which questions adequately represent the construct.

The items used in this study were developed through a comprehensive analysis of literature concerning the tested constructs. Existing construct definitions and descriptions were used to inform the development of questions. Furthermore, a pre-test that involved five creative workers was performed to gauge respondents’ comments regarding the face validity of items. The pre-test was well received with respondents indicating that items were highly applicable to the context of creative work, although some respondents felt that the survey was too long. As an adequate number of items were needed to undertake an initial factor analysis, the length of the survey remained a limitation. However, to ensure that items were not answered at random by respondents in the full sample, a test for common method bias was conducted (this is outlined in the following section).

In statistical analysis, to ensure that a measure adequately represents a construct it must be comprised of at least three items, however more are preferable (Hinkin, 1998; Ping, 2004). Hinkin (1998) also notes that measures with too many items can cause respondents to become disengaged, even though such measures can possess stronger validity. A summary of the number of items used in each measure, as well as the breadth of content covered, is provided in the Table 4.1.
Where extensive qualitative discourse concerning constructs was available there were more items per construct (as was the case for the exploitation and organisational business acumen scales). Furthermore, most measures included at least one reverse item question, however the reverse item questions were removed through confirmatory factory analysis as they had a weakening effect on model fit. An explanation regarding the integration of literature into each measure is provided in the following paragraphs.
<table>
<thead>
<tr>
<th>Construct</th>
<th>Number of Items</th>
<th>Content to be covered</th>
<th>Primarily associated with the research of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Precarity</td>
<td>7</td>
<td>Job insecurity</td>
<td>De Peuter, 2011; Burgess &amp; Campbell, 1998; Hesmondhalgh &amp; Baker, 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Taking on the risks of an organisation</td>
<td>Davies &amp; Siggthorssen, 2013</td>
</tr>
<tr>
<td>Earnings satisfaction</td>
<td>6</td>
<td>Earnings satisfaction</td>
<td>Hesmondhalgh &amp; Baker, 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comparison to other sectors</td>
<td>Cunningham et al., 2010</td>
</tr>
<tr>
<td>Exploitation</td>
<td>11</td>
<td>Dissatisfaction with working conditions</td>
<td>Hesmondhalgh &amp; Baker, 2010; Ross, 2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Working conditions</td>
<td>Hesmondhalgh &amp; Baker, 2010; Ross, 2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-exploitation</td>
<td>Hesmondhalgh &amp; Baker, 2010; Banks &amp; Hesmondhalgh, 2009</td>
</tr>
<tr>
<td>Organisational business acumen</td>
<td>12</td>
<td>Management and administration capability</td>
<td>Poetschacher, 2010; Throsby &amp; Zednik, 2011; Crombie &amp; Hagoort, 2010; Coulson, 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Communication skills</td>
<td>Crombie &amp; Hagoort, 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial management skills</td>
<td>Crombie &amp; Hagoort, 2010</td>
</tr>
<tr>
<td>Network size</td>
<td>6</td>
<td>Network size</td>
<td>Belussi &amp; Sedita, 2008; Yang &amp; Liu, 2012</td>
</tr>
<tr>
<td>Structural holes</td>
<td>6</td>
<td>Bridging and connecting role</td>
<td>Burt, 1992; Yang &amp; Liu, 2012</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information exchange</td>
<td>Burt, 1992; Ahuja, 2000</td>
</tr>
<tr>
<td>Cluster engagement</td>
<td>6</td>
<td>Local supply chain involvement</td>
<td>Cunningham, 2002; Boix et al., 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Collaboration with other creative workers in the locale</td>
<td>Belussi &amp; Sedita, 2008</td>
</tr>
<tr>
<td>Non-local networks</td>
<td>6</td>
<td>Possession of ties with people from other regions</td>
<td>Giuliani, 2013; Hill, 2007</td>
</tr>
</tbody>
</table>
4.1.1.3 EXPLOITATION

The qualitative research of Hesmondhalgh and Baker (2010) and Baker and Hesmondhalgh (2013), which outlines the labour conditions faced by creative workers, was used as a primary guide in developing items for the exploitation measure used in this study. Hesmondhalgh and Baker (2010), referring also to the work of Ross (2003), describe intense feelings of dissatisfaction associated with creative work, as well as a sense of demoralization that occurs as a result of working long and irregular hours and undertaking weekend work. In addition, these authors note that creative workers forgo payment, and self-exploit themselves by volunteering to undertake poorly paid work, for the chance of generating future employment opportunities. These themes were used to develop the items presented in Table 4.2:

Table 4.2: Content and items for Exploitation

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfaction with working conditions</td>
<td>1. Poor working conditions are a norm in this industry</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>2. I feel as if no one cares about my working conditions</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>3. I sometimes feel dissatisfied with the conditions that I undertake arts, cultural and creative work under</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. I work much more than I am paid</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. I sometimes feel that I am the last person to receive financial returns from projects involving multiple people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working conditions</td>
<td>6. I don’t have regular breaks</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>7. I always take yearly holidays and weekend time (reverse coded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Long hours without breaks are typical when I undertake creative work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-exploitation</td>
<td>9. I sometimes feel angry at myself for taking on too much work</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. I am a master at negotiating a good deal for the work I undertake (reverse coded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. I regularly volunteer to undertake significant work without pay</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The ultimate item set developed through CFA possessed a degree of limitation concerning its content validity, as the items representing the dissatisfaction with working conditions theme were overrepresented (the CFA processes are discussed following this section). As a result of this, the exploitation measure had a limited average variance extracted score in the confirmatory factor analysis. Thus, future research should seek to further develop and improve this measure, and expand on the ‘working conditions’ content questions may provide a good mechanism to achieve this.

4.1.1.4 Labour Precarity

The measure of labour precarity used in this thesis was predominately developed through the conceptual work of De Peuter (2011), Burgess and Campbell (1998) and Davies and Sigthorsson (2013). In addition, the qualitative research of Hesmondhalgh and Baker (2010, pp. 11-13) concerning ‘insecurity and uncertainty’ of creative work was used as an empirical reference. The items representing this scale are presented in Table 5.3.

Table 4.3: Content and items for Labour Precarity

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job insecurity</td>
<td>1. My job is at risk because of high competition</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>2. My job is at risk by people who are willing to work for free</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>3. My employment options affect my ability to plan for my future</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>4. I have a long term contract and feel secure in my work (reverse coded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. I am frequently searching for new work</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. I am frequently searching for more work</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Taking on risk of an organisation</td>
<td>7. I self-subsidize my artistic, creative and cultural pursuits</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As with the exploitation measure, the number of items representing labour precarity was reduced through exploratory and confirmatory factor analysis. The remaining three items were shown to have the best reliability. Future research should seek to develop further items concerning the dimension – ‘taking on the risk of an organisation’ – to improve the construct validity of this measure. The item corresponding to this content theme was not sufficiently correlated with the other items concerning ‘job insecurity’.

### 4.1.1.4 Earnings Satisfaction

As noted in Chapter Two, creative workers generally receive lower pay than people working in other sectors (Throsby & Zednik, 2011). Furthermore, De Peuter (2011) and Hesmondhalgh and Baker (2010) suggest that creative workers are often dissatisfied with the pay they receive in consideration of the work they undertake, and the training and experience they possess. Rather than a financial measure that may vary significantly from one creative occupation to another (and hence may present in a non-parametric form), this quantitative study used psychometric items to focus on a perceived level of satisfaction concerning the economic returns generated from creative work. The items retained in CFA are displayed in Table 4.4.

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings satisfaction</td>
<td>1. I get good financial returns from my work</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>2. I earn enough money to live well</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td></td>
<td>3. When I work I am paid a price that reflects the hours I put into a particular job</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. I have the ability to purchase luxury or expensive items if I choose to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. I often experience financial hardship (reverse coded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison to other sectors</td>
<td>6. I earn more than my peers</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>
The measure for earnings satisfaction had good face validity, covering both of the listed content themes of the construct. Item 3 was removed in the CFA as it had a significant weakening effect on the goodness-of-fit indices (it reduced the Goodness of Fit Index (GFI) score by .009 points, which is quite considerable for one item).

4.1.1.5 ORGANISATIONAL BUSINESS ACUMEN

The description of ‘business skills,’ as well as the business dimensions of creative work by Crombie and Hagoort (2010), were used to develop the organisational business acumen measure. To this end, themes such as ‘business planning’ and ‘management’ were drawn from the Crombie and Hagoort (2010) definition (presented in Chapter Two) and converted into psychometric items used to represent organisational business acumen. In addition to these themes, Crombie and Hagoort (2010) also noted that creative entrepreneurs must possess strong communication and presentation skills when dealing with clients and networked businesses, as well as financial management skills. Based on these criteria, Table 4.5 presents the derived questions representing organisational business acumen.

Items for organisational business acumen were conceptualised around an organisational context (evidenced in the repeated question phrasing: ‘the organisation I work for…’). This was used as a ‘best fit’ method that would have validity across a broad range of potential creative worker respondents, including those who might work or be employed within an established firm, and those freelance workers who operated their own organisation, as well as musicians and performing artists that
operated through a band or troupe. However, future research utilizing this scale with a more directed sampling frame could seek to accentuate either organisational or freelance structures across these items (phrased specifically for freelancers for example – ‘I manage my creative work effectively’).

Table 4.5: Content and items for Organisational Business Acumen

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management and administration capability</td>
<td>1. The organisation I work for is managed effectively</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>2. The organisation I work for has good administrative practices</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>3. The organisation I work for is a great model for other similar organisations working in the sector</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>4. The organisation I work for need to improve their policies and procedures to run effectively</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Communication skills</td>
<td>5. The organisation I work for treats staff and clients well</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Financial Management skills</td>
<td>6. The organisation I work for pays its bills on time</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. The organisation I work for have no expectation for me to work beyond what I am paid for</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. The organisation I work for is profit-focussed</td>
<td>✓ *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. The organisation I work for is very financially strong and robust</td>
<td>✓ *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. On average the organisation I work for doesn’t require any volunteer labour to run effectively</td>
<td>✓ *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. I have concern for the long-term financial viability of the organisation I work for</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12. The organisation I work for pay me on time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The content covered in the post-CFA measure specifically related to management and administrative capability and communication skills. However, a financial management factor also emerged as a result of the EFA (note the ✓* representing items that formed a separate factor), yet it had unacceptable reliability (Cronbach’s Alpha of below 0.7), and the measure had a significant weakening effect for the goodness-of-fit indices in the CFA (reducing the GFI by .027), hence these items were rejected through the factor analysis. This process is detailed in the following section.
4.1.1.6 Network Size

As noted in Chapter Two, the research of Belussi and Sedita (2008) indicates that creative workers generally seek to generate a large number of network connections to overcome labour precarity. As a result, the research of Belussi and Sedita (2008) was used as a reference in generating the items used in this study to measure the network size of creative workers. The items are displayed in Table 4.6.

Table 4.6: Content and items for Network Size

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Size</td>
<td>I have a large number of people in my network</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>I regularly talk to a large number of people about my arts, culture</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>and creative industries activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I’m in contact with many people who work in the arts, cultural and</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>creative sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>When I meet new people, often they have heard of my work</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>through friends and connections</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I find it difficult to stay in contact with everyone in my network</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>because it is so large (reverse coded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I only know a few people working in the arts, cultural and creative</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sector (reverse coded)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The developed network size measure possessed some conceptual crossover with the scale of network closure by Yang and Liu (2012). The network closure scale of Yang and Liu (2012) has the following items:

1) A firm has multiple access avenues to upstream firms and suppliers
2) A firm has multiple access avenues to downstream distributors and customers
3) A firm has a higher frequency of interaction with its supplies, customers, and allies.

(Yang and Liu, 2012, p. 1044)

Yang and Liu (2012) used the network closure scale to collect data concerning the network connections of glass manufacturing firms in South Korea, with a focus on the networks contacts present within a supply chain, between customers and allies. While the measure of Yang and Liu (2012) gives reference to the ‘size’ of a network held by a firm, a more creative industries-specific conceptualisation was developed for this
study. This was decided upon as the supply chain references present in the Yang and Liu (2012) scale, such as ‘upstream’ and ‘downstream’, did not have direct relevancy to the context of a creative worker’s network size.

4.1.1.7 STRUCTURAL HOLE

The definition of structural holes established by Burt (1992) was used as a guide to develop the structural hole items used in this study, with the central content concerning connecting and bridging roles. The items used to measure the structural hole of creative workers are displayed in the Table 4.7:

Table 4.7: Content and items for Structural Hole

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridging and connecting ties</td>
<td>1. I connect people</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>2. I act as a bridge for information between people in my network</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>3. I regularly introduce people in my network to one another who haven’t met previously</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>4. I work with multiple groups of people</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. I am very ‘cliquey’; I primarily work very closely with a small bunch of people (reverse coded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information exchange</td>
<td>6. I am typically the first person to find out about new information</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

A second content item of ‘information exchange’ was also developed for this scale. To this end, the research of Ahuja (2000) indicated that people occupying bridging positions become the means by which information is exchanged throughout a network. Hence, item 6 of the scale sought to capture this quality, reflecting the flow of knowledge, applied to creative workers.
Yang and Liu (2012) also have a scale to measure structural holes for firms within the Taiwanese Glass industry. Their items are as follows:

1) A firm has a brokering effect in the relations among upstream firms
2) A firm has a bridging effect in the relations among downstream firms
3) A firm plays an intermediate role in the interaction and cooperation within both its industry and diverse industries

(Yang and Liu, 2012, p. 1044)

Here again, the supply-chain contextualisation of these items had questionable face validity within the context of the creative industries, and as such this measure was not applied.

4.1.1.8 CLUSTER ENGAGEMENT

Empirical research concerning creative clusters has traditionally focussed on localised supply chain engagement (Boix et al., 2011; Cunningham, 2002; Pratt, 2004), as well as on the social and work-based collaborations that occur within creative districts (Belussi & Sedita, 2008; De Propris & Wei, 2009). These two content themes informed the item development for the cluster engagement measurement as described in Table 4.8.

Table 4.8: Content and items for Cluster Engagement

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local supply chain engagement</td>
<td>My work forms part of the local arts, cultural and creative supply chain</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>My place of work is a recognised art, cultural or creative district</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>People recognize me as being an artist, cultural or creative worker from my area</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Collaboration with other creative workers in the locale</td>
<td>Most of the people I work with in the arts, cultural and creative industries live fairly close to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I collaborate with those in my locale on arts, cultural and creative projects</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>I rarely work locally (reverse coded)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.1.1.9 NON-LOCAL NETWORKS

There was not a great deal of empirical literature available to inform the development of a contextually relevant non-local network scale for this study. There exists some literature concerning the role of international alliances (Boso et al., 2013), as well as research exploring the impact of non-local ties on clustered firms (Giuliani, 2013). However, the methodological tools used to collect network data in these examples were not grounded in psychometric scales. Hence, a set of questions was devised to represent non-local networks, which was focussed primarily on the possession of ties with people from other regions. Table 4.9 lists the items that were used as a measure of non-local networks.

Table 4.9: Content and items for Non-Local Networks

<table>
<thead>
<tr>
<th>Content</th>
<th>Item</th>
<th>Retained in EFA</th>
<th>Retained in CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possession of ties with people from other regions</td>
<td>I have strong relationships with artists, cultural and creative workers from other regions and countries</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>I often collaborate on arts, cultural and creative projects with people from interstate/overseas</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Most of the people I work with are from other regions</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>My network is global</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>I never travel outside of my region for work (reverse coded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I never travel outside of my region for work (reverse coded)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.1.2 Item generation summary

As can be noted from the items that were retained after the EFA and CFA processes, the measures used in this study warrant further development in future research to more comprehensively represent the content themes pertaining to each construct. Despite this, the remaining measures provide a foundational, though sometimes
rudimentary, representation of each construct. Future development of these measures should utilize items that were found to have satisfactory factor loadings and reliability scores in CFA; building in new items to measure content that warranted further representation.

The following section applies the remaining ‘survey questionnaire measurement development’ procedures of Hinkin (1998) to the items used in this study. In specific terms, the processes used to develop the final variables using EFA, and CFA, are outlined.

4.1.4 Step 2: Questionnaire Administration

Surveys utilizing newly developed scales need to target an appropriate sample group (Hinkin, 1998). In addition, the sample size needs to be large enough to allow for adequate factor analysis (at least 150 for exploratory factor analysis, and at least 200 for confirmatory factor analysis) (Hinkin, 1998). The sampling frame and sample size used for the quantitative analysis, as discussed in the previous chapter, met these conditions.

4.1.5 Step 3: Initial Item Reduction (Exploratory Factor Analysis)

The process of ‘reducing a set of observed variables to a smaller set of variables’ is termed factor analysis (Hinkin, 1998, p. 112). Exploratory factor analysis forms the initial process by which the amount of survey items may be reduced into sets of
variables, and combines a number of statistical tests to determine which items correlate with other groups of items.

This quantitative study employed an initial exploratory factor analysis testing method for grouping items (and hence forming variables) as suggested by Field (2013). This comprised a series of statistical tests including principal axis extraction, using varimax rotation, and a Cronbach’s Alpha reliability assessment. Through this process, items that possess small correlations with other items (i.e. that possessed a correlation score below .04 with a factor) were suppressed, as recommended by Hair et al. (2010) for sample sizes greater than 200. As part of the exploratory factor analysis, a Kaiser-Meyer Olkin Test (KMO) of sampling adequacy was conducted. The adequacy of a sample used in factor analysis is considered meritorious when the KMO score is above 0.70 (Hair et al., 2010). The KMO for all items used in the exploratory factor analysis was very good, possessing a score of 0.795.

Exploratory factor analysis using varimax rotation produces an initial rotated solution that can be used to ascertain which items are related to each other, and to potential factors (groups of items). The rotated factor solution can also be used as an indicator for the potential for multicollinearity to exist between factors. The initial rotated solution produced in the exploratory factor analysis of this study indicated that there was a degree of multicollinearity between factors built from network items: network size and structure hole, and non-local networks and cluster engagement. Further, the reversed-scored items tended to be poorly correlated with all measures (0.45 coefficient was the highest level of relatedness between a reversed-scored item and its factor, and this is a low correlation). To remedy this, the factor analysis was run
again, excluding items that had the potential to generate multicollinearity (such as the non-local network item that appeared as inverse scores in the cluster measure), as well as items that were not correlated effectively with more than two other items.

Nine factors were found through the EFA process that corresponded to the constructs under investigation. The construct organisational business acumen was divided into two factors (organisational business acumen – management & communication, and organisational business acumen – financial management); however, the latter factor had poor reliability, with a Cronbach’s Alpha score of only 0.68. This reliability measure is deemed acceptable above 0.70 (Hinkin, 1998). The results of the exploratory factor analysis, including Cronbach’s Alpha reliability scores, are provided in Table 4.10.
Table 4.10: Results from Rotated Factor Matrix – Exploratory Factor Analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9 Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational business acumen (management)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.82</td>
</tr>
<tr>
<td>The organisation I work for is managed effectively</td>
<td>.823</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation I work for has good administrative practices</td>
<td>.748</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation I work for is a great model for other similar organisations working in the sector</td>
<td>.691</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation I work for treats staff and clients well</td>
<td>.646</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation I work for pay their bills on time</td>
<td>.534</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation I work for have no expectation for me to work beyond what I am paid for</td>
<td>.467</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Hole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.85</td>
</tr>
<tr>
<td>I connect people</td>
<td>.845</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I act as a bridge for information between people in my network</td>
<td>.772</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I regularly introduce people in my network to one another who haven’t met previously</td>
<td>.679</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I work with multiple groups of people</td>
<td>.551</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am typically the first person to find out new information</td>
<td>.449</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-local Networks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.83</td>
</tr>
<tr>
<td>I have strong relationships with artists, cultural and creative workers from other regions and countries</td>
<td>.304</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I often collaborate on arts, cultural and creative projects with people from interstate/overseas</td>
<td>.780</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most of the people I work with are from other regions</td>
<td>.711</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My network is global</td>
<td>.673</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.81</td>
</tr>
<tr>
<td>I have a large number of people in my network</td>
<td>.757</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I regularly talk to a large number of people about my arts, culture and creative industries activity</td>
<td>.729</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I’m in contact with many people who work in the arts, cultural and creative sector</td>
<td>.724</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find it difficult to stay in contact with everyone in my network because it is so large</td>
<td>.437</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earnings Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.81</td>
</tr>
<tr>
<td>I get good financial returns from my work</td>
<td>.817</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I earn enough money to live well</td>
<td>.757</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I earn more than my peers</td>
<td>.597</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I work I am paid a price that reflects the hours I put into a particular job</td>
<td>.593</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cluster engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.79</td>
</tr>
<tr>
<td>My work forms part of the local arts, cultural and creative supply chain</td>
<td>.738</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People recognize me as being an artist, cultural or creative worker from my area</td>
<td>.476</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I collaborate with those in my locale on arts, cultural and creative projects</td>
<td>.507</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exploitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>Poor working conditions are a norm in this industry</td>
<td>.709</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel as if no one cares about my working conditions</td>
<td>.666</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don’t have regular breaks</td>
<td>.591</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I sometimes feel dissatisfied with the conditions that I undertake work in arts, cultural and creative sector</td>
<td>.408</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I sometimes feel angry at myself for taking on too much work</td>
<td>.450</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour Precarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>My job is at risk because of high competition</td>
<td>.741</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job is at risk by people who are willing to work for free</td>
<td>.596</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My employment options affect my ability to plan for my future</td>
<td>.642</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am frequently searching for more work</td>
<td>.640</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational business acumen (financial)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>The organisation I work for is profit-focussed</td>
<td>.737</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation I work for is very financially strong and robust</td>
<td>.635</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On average the organisation I work for doesn’t require any volunteer labour to run effectively</td>
<td>.495</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In addition to reporting the rotated factor solution, Hinkin (1998) indicates that a correlation matrix and the descriptive statistics for each measure should be reported as part of the EFA procedure. While further descriptive data and assessment for normality is provided in the following section of this chapter, the Tables 4.11 and 5.12 highlight the mean, standard deviation, skewness and kurtosis measures for each measure identified in the EFA as part of the Hinkin (1998) survey questionnaire development framework.

Table 4.11: Descriptive statistics for measures developed through EFA

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Minimum Score</th>
<th>Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Labour Precarity</td>
<td>3.2933</td>
<td>.89554</td>
<td>-.233</td>
<td>-.076</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2. Exploitation</td>
<td>3.0783</td>
<td>.73607</td>
<td>.060</td>
<td>-.038</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>3. Earnings Satisfaction</td>
<td>2.5240</td>
<td>.88120</td>
<td>.210</td>
<td>-.451</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4. Organisational business acumen</td>
<td>3.2409</td>
<td>.65317</td>
<td>.051</td>
<td>.794</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>(Management &amp; Communication)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Organisational business acumen</td>
<td>2.7616</td>
<td>.87097</td>
<td>.213</td>
<td>.252</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>(Financial Management)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Network Size</td>
<td>3.5033</td>
<td>.78094</td>
<td>-.467</td>
<td>-.065</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>7. Non-Local Networks</td>
<td>3.0335</td>
<td>.92874</td>
<td>-.186</td>
<td>-.297</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>8. Structural Hole</td>
<td>3.3984</td>
<td>.74024</td>
<td>-.670</td>
<td>.401</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>9. Cluster Engagement</td>
<td>3.3515</td>
<td>.88025</td>
<td>-.769</td>
<td>.345</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

It should be noted that the skewness and kurtosis of each measure was appropriate (between -2 and 2), and that all items had a five-point range (minimum score of 1 and maximum score of five).
Table 4.12: Correlation matrix for measures developed through EFA

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Labour Precarity</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Exploitation</td>
<td>0.223***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Earnings Satisfaction</td>
<td>-0.108</td>
<td>-0.288***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Organisational business acumen (Management &amp; Communication)</td>
<td>-0.143*</td>
<td>-0.277***</td>
<td>0.280***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Organisational business acumen (Financial Management)</td>
<td>0.168**</td>
<td>-0.066</td>
<td>0.296***</td>
<td>0.285***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Network Size</td>
<td>-0.079</td>
<td>0.026</td>
<td>0.104</td>
<td>0.123*</td>
<td>0.065</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Non-Local Networks</td>
<td>-0.089</td>
<td>0.013</td>
<td>0.238***</td>
<td>0.136*</td>
<td>0.010</td>
<td>0.237***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Structural Hole</td>
<td>-0.081</td>
<td>0.072</td>
<td>0.151*</td>
<td>0.147*</td>
<td>0.137*</td>
<td>0.589***</td>
<td>0.320***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>9. Cluster Engagement</td>
<td>-0.016</td>
<td>-0.015</td>
<td>0.106</td>
<td>0.177**</td>
<td>0.122*</td>
<td>0.416***</td>
<td>0.166**</td>
<td>0.521***</td>
<td>1</td>
</tr>
</tbody>
</table>

Significant at: *p < 0.05, ** < 0.01, ***p = 0.001; n =271

Table 4.12 presents the correlation matrix of variables that were generated through the EFA (including organisational business acumen – financial management). There was a high degree of correlation between the social network structure variables. While this was expected (with reference to Hypothesis 7), variables that are strongly correlated with each other can be a cause for concern as they can be an indicator of multicollinearity. Correlations above 0.8 or 0.9 are likely to possess multicollinearity (Field, 2013). As can be seen in Table 4.12, the correlation between network size and structural hole was 0.589***, and cluster engagement and structural hole was 0.521***. These correlation scores were strong, yet they did not surpass the 0.8 level indicated by Field (2013). However, to ensure that multicollinearity did not exist between these items, a ‘variance inflation factor’ (VIF) test was conducted for these relationships. The VIF test is a tolerance statistic which indicates whether a strong
linear relationship is present between variables (Field, 2013). A VIF score of greater than 10, and a tolerance indicator below 0.2 indicates that there is a major cause for concern that the variables suffer from multicollinearity. Table 4.13 provides the results from the VIF test for the relationships present between these variables.

Table 4.13: VIF test of collinearity between strongly correlated variables

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Coefficient</th>
<th>Significance</th>
<th>Collinearity statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>Cluster Engagement -&gt; Structural Hole</td>
<td>.521</td>
<td>.000</td>
<td>1</td>
</tr>
<tr>
<td>Structural Hole -&gt; Network Size</td>
<td>.589</td>
<td>.000</td>
<td>1</td>
</tr>
</tbody>
</table>

As the tolerance and VIF scores fell between the stipulated acceptable ranges, the relationships between cluster engagement and structural hole, as well as structural hole and network size, were unlikely to suffer from multicollinearity.

4.1.6 Summary: Initial Item Reduction

The previous paragraphs have outlined the EFA processes used to develop initial construct representations to inform the quantitative analysis conducted as part of this study. While all but one of the constructs identified through the EFA had effective reliability measures, most of the factors included some items that were weakly correlated to the factor.

Factors comprised of weakly correlated items can negatively impact on the goodness-of-fit indices generated through the CFA. As a result, these may be discarded in final
analysis (McMurray et al., 2004). In addition, factors that possess a low Cronbach’s Alpha reliability score are likely also to negatively impact on goodness-of-fit indices in a CFA. Hence, the measure for organisational business acumen – financial management, which was identified as having a low Cronbach’s Alpha reliability score, was discarded in the final model (a justification for this is presented in the next section).

4.1.7 Step 4: Confirmatory Factor Analysis

CFA subjects the measures developed through EFA to a range of reliability and model fit tests. Unlike EFA, CFA has a stricter threshold for the uni-dimensionality of measures, and as such the final measures resulting from an EFA-CFA process are generally considered robust enough to conduct SEM analysis (Hinkin, 1998). CFA involves two primary assessment processes. The first CFA assessment process analyses the reliability of the measures used in a model. Indicators of reliability in CFA include composite reliability, average variance extracted, maximum shared variance and average shared variance. A summary of these indicators are provided in Table 5.14.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite Reliability (CR)</td>
<td>Composite reliability indicates the internal consistency of the items that make up a construct. Items that weaken the composite reliability below .07 are excluded as long as the validity of an item remains constant (Hair et al., 2010).</td>
<td>Acceptable above .07</td>
</tr>
</tbody>
</table>
Average Variance Extracted (AVE)
The AVE indicates the average amount of variation that a latent construct is able to explain in the observed variable (Farrell, 2009). A degree of variance is important, but too much can indicate that items are not strongly related. Hence, the AVE should be above .5 (Hair et al., 2010).

Acceptable above .5

Maximum Shared Variance (MSV)
This indicator displays the maximum amount of variance in items relating to other constructs (Farrell, 2009).

Acceptable when less than AVE

Average Shared Variance (ASV)
Average shared variance is the amount of variance in items relating to other constructs (Farrell, 2009).

Acceptable when less than AVE

Where indicators proved inadequate, alternate item-measure arrangements (including removing items) are explored. If adequate reliability arrangements are not identified, measures may be discarded as an item with poor validity and reliability may generate erroneous relationships with other constructs in analysis (Farrell, 2009; Ping, 2004).

CFA also involves a second assessment process. Tied to the validity and reliability testing procedures, the second assessment process of CFA analyses the degree to which the data fits the model (termed goodness-of-fit). Rather than focussing on the make-up of individual constructs used in a model, goodness-of-fit indices provide an overall portrayal of ‘the degree to which the specified indicators represent the hypothesised constructs’ (Hair et al., 2010, p. 621). However, there is no ‘one’ commonly used fit test, instead researchers tend to list the several indices to indicate a relative overall fit (Hinkin, 1998). Common goodness-of-fit indices include: Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Standardised Error of Approximation (RMSEA) and the minimum discrepancy, which is represented by minimum value of the discrepancy (Chi-square) over the degrees of freedom (CMIN/DF). A summary of the goodness-of-fit indices and thresholds are provided in Table 4.15.
Table 4.15: Confirmatory Factor Analysis Goodness-of-fit Indices

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>The GFI indicates the degree to which data discrepancies are present within the model. A model with very few data discrepancies is preferable.</td>
<td>Acceptable above .90, preferable above .95</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>The CFI is similar to the GFI, however it ‘involves a correction factor for the degrees of freedom,’ (Hinkin, 1998, p. 115) and is a standardised measure (Ping, 2004).</td>
<td>Acceptable above .90, preferable above .95</td>
</tr>
<tr>
<td>Tucker-Lewis Index (TLI)</td>
<td>The TLI provides a non-normalised measure of goodness of fit.</td>
<td>Acceptable above .90, preferable above .95</td>
</tr>
<tr>
<td>Root Mean Standardised Error of Approximation (RMSEA)</td>
<td>RMSEA is a standardised measure that incorporates no penalty for model complexity.</td>
<td>Less than 0.05</td>
</tr>
<tr>
<td>Minimum value of the discrepancy over the degrees of freedom (CMIN/DF)</td>
<td>CMIN/DF is used as an absolute fit measure and is not overly affected by sample size (Hair et al., 2010).</td>
<td>Ideally less than 2, but values of less than 5 are deemed acceptable (McMurray et al., 2004)</td>
</tr>
</tbody>
</table>

Items and/or constructs that reduce goodness of fit indices below adequate levels are generally removed (as long as the validity of items remains intact) (Ping, 2004). Thus, the ultimate aim of CFA is to develop measures that satisfy both assessment criteria. Resulting measures should thus be reliable and valid, and should also satisfy appropriate goodness-of-fit indices to ensure robust analysis.

4.1.7.1 ASSESSMENT OF RELIABILITY AND MODEL FIT INDICATORS FOR THE EFA MODEL

To undertake an initial assessment of how well the factors found in EFA stood in CFA, measures developed from the above EFA processes were constructed in the AMOS software package, and variables were co-varied with each other. Table 4.16 displays the CFA reliability and validity scores for each construct.
Table 4.16: Assessment of Reliability for the EFA Model

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Labour Precarity</td>
<td>.755</td>
<td>.447</td>
<td>.175</td>
<td>.045</td>
<td>The AVE is affected by the variance between each of the four items used to construct this variable. The average variance between variables is thus too inconsistent to provide a robust measure.</td>
</tr>
<tr>
<td>2. Exploitation</td>
<td>.735</td>
<td>.436</td>
<td>.147</td>
<td>.047</td>
<td>The AVE is affected by the variance between each of the four items used to construct this variable. The average variance between variables is thus too inconsistent to provide a robust measure.</td>
</tr>
<tr>
<td>3. Earnings Satisfaction</td>
<td>.820</td>
<td>.530</td>
<td>.171</td>
<td>.064</td>
<td></td>
</tr>
<tr>
<td>4. Organisational business acumen (Management and Communication)</td>
<td>.835</td>
<td>.465</td>
<td>.147</td>
<td>.068</td>
<td>The AVE is affected by the variance between each of the six items used to construct this variable. The average variance between variables is thus too inconsistent to provide a robust measure.</td>
</tr>
<tr>
<td>5. Network Size</td>
<td>.821</td>
<td>.544</td>
<td>.434</td>
<td>.113</td>
<td></td>
</tr>
<tr>
<td>6. Non-Local Networks</td>
<td>.832</td>
<td>.559</td>
<td>.164</td>
<td>.057</td>
<td></td>
</tr>
<tr>
<td>7. Structural Hole</td>
<td>.862</td>
<td>.563</td>
<td>.434</td>
<td>.136</td>
<td></td>
</tr>
<tr>
<td>8. Cluster Engagement</td>
<td>.794</td>
<td>.562</td>
<td>.370</td>
<td>.104</td>
<td></td>
</tr>
<tr>
<td>9. Organisational business acumen (financial Management)</td>
<td>.698</td>
<td>.435</td>
<td>.132</td>
<td>.042</td>
<td>The reliability of this measure is poor, as is the AVE of the three items used to construct this measure.</td>
</tr>
</tbody>
</table>

The goodness-of-fit indices for the model developed from the EFA are presented in Table 4.17:

Table 4.17: Goodness-of-fit indicators for the EFA Model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Required level</th>
<th>Model Score</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN</td>
<td>N/A</td>
<td>1053.774</td>
<td>N/A</td>
</tr>
<tr>
<td>DF</td>
<td>N/A</td>
<td>629</td>
<td>N/A</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>&lt;5</td>
<td>1.675</td>
<td>✔</td>
</tr>
<tr>
<td>GFI</td>
<td>.9&lt;</td>
<td>.833</td>
<td>x</td>
</tr>
<tr>
<td>CFI</td>
<td>.9&lt;</td>
<td>.895</td>
<td>x</td>
</tr>
<tr>
<td>TLI</td>
<td>.9&lt;</td>
<td>.888</td>
<td>x</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;.05</td>
<td>.05</td>
<td>✔</td>
</tr>
</tbody>
</table>

While some measures proved reliable, the goodness-of-fit indices for the EFA model were not adequate in the CFA testing. Accordingly, and as suggested by Hair et al.
(2010), offending estimates were removed to improve the goodness-of-fit indices. In a process similar to EFA, the items identified that possessed a low correlation to a factor, and/or weakened the reliability score of a factor, were removed. This process was only possible for measures that had at least three remaining items. Thus as Organisational Business Acumen – Financial Management only had three items originally, the measure was discarded from the model as it could not be reduced further and had poor reliability. For most other items, the item-to-construct ratio was reduced to roughly 3:1, except for Organisational Business Acumen – Management and Communication, which was adequately retained as a four-item construct. This arrangement had no adverse impact on the overall model fit. The reliability, validity and goodness-of-fit indices for the reduced model are displayed in the Table 4.18.

Table 4.18: Assessment of Reliability for the Reduced Model

<table>
<thead>
<tr>
<th>Measure</th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Labour Precarity</td>
<td>.766</td>
<td>.535</td>
<td>.178</td>
<td>.049</td>
<td>✓</td>
</tr>
<tr>
<td>2. Exploitation</td>
<td>.736</td>
<td>.497</td>
<td>.178</td>
<td>.069</td>
<td>✓</td>
</tr>
<tr>
<td>3. Earnings Satisfaction</td>
<td>.798</td>
<td>.571</td>
<td>.123</td>
<td>.056</td>
<td>✓</td>
</tr>
<tr>
<td>4. Organisational business acumen</td>
<td>.837</td>
<td>.564</td>
<td>.156</td>
<td>.059</td>
<td>✓</td>
</tr>
<tr>
<td>5. Network Size</td>
<td>.848</td>
<td>.650</td>
<td>.417</td>
<td>.128</td>
<td>✓</td>
</tr>
<tr>
<td>6. Non-Local Networks</td>
<td>.827</td>
<td>.618</td>
<td>.176</td>
<td>.078</td>
<td>✓</td>
</tr>
<tr>
<td>7. Structural Hole</td>
<td>.876</td>
<td>.703</td>
<td>.417</td>
<td>.128</td>
<td>✓</td>
</tr>
<tr>
<td>8. Cluster Engagement</td>
<td>.793</td>
<td>.562</td>
<td>.367</td>
<td>.118</td>
<td>✓</td>
</tr>
</tbody>
</table>

The goodness-of-fit indices used in the reduced model were above par, and all except one measure had acceptable reliability and validity. In the case of exploitation, as the three item variable could not be reduced further without generating an
underrepresented construct, the reduced structure was retained with a very close, though sub-par AVE score of 0.497. A below-par AVE score can impact on the ability of the model to represent relationships adequately, yet at 0.003 below 0.5, the AVE of exploitation is highly unlikely to generate a significant effect on the adequacy of the model. However, future research adopting these scales should seek to improve the exploitation measure, both with respect to the content covered across the items, as well as the reliability scores.

Table 4.19: Goodness-of-fit indices for the reduced model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Required level</th>
<th>Model Score</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN</td>
<td>N/A</td>
<td>298.807</td>
<td>N/A</td>
</tr>
<tr>
<td>DF</td>
<td>N/A</td>
<td>247</td>
<td>N/A</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>&lt;5</td>
<td>1.210</td>
<td>✓</td>
</tr>
<tr>
<td>GFI</td>
<td>.9&lt;</td>
<td>.919</td>
<td>✓</td>
</tr>
<tr>
<td>CFI</td>
<td>.9&lt;</td>
<td>981</td>
<td>✓</td>
</tr>
<tr>
<td>TLI</td>
<td>.9&lt;</td>
<td>977</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;.05</td>
<td>.028</td>
<td>✓</td>
</tr>
</tbody>
</table>

As can be noted from Table 4.19, the final model possessed very good model fit scores. As such, the retained measures were ready for SEM analysis. The Tables 4.20 and 4.21 (below) provide descriptive statistics and a correlation matrix for the constructs developed through CFA verification.
Table 4.20: Descriptive statistics for the final model

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Minimum Score</th>
<th>Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Labour Precarity</td>
<td>3.2176</td>
<td>.93632</td>
<td>-.179</td>
<td>.209</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2. Exploitation</td>
<td>3.0397</td>
<td>.83942</td>
<td>.253</td>
<td>-.106</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>3. Earnings Satisfaction</td>
<td>2.5621</td>
<td>.91295</td>
<td>.140</td>
<td>-.676</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4. Organisational business acumen (Management &amp; Communication)</td>
<td>3.3136</td>
<td>.70722</td>
<td>.012</td>
<td>.650</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>5. Network Size</td>
<td>3.7048</td>
<td>.85295</td>
<td>-.546</td>
<td>-.078</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>6. Non-Local Networks</td>
<td>3.2338</td>
<td>.99895</td>
<td>-.336</td>
<td>-.405</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>7. Structural Hole</td>
<td>3.5069</td>
<td>.86485</td>
<td>-.646</td>
<td>.062</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>8. Cluster Engagement</td>
<td>3.2515</td>
<td>.88025</td>
<td>-.759</td>
<td>.345</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.21: Correlation matrix final model

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Labour Precarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Exploitation</td>
<td>.297***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Earnings Satisfaction</td>
<td>-.158**</td>
<td>-.225***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Organisational business acumen (Management &amp; Communication)</td>
<td>-.192**</td>
<td>-.272***</td>
<td>.220***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Network Size</td>
<td>-.098</td>
<td>.002</td>
<td>.135*</td>
<td>.151*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Non-Local Networks</td>
<td>-.162**</td>
<td>.027</td>
<td>.260***</td>
<td>.144*</td>
<td>.297***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Structural Hole</td>
<td>-.099</td>
<td>.046</td>
<td>.131*</td>
<td>.134*</td>
<td>.565**</td>
<td>.339***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Cluster Engagement</td>
<td>-.007</td>
<td>-.089</td>
<td>.112*</td>
<td>.191**</td>
<td>.427***</td>
<td>.227***</td>
<td>-.510***</td>
<td></td>
</tr>
</tbody>
</table>

Significant at: *p < 0.05, ** < 0.01, ***p = 0.001; n =271

The results presented in the correlation matrix (Table 4.21) possessed very few substantial changes in comparison to the correlations between factors developed through the EFA processes (as displayed in Table 4.12). However, in the CFA, the non-local networks construct was more strongly correlated with other network factors. This stronger correlation was achieved with the removal of the item (with a low factor
loading) corresponding to the question: Most of the people I work with are from other regions. The remaining content in the non-local network questions focused on the possession of network relationships with people from other regions, rather than a focus on non-local network activity to the exclusion of local activity. In summary, the three-item factor represent non-local networks correlated more significantly with other network factors.

4.1.8 Summary: Confirmatory Factor Analysis

The measures identified in the EFA were reduced and refined through the process of CFA verification. The final constructs displayed acceptable reliability scores, except for exploitation, which had a slightly below par AVE score. In addition, the final variable structure developed through CFA, satisfied all of the goodness-of-fit indices. In light of this, the scales developed through this process were deemed ready for quantitative analysis.

4.1.9 Hinkin’s (1998) Step 5 and 6 of Measurement Development

The final stages of the survey questionnaire measurement development framework of (Hinkin, 1998) involve an assessment of the convergent/discriminant validity and a replication of measures. Convergent and discriminant validity testing seeks to compare the correlation of newly developed scales with existing scales that measure similar constructs and different constructs (respectively) (Hinkin, 1998). In addition, criterion-related validity tests substitute newly developed measures with alternate measures in hypothetical models to assess the correlation with variables that have a
theoretical significant relationship (Hinkin, 1998). When newly developed scales offer a more robust representation of a construct with reference to their convergent, discriminant and criterion-related validity than existing scales, the new scales should undergo replication (Hinkin, 1998). Furthermore, Hinkin (1998, p. 117) argues that the replication of a scale with an ‘independent sample will enhance the generalizability of the new measure.’

As the developed scales used in this study do not share significant commonalities with existing scales (as outlined in the measure development step above), the convergent and discriminant validity cannot be adequately assessed. Furthermore, as this research is new, replication of the scales to an independent sample has not yet occurred. The novelty of this research thus creates opportunity for future comparative studies that compares the reliability of constructed measures.

4.1.10 Summary of Construct Generation

Thus far, this chapter has applied the ‘survey questionnaire measurement development framework’ of Hinkin (1998) to create reliable variable structures representing the constructs under investigation in this study, which is a prerequisite of SEM analysis. As noted in Chapter Three, however, independent of the reliability of constructs, data needs to be checked to ensure that any results produced through analysis were drawn from an adequate sample of data. The following section of this chapter presents the results of a number of statistical tests applied to the quantitative data used in this study. These tests are used to indicate the adequacy of the data for use in SEM analysis.
4.2 Examining the Adequacy of the Quantitative Data

The following paragraphs outline the steps used to ensure that data used in the quantitative analysis was adequate, and thus provided a sound basis from which to generate reliable and accurate results. The list of steps used to examine the adequacy of data is described in Table 5.22.

Table 4.22: Processes for testing the adequacy of quantitative data for conducting structural equation modelling

<table>
<thead>
<tr>
<th>Step (in order of occurrence)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Initial Normality Test and Pattern Scanning</td>
<td>An initial pattern scan and normality test limited to kurtosis and skewness examination is conducted to ensure that there are no obvious violations present within the data.</td>
</tr>
<tr>
<td>2) Outlier Case Removal</td>
<td>Cases that distort the normality of items are removed or winsorized (moved to the closest extreme within a normal distribution) to ensure overall adequacy in multivariate analysis (Field, 2013).</td>
</tr>
<tr>
<td>3) Missing Value Analysis</td>
<td>A missing value analysis is conducted to look for empty responses in the data. Items that have more than 10% of data missing are removed from analysis.</td>
</tr>
<tr>
<td>4) Inputting Missing Data</td>
<td>In the instances where data was absent the item mean was used in its place (Hair et al., 2010). Outliers have to be removed before the input of the mean for missing data to ensure that the mean adequately reflects a normally distributed sample.</td>
</tr>
<tr>
<td>5) Secondary Normality Test</td>
<td>With no missing data, the distribution of each item used in analysis can be assessed comprehensively. This involves the Kolmogorov-Smirnov test of normality and Q-Q Plot scanning to ensure that distributions do not deviate too excessively from expected normal.</td>
</tr>
<tr>
<td>6) Common Method Variance Test</td>
<td>Common method variance tests examine the degree to which measure errors significantly impact on the quantitative data.</td>
</tr>
<tr>
<td>7) Measurement Model Test</td>
<td>Measurement model tests examine the degree to which the data fits the model (as part of the final confirmatory factor analysis process).</td>
</tr>
</tbody>
</table>
4.2.1 Step 1: Initial Normality Test and Pattern Scanning

Of the original 318 returned surveys that were (at least partially) filled out, 47 had only completed the demographic questions and had not attempted to answer the psychometric items. As a result, these 47 were removed. Although the remaining surveys had occasional missing data, the placement of this missing data appeared to be random (see below), and hence no further cases were removed. An initial check for normality was conducted by examining the skewness and kurtosis scores for each of the 48 original items used in the factor analysis. All items possessed adequate skewness and kurtosis scores, which is acceptable between -2 to 2 (Hair et al., 2010).

4.2.2 Step 2: Outlier Case Removal

A scan of stem-and-leaf plots for all 48 items was undertaken to isolate statistical outliers. While some items had several cases present as minor outliers, no item presented any extreme outliers. In addition, as the initial skewness and kurtosis scores were in the acceptable range (thereby indicating that initial normality tests revealed no violation caused by outliers), no cases were removed.

4.2.3 Step 3 and 4: Missing Value Analysis and Inputting Missing Data

A missing value analysis was conducted using SPSS on the remaining 271 cases. The first item for network size had the highest instance of missing values, 3.0%. Missing value analysis also showed that 46 cases had not answered 1 of the 48 items; 13 cases had not answered 2 of the 48 items; 4 cases had not answered 3 of the 48 items; 2 cases had not answered 2 of the 48 items; and 2 cases had not answered 5 and 11
items respectively. No discernible pattern was present in the non-answered items, with the only two consecutive unanswered questions present for 1 case. Thus, as the missing data was less than 10%, with no discernible pattern present for the data that was missing, the item mean was inputted for case-items with missing data (Hair et al., 2010).

4.2.4 Step 5: Secondary Normality Test

A second round of robust normality testing was undertaken to ensure that items presented as parametric data (i.e. that the items were normally distributed), and hence are eligible to be used in SEM analysis (Hair et al., 2010). This process occurred after the mean was inputted for missing data, as normality can be more adequately examined if all items are present in the analysis. To test the overall normality of aggregated measures (rather than for each of the original 48 items), three normality tests were applied; these being the Kolmogorov-Smirnov test, the Shapiro-Wilk test and a Q-Q plot scan.

The Kolmogorov-Smirnov and the Shapiro-Wilk tests (henceforth K-S tests) ‘compare the scores in a the sample to a normally distributed set of scores with the same mean and standard deviation’ (Field, 2013, p. 185). However, Field (2013) notes that these tests possess a fundamental problem, in that they test for a null-hypothesis (i.e. they check to see if the item is not normally distributed) rather than offer a tolerance score (i.e. the degree to which an item is normally distributed). Field (2013) also indicates that these tests, applied to larger samples, can be significant even if a small or unimportant normality violation is present. As a result, Field (2013) argues
that the normality of items should be assessed by scanning Q-Q plots. Q-Q plots indicate the degree to which a distribution violates the expected parameters of normality. Items that significantly violate expected normal distribution should be removed from parametric analysis (Field, 2013). Significant violations are those where the shape of the distribution runs at an angle that is not congruent with expected normal (Field, 2013). Table 4.23 presents results from the K-S tests applied to each of the measures, and Figure 4.1 in the appendix presents the Q-Q plots.

Table 4.23: Kolmogorov-Smirnov test and Shapiro-Wilk test for all measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Df</td>
</tr>
<tr>
<td>Earnings Satisfaction</td>
<td>.093</td>
<td>271</td>
</tr>
<tr>
<td>Exploitation</td>
<td>.109</td>
<td>271</td>
</tr>
<tr>
<td>Structural Hole</td>
<td>.166</td>
<td>271</td>
</tr>
<tr>
<td>Non-local Networks</td>
<td>.107</td>
<td>271</td>
</tr>
<tr>
<td>Network Size</td>
<td>.132</td>
<td>271</td>
</tr>
<tr>
<td>Cluster Engagement</td>
<td>.160</td>
<td>271</td>
</tr>
<tr>
<td>Labour Precarity</td>
<td>.087</td>
<td>271</td>
</tr>
<tr>
<td>Organisational Business Acumen</td>
<td>.118</td>
<td>271</td>
</tr>
</tbody>
</table>

The K-S test indicated that the data for each measure deviates from a normal distribution. However, in line with the above stated position of Field (2013), significance in this test was largely to be expected considering the size of sample. On closer inspection, scanning the Q-Q plots indicated that the deviations from the expected normal were very slight for each measure, and that normality was thus not likely to be an issue for the data. As this condition was met, in addition to all items possessing acceptable kurtosis and skewness scores, the distribution of the data presented as appropriate for multivariate analysis.
4.2.5 Step 6: Common Method Variance

Common method variances can be a key factor in generating type one and type two errors in quantitative research. Common method variance is defined by Podsakoff, MacKenzie, A., and Podsakoff (2003, p. 879) as:

The variance that is attributable to the measurement method rather than to the constructs the measures represent.

Common method variance can occur for a variety of reasons. Survey questions that are either too long or too short can generate inaccurate responses from participants. Furthermore, biases embedded within survey questions, which encourage a certain response can also be a potential source of method variance. Finally, context effects such as ‘context-induced mood,’ that sway the way a respondent answers questions, may also generate method variance (Podsakoff et al., 2003, p. 882).

Two common tests are conducted on data to ensure that the common method variance does not impact on results, these are: the Harmon’s single-factor test and the common latent factor test. Harman’s single-factor test involves loading all of the variables in one factor using an un-rotated factor analysis (Podsakoff et al., 2003). Podsakoff et al. (2003, p. 890) indicates that the basic assumption underlying this test is that:

If a substantial amount of common method variance is present, either (a) a single factor will emerge from the factor analysis or (b) one general factor will account for the majority of the covariance among the measures.

This process determines the degree to which one factor accounts for the variance present amongst all responses used in a study. When more than fifty per cent of the variance explains one factor, common method variance presents as a concern (Field, 2013). Table 4.24 indicates the degree of variance possessed by one factor for the quantitative data used in this study.
As one factor only explained 20.87 per cent of the variance, the presence of common method variance was very low using the reasoning of Harman’s single factor test. However, Podsakoff et al. (2003, p. 889) note that the single factor test should be limited to an initial diagnosis of the chance of common method variance in the data, as the test is not able to capture the natural variance that will ensue in models with multiple constructs. As a consequence, Podsakoff et al. (2003) suggest that a common latent factor test is one way that common method variance can be examined more thoroughly.

The common latent factor test loads all items onto their theoretical constructs, as well as regressing all items onto an ‘unmeasured latent common methods variance factor’ (Podsakoff et al., 2003, p. 892). If there is significant improvement in the goodness-of-fit indices and co-variances for constructs used in quantitative analysis generated through the inclusion of the ‘unmeasured latent factor’, it is likely that there is a degree of common method variance present in the data (Podsakoff et al., 2003, p. 892). Table 4.25 compares the goodness-of-fit indices for the quantitative data with, and without, a common latent factor.

Table 4.25: Comparison of the goodness-of-fit indices with and without a common latent factor

<table>
<thead>
<tr>
<th>Component</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>4.591</td>
</tr>
</tbody>
</table>

Table 4.24: Harmon’s Single Factor Test
Table 4.25 indicates that there is a very slight improvement in the model fit scores for the model with the unmeasured latent factor, as displayed by the 0.001 increase in CFI, 0.001 increase in TLI, 0.001 decrease in RMSEA, and the 0.007 decrease in CMIN/DF (note that this final indicator occurs on a much larger scale (1-5) than the other indices (0-1)). While this was an indication that there may have been common method variance present within the data, the very slight increase in goodness-of-fit indices indicated that the impact caused by common method variance for the relationship between constructs was likely to be very low, or insignificant.

5.2.5.2 SUMMARY OF COMMON METHOD VARIANCE TESTI

4.2.6 Measurement Model

Before executing final path-model analysis (which tests the strength of relationships between hypothesised paths between constructs), the process of SEM requires that a measurement model examined. In measurement models, all constructs used in a hypothetical path model are co-varied, and the relationships between the data, observed items and constructs, are examined through a CFA. In addition, the measurement model provides an initial indication of the goodness-of-fit indices pertaining to a particular model (Hair et al., 2010). Finally, the measurement model is used to ensure that the development of any higher-order constructs used in a path model are reliable (Ping, 2004). Higher-order constructs are a combination of lower-
order constructs that, when combined, represent a more general, or ‘higher-order’ variable.

As noted in Chapter Two, two path models were utilised to test the posed hypotheses under examination in this study. The first model, termed the primary model, was used to examine the impact of individual social network structures on labour outcomes, (while factoring in the role of organisational business acumen). The second model, termed the final model, combined the cluster engagement, network size, non-local networks and structural hole constructs into one higher-order variable representing creative workers’ social network structure, and was used to examine the impact of social network structure and organisational business acumen on the labour outcomes variables. Aside from the higher-order variable used in the final model, the two models were relatively identical in that they used the same constructs, control variables, items and data.

Measurement model testing for the hypothetical path models used in this study required two steps. The first step co-varied all constructs and examined the reliability of the constructs, as well as the goodness-of-fit indices. The second step linked the social network structure variables into one, higher-order variable and re-examined the reliability of constructs, and goodness-of-fit indices.

4.2.6.1 Step 1: Assessing the Primary Measurement Model

The reliability of constructs and goodness-of-fit scores of the primary measurement model were presented as part of the item generation process (confirmatory factor
analysis) described at the beginning of this Chapter (Tables 4.18 and 4.19). The goodness-of-fit indices of the primary measurement model were appropriate, and all constructs, except for exploitation, presented as robust and reliable variables (as noted, exploitation had a marginally below par average variance extracted score of 0.497, hence this variable was noted as having a very minor limitation in the analysis). Aside from this limitation, the primary measurement model was robust, and structural model testing of the primary model was warranted.

4.2.6.2 Step 2: Assessing the Final Measurement Model

The goodness-of-fit indices for the final measurement model, which combined all of the social network structure constructs into one higher-order variable, are presented in Table 4.29.

Table 4.29: Goodness-of-fit indices for the final measurement model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Required level</th>
<th>Model Score</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN/DF</td>
<td>&lt;5</td>
<td>1.256</td>
<td>✓</td>
</tr>
<tr>
<td>GFI</td>
<td>.9&lt;</td>
<td>911</td>
<td>✓</td>
</tr>
<tr>
<td>CFI</td>
<td>.9&lt;</td>
<td>976</td>
<td>✓</td>
</tr>
<tr>
<td>TLI</td>
<td>.9&lt;</td>
<td>972</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;.05</td>
<td>.031</td>
<td>✓</td>
</tr>
</tbody>
</table>

The goodness-of-fit indices were acceptable, yet the construction of the higher-order variable slightly degraded these scores from how they presented in the primary measurement model. The reliability of the higher-order social network structure variable is presented in Table 4.30.

Table 4.30: Reliability indicators for Social Network Structure

<table>
<thead>
<tr>
<th>Indicator</th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>Assessment</th>
</tr>
</thead>
</table>


The average variance extracted indicator for social network structure was low, yet it was above the acceptable limit (>0.5). The reliability indicators for all other measures remained constant (as presented in Table 4.18). As the goodness-of-fit indices and construct reliabilities were robust, a final path (structural) model analysis was conducted.

### 4.3 Summary: Assessing the adequacy of the quantitative data

This section has outlined seven processes applied to the quantitative data used in this study to ensure its adequacy for use in SEM analysis. The normality tests indicated that the distribution of data allowed for SEM analysis. Furthermore, tests indicated that the data possessed a very slight degree of common method variance, yet further investigation yielded that this was likely to have no significant impact on the relationships present between the constructs. A final measurement model analysis of the primary and final models indicated their suitability for further path/hypothetical model analysis. As the data presented, for the most part, as robust, the final section of this chapter presents results from the statistical analysis using SEM. A final restatement of the hypotheses tested in the primary and final model are displayed in Table 4.31.
Table 4.31: Hypotheses and corresponding Research Question

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Research Question (RQ)</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Labour precarity negatively relates to earnings satisfaction and positively relates to exploitation; and, earnings satisfaction negatively relates to exploitation.</td>
<td>N/A</td>
<td>Final</td>
</tr>
<tr>
<td>2. Organisational business acumen negatively impact labour precarity and exploitation, and positively impacts on the earnings satisfaction for creative workers.</td>
<td>RQ1) What is the impact of organisational business acumen on the labour outcomes of creative workers?</td>
<td>Final</td>
</tr>
<tr>
<td>3. A creative worker’s network size is negatively related to their labour precarity and exploitation, and positively related to their earnings satisfaction.</td>
<td>SRQ1) Which network structures are more significant for the labour outcomes experienced by creative workers?</td>
<td>Primary</td>
</tr>
<tr>
<td>4. Non-local networks are positively related to earnings satisfaction, and negatively related to labour precarity and exploitation for creative workers.</td>
<td>SRQ1) Which network structures are more significant for the labour outcomes experienced by creative workers?</td>
<td>Primary</td>
</tr>
<tr>
<td>5. Structural holes are positively related to earnings satisfaction, and negatively related to labour precarity and exploitation, for creative workers.</td>
<td>SRQ1) Which network structures are more significant for the labour outcomes experienced by creative workers?</td>
<td>Primary</td>
</tr>
<tr>
<td>6. Cluster engagement is positively related earnings satisfaction, and negatively related to labour precarity and exploitation for creative workers.</td>
<td>SRQ1) Which network structures are more significant for the labour outcomes experienced by creative workers?</td>
<td>Primary</td>
</tr>
<tr>
<td>7. Network size, non-local networks, structural hole, and clustering will be positively and significantly related to each other</td>
<td>N/A</td>
<td>CFA/Primary/Final</td>
</tr>
<tr>
<td>8. The aggregate of a creative worker’s social network structure, comprising network size, non-local networks, structural hole and clustering will positively relate to earnings satisfaction, and negatively relate to labour precarity and exploitation.</td>
<td>RQ2) What is the impact of social network structure on the labour outcomes of creative workers?</td>
<td>Final</td>
</tr>
<tr>
<td>9. Organisational business acumen and social network structure are co-varied and indirectly impact on the others’ relationship with creative labour outcomes.</td>
<td>SRQ2) To what extent does the social network structure of a creative worker, and their organisational business acumen, impact on their labour outcomes?</td>
<td>Final</td>
</tr>
</tbody>
</table>

**Control Hypotheses (CH)**

CH1) The sub-sector that a creative worker operates in will impact on their labour outcomes. | Final |

CH 2) Creative workers who work part time within the creative sector experience poorer labour outcomes. | Final |

CH 3) Years of experience enhances the labour outcomes of creative workers. | Final |
4.4 Results: Quantitative Analysis

The results for the primary model and final model are displayed in Figures 4.2 and 4.3 respectively. As noted in Chapter Two, the primary model functions to identify the theoretical significance regarding which social network structures (network size, cluster engagement, structural hole and non-local networks) had the greatest impact on the labour outcomes of creative workers. In addition, the final model indicated the real impact of the aggregate of social network structures on the labour outcomes of creative workers.

4.4.1 Results from the Primary Model

The goodness-of-fit indices for the primary model were appropriate, as displayed in Table 4.32.

Table 4.32: Goodness-of-fit indices for the primary model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Required level</th>
<th>Model Score</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN/DF</td>
<td>&lt;5</td>
<td>1.250</td>
<td>✓</td>
</tr>
<tr>
<td>GFI</td>
<td>.9&lt;</td>
<td>906</td>
<td>✓</td>
</tr>
<tr>
<td>CFI</td>
<td>.9&lt;</td>
<td>972</td>
<td>✓</td>
</tr>
<tr>
<td>TLI</td>
<td>.9&lt;</td>
<td>966</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;.05</td>
<td>.030</td>
<td>✓</td>
</tr>
</tbody>
</table>
Figure 4.2: Standardised regression weights and significance levels for the primary model

Table 4.33: Control impacts on dependent variables for the primary model

<table>
<thead>
<tr>
<th></th>
<th>Labour Precarity</th>
<th>Earnings Satisfaction</th>
<th>Exploitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsector</td>
<td>.067</td>
<td>.146*</td>
<td>.091</td>
</tr>
<tr>
<td>Experience</td>
<td>.062</td>
<td>-.039</td>
<td>.112</td>
</tr>
<tr>
<td>Full/part</td>
<td>-.141*</td>
<td>-.143*</td>
<td>-.039</td>
</tr>
</tbody>
</table>

Significant at: *p < 0.05, ** < 0.01, ***p = 0.001; n = 271
The findings from the primary model indicated that non-local networks and cluster engagement were the only network structures that have an impact on any of the labour outcomes. Of these two antecedents, non-local networks possessed a weak, but significant, negative relationship with labour precarity (-0.151*). In addition, non-local networks had a significant, positive relationship with earnings satisfaction (0.225**). Hence a partial confirmation of the fourth hypothesis can be concluded (i.e. non-local networks enhances earnings satisfaction and reduces labour precarity, but has no impact on exploitation).

Cluster engagement possessed a significant, negative relationship with exploitation (-0.227**). However, this construct possessed no significant relationship to earnings satisfaction or labour precarity. Hence, a partial confirmation of the sixth hypothesis can be concluded (i.e. cluster engagement only reduces exploitation, and has no impact on labour precarity nor earnings satisfaction).

Neither structural hole nor network size displayed a significant relationship with any of the dependent variables, which leads to a rejection of the third and fifth hypotheses (i.e. neither structural hole nor network size impacted on the labour outcomes of creative workers). Finally, the control variable years of experience had no significant impact on the dependent variables in the model; hence, the third control hypothesis was rejected (i.e. years of experience has not impact on the labour outcomes of creative workers).

At a theoretical level, the results presented in the primary model were at odds with many of the posed hypotheses. To this end, there appeared to be a contrasting
dynamic present between the local and the non-local (potentially global) social network connections, which plays a separate role on the labour outcomes of creative workers. This is discussed further in Chapter Six, yet an answer concerning the first, secondary research question (SRQ1) posited in this thesis (i.e. Which network structures are more significant for the labour outcomes experienced by creative workers?) can be derived from these results. Thus, the results indicated that a creative workers’ non-local networks reduced their labour precarity and enhanced their earnings satisfaction and, for this reason, non-local networks presented as a resource with the most significant strategic value for creative workers. In addition, the cluster engagement of creative workers reduced their exploitation. Thus, cluster engagement presented as an additional resource of strategic value for creative workers.

It would be incorrect to conclude that network size and structural hole had no influence on the labour outcomes of creative workers. As noted in Chapter Two, the true impact of a creative workers’ social network structure must take into account the aggregate of all network structures into a higher-order variable (Yang & Liu, 2012). This analysis is provided in the final model (figure 15).
4.4.2 Results from the Final Model

Table 4.34: Goodness-of-fit indices for the final model

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Required level</th>
<th>Model Score</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN/DF</td>
<td>&lt;5</td>
<td>1.284</td>
<td>✓</td>
</tr>
<tr>
<td>GFI</td>
<td>.9&lt;</td>
<td>.899</td>
<td>+/-</td>
</tr>
<tr>
<td>CFI</td>
<td>.9&lt;</td>
<td>.967</td>
<td>✓</td>
</tr>
<tr>
<td>TLI</td>
<td>.9&lt;</td>
<td>.962</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;.05</td>
<td>.032</td>
<td>✓</td>
</tr>
</tbody>
</table>

The goodness-of-fit indices, shown in table 4.34, for the final model indicated a slightly below par GFI score (below the acceptable level by 0.001). This result was to be expected, as the GFI is typically negatively affected when model complexity is enhanced (such as in this model) (Ping, 2004). For models that are more complex, Ping (2004) argues that the CFI and RMSEA scores offer a more robust indication of overall fit. Accordingly, as all other indices of model fit were very strong, the below par GFI was not likely to be a cause for concern.
Figure 4.3: Standardised regression weights and significance levels for the final model

Table 4.35: Control impacts on dependent variables for the final model

<table>
<thead>
<tr>
<th></th>
<th>Labour Precarity</th>
<th>Earnings Satisfaction</th>
<th>Exploitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsector</td>
<td>.038</td>
<td>.139*</td>
<td>.126</td>
</tr>
<tr>
<td>Firm age</td>
<td>.060</td>
<td>-.013</td>
<td>.103</td>
</tr>
<tr>
<td>Full/part</td>
<td>-.150*</td>
<td>-.146*</td>
<td>-.034</td>
</tr>
</tbody>
</table>

Significant at: *p < 0.05, ** < 0.01, ***p = 0.001; n =271
The aggregated social network structure variable softened the impact of the individual social network structures on labour outcomes as they presented in the previous, primary model. To this end, when cluster engagement was aggregated with the other network variables, its impact on exploitation became insignificant. Thus, the findings from the final model indicated that, just because a creative worker may have possessed a very high score in one dimension of social network structure, they were unlikely to possess the same strength in other dimensions (though the structures were positively correlated). Hence, a nuanced confirmation of hypothesis seven was concluded, i.e. network size, non-local networks, structural hole, and cluster engagement were positively and significantly related to each other, yet there was significant variance between the relationships present between these constructs.

The final model indicated that in comparison to social network structure, organisational business acumen had a much more significant and direct impact on the labour outcomes of creative workers. Organisational business acumen significantly reduced labour precarity (-0.189**) and exploitation (-0.292***), and enhanced earnings satisfaction (0.207**). In contrast, the aggregated social network structure variable had only a small impact on reducing labour precarity (-0.177*).

These results comprehensively confirmed hypothesis two (i.e. the positive impact of organisational business acumen on the labour outcomes of creative workers was confirmed). In addition, the results provided a conclusive answer for the first research question, i.e. What is the impact of organisational business acumen on the labour outcomes of creative workers? Thus, the results indicated that organisational business acumen significantly enhanced the labour outcomes of creative workers.
These results from the final model lead to a partial rejection of Hypothesis 8 (i.e. the positive impact of social network structure on labour outcomes was limited to a small, though significant, reduction in labour precarity). This outcome offered a qualified answer to the second research question posed in this study, i.e. what is the impact of social network structure on the labour outcomes of creative workers? Results from the final model indicated that a creative worker’s social network structure had only a small impact on reducing labour precarity, and had no significant impact on the other labour outcomes of exploitation and earnings satisfaction.

Hypothesis 9, and the second, secondary research question (SRQ2) posed in this study sought to examine the combined effect on a creative workers’ labour outcomes generated through their organisational business acumen and social network structure. The line of enquiry offered by this hypotheses sought to find empirical support for the claims of Rae (2004), who suggested that the business skills of creative workers impacted on the way they develop their social network structures and, similarly, that their social network structures impacted on their development of business skills. Applied to the statistical testing conducted in the final model, the hypothesis sought to examine if the relationship between organisational business acumen and social network structure presented as a complex mediation model, where both of these independent variables were indirectly impacting on the other’s relationship to the dependent variables (as noted in Chapter Two).

It is important to note that the overall impact of organisational business acumen and social network structures on labour outcomes, while significant, is rather small. The independent variables of organisational business acumen and social network structure
only contribute between 10 and 30 per cent of the dependent variables. A possible explanation for such a low impact may relate to the homogenised, and quite small, sample used in this analysis. In a more specified sample there could conceivably be more, or less, overall impactful (particularly for earnings satisfaction which was significantly different for those from different fields).

In a situation where at least 70% of the labour outcomes of creative workers is not explained by their organisational business acumen, nor their social network structure, the results beg the question of ‘what other factors, unmeasured in this thesis, might be contributing more heavily to the labour outcomes of creative workers?’ A possibility is that luck, chance and/or serendipity plays a very important role in the career success and labour outcomes of creative workers. This would explain how some in the sample had better labour outcomes, though not necessarily high business acumen. At a conceptual level, this justification could also explain why evidence-based models for career development and success have been elusive within the creative industries, despite their development in other sectors. It is possible that other unmeasured and complex impacts such as engaging with one particular, or a set of particular regions, may also be responsible for the generation of creative workers’ labour outcomes. Thus, future research is needed to account for such impacts and, through comparison of these results, more fully account for the impacts observed in the final model.

AMOS (the software used in this thesis to conduct the SEM analysis) possesses functionality to assess the indirect effects that impact on dependent variables, generated through co-varied independent variables. This is achieved by bootstrapping the data to 4000, at a .95 bias-corrected confidence interval, and observing the
significance of the indirect effects generated from linked constructs. The bootstrapping resamples the original data to estimate the possible distributions over a larger sample size (Hair et al., 2010). AMOS calculates the significance of indirect effects generated through linked variables over this larger sample size. This functionality was applied to the final model to test the indirect effects for organisational business acumen and social network structure on the labour outcomes of creative workers.

As results from the final model indicated that social network structure possessed no impact on exploitation and earnings satisfaction, an indirect effect generated through organisational business acumen and social network structure (or vice versa) was rejected. The significance levels (p values) for the indirect relationships that occurred through organisational business acumen and social network structure (and vice versa) on labour precarity are displayed in Table 4.36 (below).

Table 4.36: Standardised Indirect Effects Significance levels for the final model

<table>
<thead>
<tr>
<th></th>
<th>Labour Precarity</th>
<th>Earnings Satisfaction</th>
<th>Exploitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational Business</td>
<td>.026</td>
<td>.060</td>
<td>.000</td>
</tr>
<tr>
<td>Business Acumen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Network Structure</td>
<td>.044</td>
<td>.063</td>
<td>.992</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As the p-value scores were significant below the 0.05 level, the results displayed in Table 4.35 indicated that both organisational business acumen and social network structure had a significant, indirect effect on each other with respect to reducing labour precarity. This result offered a confirmation to the proposition of Rae (2004), and partially confirmed the ninth hypothesis posed in this study (i.e. organisational
business acumen and social network structure have an indirect effect on labour precarity, but not on earnings satisfaction nor exploitation). Hence, the results from the indirect testing provided an answer to the second, secondary research question posed in this study i.e. a creative workers’ social network structure, and their organisational business acumen, combine to indirectly impact on labour precarity.

Surprisingly, the results from the primary model and the final model indicated that the labour outcomes were not comprehensively correlated, evidencing a partial rejection of the first hypotheses (labour outcome are positively correlated with each other). Thus, while earnings satisfaction was significantly related to exploitation (-0.259**), and labour precarity was significantly related to exploitation (0.319***), there was no significant relationship between labour precarity and earnings satisfaction. This outcome suggests that a creative worker’s labour precarity and earnings satisfaction are somewhat independent of each other, though both act as a precursor for exploitation.

The control hypotheses were also partially confirmed. The sub-sector that a creative worker worked in had a significant impact on their earnings satisfaction. In the following MANOVA table (Table 4.37), and Estimated Marginal Means table (Table 4.38), the differences in labour outcomes between creative workers’ working in different sub-sectors are presented.
Table 4.37: MANOVA of sub-sector on Labour Outcomes

<table>
<thead>
<tr>
<th>Sub-sector</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Precarity</td>
<td>2.686</td>
<td>6</td>
<td>.488</td>
<td>.505</td>
<td>.804</td>
</tr>
<tr>
<td>Earnings Satisfaction</td>
<td>12.160</td>
<td>6</td>
<td>2.2027</td>
<td>2.513</td>
<td>.022</td>
</tr>
<tr>
<td>Exploitation</td>
<td>2.875</td>
<td>6</td>
<td>.479</td>
<td>.675</td>
<td>.670</td>
</tr>
</tbody>
</table>

Table 4.38: Mean comparisons labour outcomes of different sub-sectors

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Mean</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Precarity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>3.267</td>
<td>.113</td>
</tr>
<tr>
<td>Art</td>
<td>3.135</td>
<td>.102</td>
</tr>
<tr>
<td>Film</td>
<td>3.394</td>
<td>.235</td>
</tr>
<tr>
<td>Design</td>
<td>3.583</td>
<td>.333</td>
</tr>
<tr>
<td>Web</td>
<td>3</td>
<td>.942</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>3.300</td>
<td>.211</td>
</tr>
<tr>
<td>Multiple Art Forms</td>
<td>3.167</td>
<td>.113</td>
</tr>
<tr>
<td>Earnings Satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>2.569</td>
<td>.107</td>
</tr>
<tr>
<td>Art</td>
<td>2.322</td>
<td>.097</td>
</tr>
<tr>
<td>Film</td>
<td>2.354</td>
<td>.224</td>
</tr>
<tr>
<td>Design</td>
<td>2.917</td>
<td>.317</td>
</tr>
<tr>
<td>Web</td>
<td>3.667</td>
<td>.898</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>2.800</td>
<td>.201</td>
</tr>
<tr>
<td>Multiple Art Forms</td>
<td>2.774</td>
<td>.107</td>
</tr>
<tr>
<td>Exploitation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>2.925</td>
<td>.101</td>
</tr>
<tr>
<td>Art</td>
<td>3.000</td>
<td>.091</td>
</tr>
<tr>
<td>Film</td>
<td>3.104</td>
<td>.211</td>
</tr>
<tr>
<td>Design</td>
<td>2.883</td>
<td>.298</td>
</tr>
<tr>
<td>Web</td>
<td>3.000</td>
<td>.842</td>
</tr>
<tr>
<td>Literary Arts</td>
<td>3.200</td>
<td>.188</td>
</tr>
<tr>
<td>Multiple Art Forms</td>
<td>3.161</td>
<td>.101</td>
</tr>
</tbody>
</table>

In combination, Tables 4.37 and 4.38 indicate that a significant difference existed between the mean scores for earnings satisfaction for creative workers in different sub-sectors. To this end, creative workers who reported that they worked in the visual arts had the lowest earnings satisfaction, whereas those that undertook web-based work had a significantly higher level of earnings satisfaction.

Control hypothesis two, which posited that the working intensity (full-time or part-time) of a creative worker impacted on their labour outcomes, was partially confirmed by these results. To this end, part-time creative workers were shown to experience significantly poorer earnings satisfaction and labour precarity than full-time workers.
The following tables (table 4.39 and 4.40) display the results from a MANOVA analysis and mean comparison for the constructs that were significantly different for full-time and part-time creative workers.

Table 4.39: MANOVA of full-time/part-time on Labour Outcomes

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Precarity</td>
<td>4.068</td>
<td>1</td>
<td>4.068</td>
<td>4.704</td>
<td>.031</td>
</tr>
<tr>
<td>Earnings Satisfaction</td>
<td>3.518</td>
<td>1</td>
<td>3.518</td>
<td>4.273</td>
<td>.040</td>
</tr>
<tr>
<td>Exploitation</td>
<td>.193</td>
<td>1</td>
<td>.193</td>
<td>.273</td>
<td>.602</td>
</tr>
</tbody>
</table>

Table 4.40: Mean comparisons labour outcomes of different subsectors

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Mean</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Precarity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>3.291</td>
<td>.066</td>
</tr>
<tr>
<td>Part-time</td>
<td>3.014</td>
<td>.110</td>
</tr>
<tr>
<td>Earnings Satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>2.631</td>
<td>.064</td>
</tr>
<tr>
<td>Part-time</td>
<td>2.373</td>
<td>.107</td>
</tr>
<tr>
<td>Exploitation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>3.056</td>
<td>.060</td>
</tr>
<tr>
<td>Part-time</td>
<td>2.995</td>
<td>.099</td>
</tr>
</tbody>
</table>

Counter to the third control hypothesis (i.e. years of experience has an impact on the labour outcomes of creative workers), the years of experienced possessed by creative workers had no impact on their labour outcomes (as evidenced by an insignificant relationship in the primary and final models for firm age). Hence, the third control hypothesis was rejected.

The result concerning the third control hypothesis indicated that poor labour outcomes were likely to be consistent throughout the entire careers of creative workers. This result is supportive of the observations of Hesmondhalgh and Baker (2010), who observed that the threat of labour precarity remained constant for creative workers in spite of their career progression. However, the results were in contrast to the findings of the Throsby and Zednik (2010) study of performing arts workers, in which it was
found that job security increased over time. The contrast between the results presented here, and the results from the Throsby and Zednik (2010) study (which was used to develop the third hypothesis), may be due to the broader sampling frame used in this study.

It is almost certain that the notion of what constitutes labour precarity, exploitation and earnings satisfaction changes over time depending on the experience levels of a creative worker. However, a possible explanation for why these changes were not observed in this study could indicate that a creative worker’s level of satisfaction with their labour outcomes remains relative to their development (and experience) within the sector. To this end, as a creative worker progresses in their career, it is possible that while for example, their earnings may increase, their perceived level satisfaction remain poor as their expectation of better outcomes as a result of enhanced expertise is not realised.

4.5 Chapter Conclusion

This chapter outlined the quantitative study used in this thesis to investigate the impact of organisational business acumen and social network structure on the labour outcomes of creative workers. The results from the primary and final models indicated that organisational business acumen significantly enhanced the labour outcomes of creative workers. In comparison, the social network structure of a creative worker as an aggregated variable comprising the worker’s network size, structural hole, cluster engagement and non-local network had a limited impact on their overall creative labour outcomes. This is because it slightly reduced labour precarity.
The theory testing in the primary model indicated that non-local networks and cluster engagement, in isolation, had the strongest impact in enhancing labour outcomes for creative workers. However, this positive impact largely slipped away when the sum total of all network effects were accounted for (as in the final model). Perhaps most significantly, the final model evidenced an iterative indirect relationship that exists between organisational business acumen and social network structure and labour precarity. The two former variables were shown to impact on each other and, in this way, they each generated a reduction in labour precarity. As the quantitative analysis formed the primary component of the explanatory mixed methods approach conducted as part of this the study, the following chapter uses qualitative data to support and explain these results.
Chapter Five – Qualitative Results

The qualitative analysis presented in this chapter formed the final phase of the explanatory mixed methods design adopted in this study to examine the impact of organisational business acumen and social network structure on the labour outcomes of creative workers. In line with the explanatory design, the primary aim of this chapter is to explain the quantitative findings presented in the previous chapter (Creswell & Plano Clark, 2007). After a brief introduction to the qualitative data, a discussion concerning the process by which the quantitative results were used to navigate qualitative data is presented. The chapter concludes with a presentation of the qualitative analysis.

5.1 Introduction

In this chapter, qualitative data collected in the form of transcribed, semi-structured interviews from fifteen Australian creative workers is used to examine and explain the results from the previous quantitative study. The quantitative study yielded four key findings pertaining to Australian creative workers:

1) Organisational business acumen significantly reduces labour precarity and exploitation, and enhances earnings satisfaction for creative workers.

2) In contrast, social network structure has a smaller, though still significant impact on reducing labour precarity of creative workers.

3) Organisational business acumen and social network structure indirectly affect each other on reducing labour precarity.
4) Non-local networks and cluster engagement appear to be the most significant social network structures for enhancing the labour outcomes of creative workers.

After the qualitative data was assembled in order of interview, the data disassembly phase involved coding sections in a way that would allow for a comparison and contrast between the quantitative results, and the responses from the qualitative interviews. The following five preliminary codes were used to identify sections of text in the transcribed qualitative interviews, which pertained to, or contrasted with, the quantitative results:

- The nature of organisational business acumen.
- The nature of social network structure,
  - The nature and impact of non-local networks and cluster engagement.
- The nature of labour outcomes.
- The interaction between organisational business acumen, social network structure and labour outcomes.

Table 5.1 displays the total number references found across the qualitative data, corresponding to each of the above listed themes. In addition, identified sub-themes are presented.

Table 5.1: Summary of qualitative themes and sub-themes

<table>
<thead>
<tr>
<th>Parent Themes</th>
<th>References</th>
<th>Sub-themes</th>
<th>Sub-themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The nature of organisational business acumen</td>
<td>36</td>
<td>5</td>
<td>Business administration; business development; financial management and budgeting; client and colleague management; project management.</td>
</tr>
<tr>
<td>The nature of social network</td>
<td>23</td>
<td>6</td>
<td>Cluster engagement; network size; network growth; structural hole; non-local networks; relationships</td>
</tr>
</tbody>
</table>
The following section expands on these themes as they appeared in the qualitative data. Where possible, selected quotations from the respondents are used to further highlight and detail the treatment of themes.

5.2 The nature of organisational business acumen

When describing and referring to the nature organisational business acumen pertaining to creative work, respondents had varied descriptions. Some respondents focussed on administrative and business management competencies, such as time management and organisation of creative activities. Others respondents focussed on financial management skills, such as budgeting, and pricing products and services correctly. Finally, some respondents emphasised client and colleague management as central to their organisational business acumen.

Ruth, an events manager and web designer, described her business activities connected to her creative work as varied:

Ruth: I run everything from Human Resources, to technical support; I run a lot of the in-house advertising… I plug multiple holes with my skills.
Paul (a musician) and Denise (a professional music photographer) noted that their business skills pertained specifically to client management, but this component also required them to possess a professional commitment to their creative work.

Paul: You’ve got to earn it for the calls to keep coming in. You’ve got to take this as a serious thing; you need to turn up on time and have respect for the venue manager and people hiring you. If you do exactly what they ask, and give them exactly what they want, that phone will always keep ringing.

Denise: Bands and creative [workers] that are disrespectful, or dodgy in their dealings, they will never ever get the ‘call back’. Word will go around – ‘don’t work with these guys.’ That is at least in my experience. So it is more about your interpersonal skills.

The responses by Paul and Denise highlight the importance of client management, as a component of organisational business acumen, for the work opportunities afforded to creative workers.

Ella, a fashion designer and events manager, emphasised that time management and professionalism was an important component of her organisational business acumen.

Ella: Time management… it’s a really important one. In a creative space we tend to ‘hang out’ and socialize a lot... And then you get to the end of the day and you haven’t done your work, and you end up going home and doing it… So time management is a big thing for me.

Focussing on the administrative and business management competencies involved in creative work, Sarah, a visual artist, noted the following.

Sarah: There is a lot of things to worry about… it is not just about the creativity… that is such a small part of the industry… There is so much more involved that needs to be done on a computer, such as designing, promoting, booking, organising, budgeting and social networking… creativity is just the icing on the cake.
The responses of Sarah and Ella seem to suggest that organisational business acumen, as well as assisting creative workers in their business activities, may also provide them with structures and competencies to enhance their creative endeavours. To this end, time management was presented by Ella as a competency that may help her to have more time for her creative (and non-creative) activities. Similarly, in Sarah’s response, competencies associated with organisational business acumen formed the foundation for creative success (evidenced in the statement: ‘creativity is just the icing on the cake’).

While the quantitative results were unable to draw conclusions regarding the financial management component of organisational business acumen, respondents to the qualitative enquiry noted that this was an important factor in generating consistent creative work and earnings satisfaction. To this end, several respondents discussed challenges in knowing how to price their services and products in a way that adequately reflected the production that had gone into it.

Enriquez: I probably under-quote myself from lack of confidence – from the fear of not getting a job. I also probably under-quote because I don’t have the scope to properly manage the expectations of clients.

Sally: It would definitely come down to knowing exactly what you are spending in your business, so if I buy something for $5, I need to know how much labour I put into it, how much electricity, and payment for any transport and things… so its knowing what the end product has cost me, and that is a hard thing, and then I sell it for that.

In summary, respondent’s perceptions regarding the nature organisational business acumen viewed it as an important skill for generating repeat work (thereby a potential source of labour precarity mitigation). It was also viewed as a factor that increased the
effectiveness of creative work, such as through the development of more robust pricing arrangements for products, and a skill that allowed them to free-up more time to focus on their creative pursuits.

5.2.1 Linking Organisational Business Acumen with Labour Outcomes

The qualitative treatment of organisational business acumen supported the quantitative findings. To this end, respondents to the qualitative enquiry presented organisational business acumen as positively impacting on their earnings satisfaction, as well as reducing their labour precarity and exploitation. Focusing initially on the impact of organisational business acumen on earnings satisfaction and exploitation, respondent Sally acknowledged that she had developed her business skills over the last few years. As a result, she increased the amount of income that she generated, and this enabled her to take a day off each week (thereby improving the conditions under which she conducted her creative work).

Sally: I’ve had my business for two years and I think if I can sell a piece of art, and put an extra $10 or $20 on it… that’s maybe all the extra cash that I need to get a day off each week… Which I haven’t had the chance to do previously.

The positive impact of organisational business acumen on earnings satisfaction was also discussed by Enriquez (below).

Enriquez: My earnings started off really poorly because I was afraid to quote what I was worth. My pay conditions are good now if I can finish a project on time and be on time. But if I’m held up, for whatever reason, then I end up losing.
Likewise, Melanie, a music manager, indicated that developing her administrative and financial management capabilities allowed her to budget more effectively and retain her earnings while experiencing gaps in creative work.

Melanie: You have to be able to accept work when it is made available to you. You also have to budget… for example you may get paid for several jobs in one month, and then not receive any other work for several months. There is a bit of balancing there and I definitely think you need to organise your money effectively.

Tim, a film worker, argued that the development of organisational business acumen meant that more people were willing to do business with him:

Tim: I think its all about having business skills. As you develop some kind of business success and professionalism, people want to work with you more.

The position expressed by Tim in the above quote provides an example of the way in which organisational business acumen may generate work for a creative worker, and through this, reduce their labour precarity.

5.2.3 Acquiring Organisational Business Acumen

The majority of respondents indicated that their level of organisational business acumen increased over time, yet there was no convergence concerning exactly concerning how long they were operating before they noticed a difference. Furthermore, for most respondents, the acquisition of a workable level of organisational business acumen appeared occur after about 1-2 years of operating as a creative worker. Key sources of development for organisational business acumen were experience generated over time, as well as learning that occurred through engagement with social networks.
Two respondents indicated that, in order to maintain a sustainable level of income while entering into the creative industries, they sought to accumulate income from elsewhere (part time work in another industry, or reserved saving accumulated through previous non-creative work). While these respondents noted that their creative work during this time was undertaken on a volunteer (unpaid) basis, they expressed that the time was useful in generating the skills required to be successful when they eventually decided to operate solely within the creative industries.

Ella: Up until last year, I was volunteering in this for two years. I was lucky that I had an alternate income... so I had a timeframe where I knew I didn’t need to make any money from my creative stuff. But I also knew I had to ‘work my butt off’ to end up with money in the end... and I did that... I created my own job, and my own wage... I have that formula now, so I know how I can keep going.

John, a film worker, indicated that he entered creative work without a strong sense of the business component pertaining to creative work.

John: I just started working in film when I realised that there was a possibility of making money from it, but I didn’t actually do any research, or look at what other people were offering. But now I have found the ‘threshold’ where I have the skills to handle the work I get... such as budgeting to make sure I have enough money between jobs.

John’s quote also indicated an experiential development of organisational business acumen, which after a time, enhances the sustainability of work. In summary, the qualitative data accounted for some of the ways in which organisational business acumen appeared to generate over time.
Several respondents also indicated that the supportive environment created through their engagement with creative clusters, as well as new information and ways of operating that manifested through their non-local networks, provided additional sources for acquisition of organisational business acumen. This is discussed at the end of the following section that examines the presentation of qualitative data concerning the nature of social network structure.

5.3 The Nature of Social Network Structure

In the main, respondents strongly agreed that engaging with, and developing, social network structures were a very important aspect of their creative work. Rather than suggesting that one kind of social network structure was more important than another, respondents indicated that different structures affected their work in different ways. Discussion concerning the nature of different network structures, as presented in the qualitative data, is offered below.

5.3.1 Network Size

Many respondents proclaimed that they possessed large social networks. These networks appeared to develop over time as a result of taking on new creative work. The experience of Denise (below) represented a very explicit statement concerning the size of her network.

Denise: I have a very, very large social network. The Australian music industry is really tiny and everyone knows each other. So I work with public relations companies, marketing companies, management, artists, record labels and booking agents. I’d say I could call on 2500 people if I needed, and ask a favour from them… or they might call me.
Sarah indicated that she sought to cultivate multiple relationships to ensure positive outcomes for her creative work:

Sarah: Who you are connected with can be very influential; but I’ve always been one who doesn’t link in with just one person.

Herman (below) discussed the way in which his social network structures tended to grow over time as a result of being a freelance worker.

Herman: my creative industries world is pretty big. Especially since, over the last years, after I quit fulltime design work and began freelancing. My business model is such that I am basically networking and collaborating with many people.

Melanie discussed that growing her network was an intentional strategy for generating more creative business.

Melanie: I went out every night thinking about making my network bigger, based on wanting to expand my business – it could be a lot bigger… but its not. I can manage with what I have at the moment.

Melanie’s quote above highlights a general belief from many of the respondents that ‘having a big social network’ was perceived to be a good thing for generating new business opportunities. At a surface level, the qualitative data seemed to present network size as very significant (thereby contrasting the quantitative results). However, rather than suggesting that having a very large social network was a good thing, respondents moreover indicated that in generating large networks they inevitably identified small pockets of people who they wished to continue working with (as well as those who they wished to discontinue working with).
5.3.2 Structural Hole

The qualitative data corresponding to the conceptualisation of structural holes within social networks generally focussed on the role of information sharing between different networks. In the quote bellow Ellen, a festival manager and DJ, indicated that she perceived herself as ‘someone in the middle’, and accordingly saw her role as a sharer of information.

Ellen: I do have people coming to me for information a lot. Sometime I don’t have the information, but for some reason people think that I am this person who has a lot of answers in this industry, probably because I’ve been working in a lot of different areas and I do go to other people and seek information all of the time… so I feel like I am someone in the middle.

Ellen goes on to discuss the reciprocal relationships she developed with different social networks through working on other festivals. She further highlights that these reciprocal relationships have become a mechanism for her to generate, as well as offer, creative work.

Ellen: I did some work with this other big festival – and I worked with one of the festival managers there. We got on very well, and I invited her to come and by my operations manager for the festival that I run. She has a lot of experience and her CV is phenomenal – so she is really good at what she does, and she brings a lot of other things to the table.

This indicated that Ellen acted as a bridge into a new festival network for her operations manager, and this helped in reciprocating the development of new work opportunities.
5.3.3 Non-local networks

Not all of the respondents in the sample indicated that they possessed non-local networks. The qualitative data suggested that non-local networks develop as a result of working in other regions or countries. Those respondents, who spoke positively of the impact of non-local networks on their creative work, indicated that their non-local network contacts possessed quite diverse working styles in comparison to their own.

Enriquez: To work with people from other regions has an impact on my motivation and inspiration to take on work. I find it more stimulating to work on projects that potentially involve different experiences and cultures. When I do work with people who are from other regions, it adds depth to my knowledge about creative industries activities that occurs in other regions, so I learn more and I get a broader sense of the bigger picture.

Paul, a musician based on the East Coast of Australia, developed non-local networks as a result of touring the West Coast. He noted that the way business was conducted on the West Coast was much more organised and professional.

Paul: In Western Australia, entertainment is a priority for venue managers! But on the East Coast it is not. Here [on the East Coast], venue managers don’t realise that musicians need to get paid. They don’t seem to think that musicians need to eat, or put petrol in their cars.

Paul reflected that he used his West Coast experience as a benchmark, and encouraged colleagues in the East Coast to adopt more professional standards in order to improve the local creative employment structures.

5.3.3.1 Impact of Non-local Networks on Labour Precarity

Enriquez discussed at length the ways in which his non-local networks impacted on his working activities.
Enriquez: My non-local networks influence the way I work by providing me with different viewpoints and opportunities for project development. It also has helped me to communicate more effectively with my clientele at home, as I draw on my experiences from working with people from different cultures and non-English speaking backgrounds. So, my clients appreciate my diverse methods of working, and I also believe they feel more confident in my ability to deliver. I say that as I have gained more work locally as a result of the overseas collaborations that I have done.

The quotes from Enriquez and Paul (above) presented two subtle ways by which a creative worker’s non-local networks may impact on their labour precarity. In the first instance, the skills and perspectives generated as an outcome of working with people from diverse backgrounds appeared to enhance the business competence of creative workers. This occurred through benchmarking and comparing local and non-local activity, as well as developing competencies for working with diverse groups of people (as displayed in the quote of Enriquez). In addition, by possessing non-local networks, creative workers enhance their legitimacy from the perspective of prospective clients. This is likely due to the idea that the possession of non-local networks evidences that a creative worker may have had extra-regional experiences upon which they can draw to undertake their creative work.

5.3.4 Cluster engagement

For those respondents who identified as belonging to a cluster, the majority noted that membership had a positive impact on their creative work.

Enriquez: Working within this cluster – originally it helped me establish a home for my business. There is a lot of people around this place that have given me good business advice and good artistic advice and that has really helped me to become more confident and more professional. I also get a lot of flow through traffic from clients visiting other creative shops next to me.
Sally: The reason why I came to this creative cluster was that I was going to be surrounded by like-minded people. And so we were all going to have one goal, we are all artists and we are all a little bit different. And also to have an impact on our region – where audiences can come to our studios and say – ‘Wow!’ Working here is definitely better than when I was working by myself… because it is like a family.

The quote of Enriquez highlighted the reciprocal relationship that exists between organisational business acumen and social network structures (in this case, cluster engagement). He (Enriquez) proclaimed that he received business advice from other creative workers within the cluster. Enriquez also discussed the impact on work generation that occurs through cluster engagement as spillover business was generated as a result co-locating. Sally’s response presented positive feelings of solidarity that ensued as a result of co-locating with other artists. She also indicated that her audience appreciated the amalgam of solidarity around artistic practice that exists within the cluster.

5.3.4.1 IMPACT OF CLUSTER ENGAGEMENT ON EXPLOITATION

One respondent, who occupied an influential role within a creative cluster, indicated that she was using the cluster to improve the way all members approached their work.

Ella: I think we are still a little bit backwards in the creative industries about not expecting the same amount of money for things… but I think this cluster has been really integral in changing that idea. I have been cultivating the idea that ‘if you don’t have the budget – you shouldn’t run with the idea.’ I guess I’ve been promoting the idea of ‘saying no’ to underpaid work, and it is sometimes better to ‘not open that door,’ and instead do work that you are going to do begrudgingly, rather than just taking the job for ‘experience’… we’ve all got ‘experience’… Go and ask a mechanic to change your tires for ‘experience’ and see what he says.

Similarly, Enriquez, who ran a film business within a creative cluster, discussed the way he attempted to improve working conditions through his local networks.
Enriquez: I come across people here who could potentially be my competitor. However, I actually see them as someone who could work with me to organise a syndicate, and through that generate a stronger industry – one that could protect us all from underquoting.

These examples provide some explanation of the quantitative findings concerning the positive impact of cluster engagement on exploitation for creative workers. To this end, the solidarity and strong bonds that exist between cluster members presented as a resource, with the potential to be directed towards the generation of positive outcomes for multiple parties. Positive impacts had an external effect that enhanced the legitimacy of creative workers within a market place, as the collective action provided a mechanism that controlled competition. The collective action simultaneously had an internal effect that enhanced the negotiating skills of the creative worker. In combination, the internal and external effects had the potential to positively impact on the labour outcomes of creative workers.

5.4 the Direct and Indirect impact of Social Network Structure on Labour Outcomes

Respondents generally agreed that their social network structures were important in enhancing their labour outcomes. This occurred directly as a result of having multiple or specific contacts that generated work opportunities (as displayed in the quote above by Ellen concerning the festival work that she generated through her contacts). It also occurred indirectly, whereby contact with social networks provided a mechanism for respondents to enhance their business skills, which in turn benefited their labour outcomes.

Enriquez: My social network has slowly helped me find ‘brackets’ in my pricing – for example I’ve learnt the space where I am not underquoting or
over-quoting – I get an idea of what is the standard price for what I should charge my client from my network.

Sally: I receive knowledge from other people in my network about how to manage my business and also creative stuff. I also get information about my craft from people – like better painting techniques. I’ve learnt by just asking other people who have been in business for quite a while - I’ve learnt from them about how to run my business a little bit better.

The quotes by Enriquez and Sally (above) highlight this indirect process, whereby network contacts influence business activities that (as displayed in the quote by Enriquez) positively impact on labour outcomes (earnings satisfaction). This process is also captured in the cluster engagement quote of Ella (above).

5.5 Labour outcomes

In line with the qualitative findings of other creative industries research examining the labour outcomes of creative workers (such as the work of Hesmondhalgh and Baker (2010) and Coulson (2012), participants in this qualitative study highlighted that their labour outcomes were generally poor. In describing their labour outcomes, respondents noted that their creative work often received poor remuneration, and it involved a constant struggle to get clients to pay them on time. Furthermore, respondents indicated that there was occasional pressure put on them to volunteer, or accept reduced pay, while undertaking intensive work hours. The following analysis defines the nature of earnings satisfaction, exploitation and labour precarity as it was presented within the qualitative analysis.
5.5.1 Earnings satisfaction

Earnings satisfaction, or rather earnings dissatisfaction, was a very strong theme enunciated by multiple respondents in the qualitative study. The range of responses varied from an overall level of dissatisfaction regarding poor remuneration for creative work, to a perception that clients were apathetic towards creative workers in the way in which they paid them.

Ellen: Look I’ve had a bit of challenge with this lately… because I’ve got 20 years of experience, I got into creative industries management 22 years ago… and I’ve gone on to have years and years of experience, and I definitely don’t feel like I’ve been paid what I’m worth… I mean… I actually have to set my own rate with my clients, but it is based on what the client can afford… and it is never great rates.

Paul: Musicians are always the last one on any of the bills needing to be paid… they don’t seem to think that the need to eat, or put petrol in their car.

Peta: I wait three months for a cheque… I wait 90 days just to get paid for one gig. And the bank won’t wait three months for their payment – but we have to wait three months for ours.

Some respondents indicated that while their rate of pay was often acceptable, they could not generate enough consistent work to have satisfactory earnings.

Tim: I’m not happy with my overall rate of pay. I am on an hourly rate and I charge well, but I haven’t been able to achieve a schedule of work to be fully satisfied with the money.

John: Every week is different. Some weeks will be ‘full on’ and at the end of it you get plenty of rest and plenty of dollars, but in other weeks there is no work and no dollars. It fluctuates a lot.

While the quantitative analysis did not indicate a significant relationship between labour precarity and earnings satisfaction, the experiences of Tim and John suggest that these two factors are linked for their respective experiences.
5.5.2 Labour Precarity

The respondents predominately focussed on themes of exploitation and earnings satisfaction when asked about their working conditions, yet there was a consistent theme concerning the irregularity of creative work.

Melanie: My creative work is sporadic! I mean it either comes all at one time, or never… and it is also seasonal…

Herman: It is sporadic and volatile and precarious, working under these conditions… because sometimes you have quite a bit, other times you have none… So psychologically it actually places you in a state of unsettlement pretty much every day.

One pregnant respondent, Denise, indicated that she was concerned about the way that her pregnancy impacted on her ability to find creative work.

Denise: Now it is different because I can’t tour anymore… I am pregnant, I actually need to settle down and to redirect my energy… I used to just flit around (from job to job) – a month here or there doing festivals, tours, shoots etc… but I can’t do that anymore… I need to create a different income stream.

Linking labour precarity with exploitation, Enriquez (in the quote below) indicated that, in order to generate a sustainable income, he needed to take on a lot of work simultaneously. However, to complete all of this work, he needed to work very long hours.

Enriquez: I’m booked out! I have enough work to last me until April and that means I have a liveable income. But it is hard working conditions. I work HEAPS of hours, I probably work too many hours… If anything I am exploiting myself, but I don’t know any other way to do it.

Similarly, Ellen links labour precarity with exploitation, by describing the inevitable stress and hours required to manage her seasonal festival.
Ellen: I’m two and a half weeks away from running a major festival and I’m working 10-12 hour days, I’m working on weekends… you know every spare minute is dedicated to that… and frankly – if it wasn’t the fact that I am a single mum, getting government money from my child – I simply wouldn’t be able to do it, because I’m not getting paid much for this job.

5.5.3 Exploitation

Respondents often expressed dissatisfaction with the conditions they experienced while undertaking creative work. A consistent theme was working long hours, and others indicated that creative work negatively impacted on their work-life balance.

Ella: I am working long hours… I’m still working 12 or 16 hour days even though I have help now…

Enriquez: Every creative person I know – whether they are from overseas, or a capital city, or wherever – everyone is putting in an insane amount of hours. I think that it is universal across the globe.

Sally: I’ve never worked so hard in my life, and when I’m saying that I mean maybe 6 days, from 8am to 7pm everyday… and I personally think that is because of the industry I work in. But being here every day, I have to love it, it is how I generate business – I mean I can’t be successful if I don’t do the hard yards.

Some respondents noted that the inconsistency of work, as well as taking on all of the concerns of running a business, created stress and negatively impacted on their work-life balance.

Enriquez: I don’t have time to spend time with my friends who aren’t directly related to the project that I am involved with which means my work/life balance is very poor.

The link between earnings satisfaction and exploitation was also demonstrated in the quote below:
Melanie: I started my music management company last year, wanting to assist and help to establish musicians in my city. It was a lot harder than I expected, and so I did a lot of volunteer work, a lot of networking into communities… I was trying to get my artists the best opportunities available to them in this city. I forewent getting paid to be a part of cool stuff… but at the end of the day I ended up complaining about it.

Several other respondents to the qualitative study shared Melanie’s experience of ‘volunteering to forgo payment’. However, Melanie’s dissatisfaction with the outcome wasn’t necessarily an experience shared by all, as some perceived it to be more of a ‘rite of passage’ for entering the industry.

5.6 Other causes of Labour Outcomes

In the main, the qualitative data supported the quantitative findings and in most cases provided anecdotal or experiential evidence supporting the statistical significant relationships between constructs determined in the quantitative results. However, while there was general agreement regarding the positive role that organisational business acumen and social network structure play in enhancing the labour outcomes of creative workers, respondents also identified other, more macro-level factors that they felt impacted on their labour outcomes.

Ella: In the creative industries we don’t really have a framework for people to model off… we don’t have a model that states ‘this is how you should pay an artists,’ ‘this is how you should engage an artists’ – everyone is just making up things as they go when working with in this industry… they make their own rules… there are no standards.

Nick: There are a lot of regulations and laws that make it hard for me to practice my art in a way that is commercially viable. For example if a venue hires me to play my music, I have to keep the volume down, and the venue has to pay extra fees to the local government for having live music, and even more if they are serving alcohol. If I perform too loud the venue can get a fine. So it
is not very conducive for me to generate an income when the people that hire me have to pay so many other people just to have music.

Both Ella and Nick’s comments highlighted the systems- and policy-level challenges that impact on creative workers. Ella’s quote calls for the development of competencies within contracting companies to determine and apply consistent engagement and pay structures for creative workers. The lack of regulated or even implicit knowledge regarding how much to pay creative workers, as well as what professional standards a company should adopt, and expect from creative workers, means that they are easily exploitable.

Offering a different perspective, Nick’s comment highlighted that one of the regulatory bodies with jurisdiction over the geographical location where he was undertaking creative work (i.e. the local government) implemented policies that indirectly disadvantaged musicians (in this case). It seems unlikely that organisational business acumen or social network structure would be able to overcome the limitations present in Nick’s case. What is apparent is that Nick would need to have a niche market, so that any venue contracting him could ensure payment to the artists, as well as to the regulatory body. Ellen also had a similar experience to Nick, as can be observed in the following quote.

Ellen: It is really challenging… art as a commodity…. Its got to have an audience, its got to have a value for there to be any money transaction, so if an artist isn’t worth anything then people aren’t going to come.

Again, as Ellen’s quote suggests, organisational business acumen and social network structures are not necessarily going to radically enhance the value of art in a climate where there is not a marketplace that is already established. This speaks to the heart of Bourdieu’s (1983, 1985) ‘field of cultural production’ theory and, as discussed in the
literature review, connotes a non-market context for creative production. While this does not contravene the quantitative findings, it does indicate a pre-requisite for organisational business acumen and social network structures to be of specific value for creative workers, i.e. a creative marketplace needs to be in operation for organisational business acumen and social network structures to enhance labour outcomes of creative workers.

5.7 Conclusion

This chapter offered an analysis of the qualitative data corresponding to the investigation concerning the impact of organisational business acumen and social network structure on the labour outcomes of creative workers. The qualitative analysis used the key findings, stemming from the quantitative results, as markers to examine transcribed interview data that was collected from fifteen creative workers. The qualitative data supported the quantitative findings, and presented experiences and opinions from the respondents that elaborated on the statistically significant relationships observed in the quantitative results. The chapter concluded by discussing supplementary data offered by respondents concerning additional causes of poor labour outcomes for creative workers. The following chapter discusses the implications of the qualitative and quantitative results for theory, research and practice.
Chapter Six – Discussion and Implications

The previous three chapters presented the results from the i) the pilot social network investigation, ii) the primary quantitative study, and iii) the supplementary qualitative study. In combination, the results from these studies evidence the impact of organisational business acumen and social network structure on the labour outcomes of creative workers. This chapter integrates and discusses the implications of these findings for theory, research, policy and practice. The chapter begins with a summary of the findings emerging from the quantitative and qualitative approaches undertaken. Using the research questions as reference points, the chapter synthesises the findings with existing literature and theory to pose a number of significant implications to guide future research, practice and policy development.

6.1 Synthesis of the Findings and Contribution to Knowledge

The pilot investigation provided an initial indication regarding the impact of social network structures on employment activity levels for musicians operating within a creative cluster. Findings from this phase indicated that social network structures likely have some impact for some studied cluster members, but the results were too varied and the sample size used was too small to draw results that were conclusive and generalisable across a larger sample of creative workers. The quantitative study was used to overcome these limitations, and was achieved through the use of SEM analysis to test hypothetical relationships between social network structure, organisational business acumen and labour outcome variables. By using statistical reasoning, this phase yielded a number of concrete, overarching findings. Findings from the quantitative study were, for the most part, supported in the supplementary
qualitative study. In addition, the qualitative findings provided a nuanced appraisal of the nature of organisational business acumen, social network structure and labour outcomes, through analysis of qualitative data provided by a sample of fifteen, Australian creative workers. The following points summarise the overall contribution to knowledge generated by this thesis.

- A creative worker’s organisational business acumen enhances their labour outcomes
- A creative worker’s social network structure reduces their labour precarity, and;
  - Cluster engagement reduces exploitation, and
  - Non-local networks reduce labour precarity, and enhance earnings satisfaction.
- Organisational business acumen and social network structure impact on each other, and together reduce labour precarity.

These findings are novel, and offer new knowledge concerning the network and business dynamics that enfold the labour structures of the creative industries. The following section of this chapter presents the implications from the totality of these findings against the posed research questions and hypotheses.

6.1.1 The role of Organisational Business Acumen

The first primary research question (PRQ1) posed within this study sought to examine the impact of organisational business acumen on the labour outcomes: exploitation, earnings satisfaction and labour precarity of creative workers. Hypotheses posed as part of this research question concerned the relatedness between labour outcome
factors (Hypothesis 1), as well as the direct impact of organisational business acumen on these factors (Hypothesis 2).

Table 6.1: Summary of findings for Research Question 1: What is the impact of organisational business acumen on the labour outcomes of creative workers?

<table>
<thead>
<tr>
<th>Hypothesis number</th>
<th>Path</th>
<th>Presented in the quantitative findings</th>
<th>Supported in the qualitative findings</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Labour precarity - earnings satisfaction</td>
<td>×</td>
<td>✓</td>
<td>Inconclusive</td>
</tr>
<tr>
<td></td>
<td>Labour precarity + exploitation</td>
<td>✓</td>
<td>✓</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>earnings satisfaction – exploitation</td>
<td>✓</td>
<td>✓</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>H2 Organisational Business Acumen + earnings satisfaction</td>
<td>✓</td>
<td>✓</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Organisation Business Acumen – labour precarity</td>
<td>✓</td>
<td>✓</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Organisation Business Acumen – exploitation</td>
<td>✓</td>
<td>✓</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Table 6.1 demonstrates that the second hypothesis was unequivocally confirmed, thus highlighting that organisational business acumen positively impacts on the labour outcomes of creative workers. However, the path test for the first hypothesis did not present a significant relationship between labour precarity and earnings satisfaction, thus statistical support for this path is not present. Notwithstanding this result, the qualitative analysis indicated that there may be a tacit link between these two factors. Hence further testing is required to make more specific conclusions concerning the relationship between these two factors.

The causal link present between organisational business acumen and labour outcomes, as was evidenced and supported in the quantitative and qualitative results respectively, represents one of the most important findings of this study. While this finding is discussed at length further in this chapter, the significant positive impact of organisational business acumen on creative workers’ labour outcomes represents a novel and significant contribution to existing knowledge concerning the labour dynamics of the creative industries. As outlined in Chapter Two, existing literature
has placed a strong emphasis on the role of social networks for the market and labour opportunities afforded to creative workers (Belussi & Sedita, 2008; Potts et al., 2008). In contrast, there remain very few studies that have examined the nature of business acumen, and a lack of empirical testing concerning the impact of this factor on the market and labour outcomes of creative workers. However, the results from the quantitative component of this study clearly demonstrated that organisational business acumen is statistically more important for the labour outcomes of creative workers than their social network structure. Hence, these findings call for an increased emphasis to be placed on the construct of organisational business acumen for creative workers, in both research, and practice.

The qualitative analysis indicated that organisational business acumen may develop over time, in stages, and as a result of the business experiences and social network interactions of creative workers. However, there was not a complete convergence as to when development increments were achieved across the respondents, and similarly, challenges with labour outcomes were perceived at all stages of respondent’s creative careers. This provides a possible explanation as to why there were no significant relationships found between the variable ‘experience’ and labour outcome variables in the quantitative analysis. This result seems to indicate that a creative worker’s perception concerning their levels of business acumen, network structures and labour outcomes, are likely to be relative to a their years of experience. Thus, while a creative worker’s business acumen and labour outcomes may develop over time, their overall impact relative to such improvement remains constant.
The qualitative analysis also indicated that organisational business acumen may provide a platform to enhance the creative and artistic processes associated with creative work. Future research, policy and practice can use these findings to investigate mechanisms to enhance the pace at which creative workers generate organisational business acumen. This issue is discussed in detail later in this chapter.

6.1.2 The role of Social Network Structure

The second primary research question (PRQ2) examined the impact of social network structure on the labour outcomes of creative workers. In addition, the first, secondary research question (SRQ1) examined which social network structures appeared to be more important for the labour outcomes of creative workers. A summary of the findings against the posed hypotheses is provided in Table 6.2

Table 6.2: Summary of findings for Research Question 2: What is the impact of social network structure on the labour outcomes of creative workers?

<table>
<thead>
<tr>
<th>Hypothesis number</th>
<th>Path</th>
<th>Presented in the quantitative findings</th>
<th>Supported in the qualitative findings</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3</td>
<td>Network size - labour precarity</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td></td>
<td>Network size – exploitation</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td></td>
<td>Network size + earnings satisfaction</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td>H4</td>
<td>Non-local networks - labour precarity</td>
<td>√</td>
<td>√</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Non-local networks – exploitation</td>
<td>√</td>
<td>√</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Non-local networks + earnings satisfaction</td>
<td>√</td>
<td>√</td>
<td>Supported</td>
</tr>
<tr>
<td>H5</td>
<td>Structural holes - labour precarity</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td></td>
<td>Structural holes – exploitation</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td></td>
<td>Structural holes + earnings satisfaction</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td>H6</td>
<td>Cluster engagement - labour precarity</td>
<td>×</td>
<td>√</td>
<td>Unsupported</td>
</tr>
<tr>
<td></td>
<td>Cluster engagement – exploitation</td>
<td>√</td>
<td>√</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Cluster engagement + earnings satisfaction</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td>H7</td>
<td>Network size, non-local networks, structural hole, and clustering will be positively and significantly related to each other</td>
<td>√</td>
<td>√</td>
<td>Supported</td>
</tr>
<tr>
<td>H8</td>
<td>Social network structure – labour precarity</td>
<td>√</td>
<td>√</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Social network structure – exploitation</td>
<td>×</td>
<td>x</td>
<td>Unsupported</td>
</tr>
<tr>
<td></td>
<td>Social network structure + earnings satisfaction</td>
<td>x</td>
<td>x</td>
<td>Unsupported</td>
</tr>
</tbody>
</table>
As noted, the hypothesised relationships concerning the impact of individual network structures were, for the most part, unsupported in the quantitative analysis. A likely explanation relates to the lack of previous research using similar research methods and a similar context available to inform the development of robust hypotheses in the case of this study. For example, while the social network analysis study of Belussi and Sedita (2008) suggested a link between social network structure factors and labour outcomes for creative workers, the approach and context (which largely formed the basis of the network hypotheses posited in this study) are somewhat dissimilar to this study. However, the combined social network structure variable was shown to have a significant impact on reducing labour precarity for creative workers in this study, and this result was supported in both the quantitative and qualitative findings. In addition, cluster engagement (in isolation) appeared to possess properties that reduced exploitation, and non-local networks (in isolation) appeared to have properties that reduced labour precarity, as well as enhancing earnings satisfaction.

Taken together, the quantitative and qualitative findings qualify extant creative industries literature highlighting the role of social network utilisation for the labour outcomes of creative workers. To some extent, the results from this study suggest that the role of social network structures in improving the labour outcomes of creative workers may have been somewhat overemphasised in existing research. To this end, previous literature has presented social networks as a leading contributor to the labour outcomes of creative workers, yet the results from this study indicate that the expectations generated by this literature may be mismatched when empirical research is undertaken. Notwithstanding this, the quantitative and qualitative findings
demonstrated that social network structures have a small, yet positive impact on the labour outcomes of creative workers.

The results point to the fact that both organisational business acumen and social network structure are important forms of capital that creative workers need to cultivate in order to enhance their overall labour and market outcomes within the sector. The results also indicated that cluster engagement and non-local networks, in particular, are network resources that yield potentially more benefits than network size and structural hole (alone). These results have a number of implications for creative workers, as well as implications for the theory of networks. These implications are discussed further in the next section of this chapter.

6.1.3 The combined impact of Organisational Business Acumen and Social Network Structure

The results indicate that organisational business acumen and social network structure have a complementary relationship and, together, they impact on labour precarity of creative workers.

Table 6.3: Summary of findings for Secondary Research Question 2

<table>
<thead>
<tr>
<th>Hypothesis number</th>
<th>Path</th>
<th>Presented in the quantitative findings</th>
<th>Supported in the qualitative findings</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H9</td>
<td>Organisational business acumen + social network structure</td>
<td>✓</td>
<td>✓</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Organisational business acumen &amp; social network structure indirectly impact:</td>
<td>[labour precarity, exploitation, earnings satisfaction]</td>
<td>[✓, x, x]</td>
<td>[✓, x, x]</td>
</tr>
</tbody>
</table>
As displayed in Table 6.3, the quantitative and qualitative findings indicated that the relationship between (a) organisational business acumen and (b) social network structure, which act to reduce (c) labour precarity, occurs simultaneously through two direct paths (i.e. from a to c, and from b to c), as well as through two indirect paths (i.e. from a through b, and on to c; as well as from b through a, and on to c). This outcome, concerning the indirect paths occurring through both organisational business acumen and social network structure, represents another very significant finding stemming from this enquiry.

The following paragraphs offer a synthesis of the qualitative and quantitative results, and elaborate on the processes by which social network structure and organisational business acumen indirectly reduce the labour precarity of creative workers. The first path begins with organisational business acumen, to social network structure, and on to labour precarity (as shown in Figure 6.1).

**Figure 6.1: Path Organisational Business Acumen -> Social Network Structure -> Labour Precarity**
As presented in the qualitative research, this path involves creative workers using their organisational business acumen to find network contacts (thereby enhancing their social network structure), which in turn provides them with secure employment. A second, contrasting path is also present (as displayed in Figure 6.2).

Figure 6.2: Path Social Network Structure -> Organisational Business Acumen -> Labour Precarity

The path displayed in figure 6.2 presents a situation whereby creative workers’ social network structures are the means by which they enhance their business skills, and this in turn allows them to realise more secure employment conditions. The qualitative study presented discussion elucidating this process. To this end, social networks structures (particularly cluster engagement) were often presented as a kind of ‘network forum,’ where business skills were diffused, and informally acquired, to and from creative workers. The outcome from this diffusion of skills was that quality of labour outcomes was generally enhanced (recall Sally’s statement concerning her
acquisition of business skills through her network, which ultimately allowed her to increase business, as well as taking weekend breaks from working).

The interaction between organisational business acumen and social network structure provides empirical support for the claims of Rae (2004). Rae (2004) posited that creative workers undertake entrepreneurial learning as a result of a dynamic interaction between their business experiences, as well as through interactions with their social networks. In addition, the results (particularly the findings from the qualitative study) provide a more nuanced appraisal concerning the impact of creative clusters as a mechanism that has the potential to enhance the productive capacity of clusters members. This outcome is discussed further towards the end of this chapter.

6.2 A Synthesis of Conclusions

The first, primary research question (PRQ1) posed in this study was: What is the impact of organisational business acumen on the labour outcomes of creative workers? The findings from the qualitative and quantitative studies indicated that organisational business acumen significantly improved the labour outcomes of creative workers.

The second, primary research (PRQ2) question was: What is the impact of social network structure on the labour outcomes of creative workers? The findings demonstrated that, when a creative worker’s network size, structural hole, cluster engagement and non-local networks were aggregated into one social network structure variable, they had a collective impact on reducing labour precarity. When
these factors were separated, cluster engagement appeared to have some impact on reducing exploitation, and non-local networks enhanced the earnings satisfaction and reduced the labour precarity of creative workers. In addition, this finding provides an answer to the first, secondary research question (SRQ1): Which network structures are more significant for the labour outcomes experienced by creative workers? Finally, social network structure and organisational business acumen were shown to impact on each other, and have a combined indirect impact on reducing labour precarity for creative workers. This finding answers the second, secondary research question (SRQ2): To what extent does the social network structure of a creative worker, and their organisational business acumen, combine to impact on their labour outcomes? The chapter moves to use the answers to these research questions as reference points to discuss the implications of this research for theory, existing literature, method, policy, and practice.

6.3 Implications: The role of Organisational Business Acumen

The results from this study suggest that organisational business acumen plays a very important role for creative workers. This section discusses the implications of the findings concerning the role of organisational business acumen for theory, research, practice and policy.

6.3.1 Contributions to Theory

The results presented in this study suggest that organisational business acumen has a broad and positive impact on the labour outcomes of creative workers. From a theoretical standpoint, these results support the notion that creative workers require
forms of capital, over and above their creative and artistic capability and social connections, to achieve sustainable labour outcomes and market success in the creative industries. Moreover, the qualitative results presented in Chapter Six suggest that organisational business acumen can be used by creative workers to further develop their creative and artistic practice, in addition to a factor that enhances their labour outcomes. This dynamic challenges the dichotomous relationship, between market and artistic drivers, as they are presented within Bourdieu’s (1983) ‘field of cultural production’ theory.

6.3.2.1 Contributions to the ‘Field of Cultural Production’ Theory

In Chapter Two, Bourdieu’s (1983) ‘field of cultural production’ theory was used to give a historical account concerning the way in which market dynamics weaved in and out of different culture-market frameworks. In this section, it was argued the creative industries, with its market focus, accentuates Bourdieu’s (1983) notion of the ‘mode of large scale production’ (i.e. market consecration) over that of ‘restricted production’ (i.e. intellectual consecration). As a consequence, a simple theoretical summation of the findings from this study, synthesising Bourdieu’s (1983) ‘field of cultural production’ theory, might suggest that organisational business acumen as a form of cultural capital encourages these workers to operate more successfully within the market-orientated, ‘large scale’ mode of cultural production. However, a more nuanced review of the qualitative results suggests that organisational business acumen may liberate creative workers from having to choose to satisfy either the goals of the market (as in the ‘mode of large scale production’), or their creative and artistic drive (as in the mode of ‘restricted production’). To this end, respondents to the qualitative enquiry did not appear to perceive a tension between the ‘poles’ of artistic integrity
and market processes. Rather, these two ‘poles’ of production were considered to be complementary (recall Sarah’s quote in Chapter Five: ‘creativity is just the icing on the cake’, and below this stood ‘designing, promoting, booking, organising, budgeting and social networking’). This implies that the paradigm typically associated with the ‘field of cultural production’ (i.e. a polar opposition between the ‘restricted’ and ‘large scale production’ modes) may have become neutralised, and resolved, for professional creative workers. Instead of being a distraction to creative and artistic processes, the presence of organisational business acumen appears to benefit these activities for creative workers. In this way, organisational business acumen may be a mechanism that allows creative workers to achieve both artistic outcomes and market outcomes simultaneously.

Confirmatory research is required to further establish the role of organisational business acumen in resolving the tensions that have traditionally forced cultural producers into either the mode of ‘restricted production’, or ‘large-scale production’, within the context of the creative industries. However, if the preliminary observations presented in the qualitative results of this study prove applicable across a broader context, a new theory which accounts more comprehensively for the dynamics of artistic and market consecration within the contemporary field of cultural production (i.e. the creative industries) may be warranted. Rather than individual agency being the key determinant of a particular production mode for cultural workers (as was presented within Bourdieu’s (1983) appraisal), the findings from this study indicate that the possession of certain forms of capital by creative workers may enhance their ability to achieve both market and artistic outcomes simultaneously (as opposed to these outcomes being mutually exclusive).
6.3.2.2 Contributions to the Resource-Based View of the Firm Theory

An implication for theory, stemming from the findings from this research, pertains to the presentation of labour outcomes as a factor that represents an aspect of a firm’s sustainable competitive advantage under a resource-based view conceptualisation. Traditional indicators of sustainable competitive advantage have focussed on firm profit and loss, return on equity, project success and competitive position relative to other firms (Boso et al., 2013; Parkman et al., 2012; Venkatraman & Ramanujam, 1986). Notwithstanding the worth of these variables in representing an aspect of a firm’s sustainable competitive advantage, the traditionally poor labour outcomes associated with the creative industries (and potentially other sectors dominated by freelance and entrepreneurial structures) call for outcome measures that provide a more comprehensive indicator of firm sustainability.

The dependent variables used in this study (exploitation, labour precarity and earnings satisfaction) are hence useful indicators as they provide an often unmeasured and industry-relevant perspective concerning firm sustainability. Recall the statement by Enriquez:

I have a liveable income. But it is hard working conditions. I work HEAPS of hours, I probably work too many hours…

In the case of Enriquez, while measures accounting for firm profit or competitive position relative to other firms may present his business in a positive light, a true account of the degree to which Enriquez has achieved a sustainable competitive advantage (underscoring the element of sustainability) would need to factor in his
potentially unsustainable labour outcomes (in this instance). This is because economic or market measures pertaining to his business may only provide a short-term indication of his current competitive position, and do not account for his ability to sustain a level of activity over a longer period of time. In contrast, the labour outcomes captured in this study do provide some indication of a creative worker’s level of satisfaction with their current working arrangements. These outcomes provide a nuanced appraisal concerning the ‘cost’ of precarious work for creative workers, as well as an indication of how sustainable precarious work may be in the long term.

It is also important to note that the quantitative results indicate that labour precarity has such a small (almost insignificant) impact on earnings satisfaction (accounting for roughly 10 per cent). At a macro/national labour and economic level, this result is very important. At the present time, political economists use income levels (obtained through taxation data) to represent a range of socioeconomic variables in econometric modelling. The results from this thesis indicate that measures of earnings may yield very little information about the working conditions and labour outcomes of some labour segments within the economy.

A further implication stemming from this research, and one which is applicable to the field of entrepreneurship theory more generally, concerns the need to examine the relationship between market and labour outcomes when accounting for sectors that preference freelance and entrepreneurial firm structures. In the case of the creative industries, as noted in Chapter One, entrepreneurial activity from this sector is believed to generate significant economic spillovers to other sectors of the economy (Jaaniste, 2009). However, a more comprehensive theory of spill-over effects, which
considers of the true costs and benefits resulting from creative labour, should factor in the negative overheads, such as indirect public expenditure to treat stress and poor health for creative workers, as well as a loss of productivity that results as creative workers adopt exploitative, and potentially indentured, working arrangements. Hence, this research suggests that a more comprehensive integration of ‘accidental entrepreneurs’ (to reference the term used by Coulson [2012] to describe musicians) and their labour outcomes into the larger body of work concerning entrepreneurship as it appears in management studies more generally may present a more dynamic and publicly-dependent sector than what is currently described.

6.3.3 Implications for Research

The findings from this study suggest that the impact of organisational business acumen for creative workers should not be understated, and has not likely received adequate attention in existing creative industries research. The literature review of this thesis (Chapter Two) identified very few studies suggesting possible links between a creative worker’s business acumen and their market and labour outcomes (Crombie & Hagoort, 2010; Throsby & Zednik, 2010). In contrast, research linking social networks with market and labour outcomes in the context of the creative industries is numerous (Belussi & Sedita, 2008; Felton et al., 2010; Joel, 2009; Ninan, 2005; Potts et al., 2008).

With reference to the significance impact of organisational business acumen, future research should seek to undertake a deeper investigation into its formation, and overall effects, for creative workers. The qualitative findings of this study indicated
that organisational business acumen developed as business experience increased. Hence, drawing from the qualitative results, it is likely that the development of this resource occurs in phases. Furthermore, the qualitative result demonstrated that the development of these phases did not correspond directly with a set amount of time (as the respondents to the qualitative enquiry offered varying times for the acquisition of functional business skills from their emerging phase). It is likely that the intensity of work (i.e. part-time or full-time) that a creative worker adopts also impacts on the development of organisational business acumen. Future research is needed to more comprehensively understand the contributors to organisational business acumen. The aim of such research would inevitably be to generate more effective organisational business acumen acquisition techniques for creative workers in order to enhance individual and sector-level outcomes. This is discussed specifically in the following (implications of social network structure findings) section.

The results concerning the nature of organisational business acumen build empirically on the foundational work of Crombie and Hagoort (2010). This is achieved through the factor analysis results, which indicate dimensions of organisational business acumen for creative workers (this was achieved through the factor analysis). In addition, the results presented in the SEM analysis highlight the specific impacts of organisational business acumen on the labour outcomes of creative workers. However, future research should examine the impact of organisational business acumen on alternate dependent variables, such as market outcomes (appropriate dependent variables may include sales and profit for creative goods and services, as well as return on investment measures). Furthermore, as the qualitative analysis indicated that organisational business acumen appear to have an additional positive
impact on the processes that creative workers use to organise their creative activities, future research could seek to investigate this more specifically. To this end, future qualitative enquiry may seek to investigate which creative processes benefit from organisational business acumen. In addition, future quantitative enquiry may seek to develop psychometric variables for these processes, and examine the statistical impact of organisational business acumen on these processes. Finally, research is needed to more adequately understand the effect on a creative worker’s business acumen generated by their job role. For example, creative workers operating in management positions (such as event managers) may generate, or require more business acumen as a result of their position, in comparison to core performers.

From a research design perspective, an implication of this study encourages future researchers who may be investigating the impact of social network structures on the outcomes of creative workers to also account for the possible effects created by organisational business acumen. This is because, as identified in this study, organisational business acumen appears to have a significant impact on labour outcomes, and research that fails to control for this factor will likely overemphasise the role of social network structures for creative workers. Thus, a key implication of this research is that organisational business acumen and social network structure are complementary, and one should not be excluded from the other in future research without considered justification.

A final implication for future research stemming from this investigation into organisational business acumen concerns the development of a more robust tool to measure the financial management component of this construct. As noted, the
exploratory factor analysis used in this thesis indicated the presence of a second (lower-order) factor representing the financial management content item of organisational business acumen; however, that variable failed to achieve statistical reliability in the confirmatory factor analysis. Future research should seek to develop the reliability of the financial management scale, as this is likely to have an impact on a range of market and labour outcomes for creative workers (particularly on earnings satisfaction).

### 6.3.4 Implications for Practice and Policy

An obvious implication of the results of this study concerning the broad and positive impact of organisational business acumen on the labour outcomes of creative workers is to raise the general levels of business competency across the creative labour force. As noted in the theoretical implications discussion above, raising the general levels of organisational business acumen for creative workers has the potential to go some way towards normalizing the poor levels of labour outcomes that have become associated with creative work. In addition, the qualitative results suggest that organisational business acumen may have properties that increase both market and artistic outcomes for creative workers, increasing overall levels of organisational business acumen will likely positively impact on the innovation spillovers and economic multiplier effects generated by creative industries activity. Targeted public policy initiatives that enhance the levels of organisational business acumen in creative workers may thus be an appropriate and justifiable public investment strategy to enhance economic growth. However, in order for any public investment strategy to be effective, specific attention needs to be dedicated to examine why creative workers, in general, have not developed such business skills previously.
As discussed in Chapter Two, some researchers have identified the need to enhance the business skills of creative workers in the sector; however, their solution to achieve this has focussed on enhancing the tertiary training of creative workers (Beckman, 2007; Carey & Naudin, 2006). Despite this, it was also noted that students undertaking creative industries-based tertiary programs typically desire to focus on more technical and creative elements of their education, and often neglect business skills and entrepreneurship training (Beckman, 2007; Carey & Naudin, 2006). As a result, this literature suggests that institutionalising efforts to enhance the levels of organisational business acumen through a tertiary educational framework need to be more targeted and effective.

Results from this thesis offer an additional forum to enhance the diffusion of organisational business acumen for creative workers. This forum comprises the social networks that makeup the creative industries. With reference to the positive relationship between social network structure and organisational business acumen, as evidenced in both the quantitative and qualitative findings, a network-based mechanism to diffuse business acumen to creative workers presents as an empirically supported solution. More specifically, the qualitative results of this study indicated that creative workers’ cluster engagement and their non-local networks present as the most significant social network structures for enhancing levels of organisational business acumen. Thus, public policy instruments that seek to encourage creative clustering, as well as the cultivation of non-local networks, appear to be the most appropriate forums to instigate organisational business acumen development initiatives at the network level.
It is important to note, however, that simply using public policy instruments to generate such network structures is not likely to radically improve the labour situation faced by creative workers (i.e. the generation of networks should not be considered an end in itself). Instead, specific attention needs to be given to imparting organisational business acumen through such networks. Hence, programs focussed on mentoring emerging creative workers and scaffolding appropriate business actions, as well as providing business support and troubleshooting opportunities for creative workers through their non-local and cluster-contacts, will likely provide the best network-based tools to diffuse business acumen. Involving tertiary educational institutions in the development of effective, evidence based mentoring programs may also be effective in enhancing both creative industries education, as well as outcomes. Such network-based public policy initiatives would require only small adaptations focussed on infusing organisational business acumen to existing creative industries development strategies, particularly ones focussed on cluster development (such as the European Union funded - European Creative Cluster Lab [eciaplatform.eu]).

In summary, the results of this thesis suggest that the acquisition of organisational business acumen provides a mechanism to significantly improve the labour outcomes of creative workers. Public policy mechanisms to enhance the levels of organisational business acumen will likely benefit by adopting a network-based diffusion approach that seeks to equip creative workers with organisational business acumen through targeted cluster and non-local network contact and support.
6.4 Implications: The role of Social Network Structure

The results suggest that the individual network structures of cluster engagement and non-local networks have the potential to reduce exploitation, as well as enhance earnings satisfaction and reduce labour precarity respectively. However, these individual effects are largely cancelled out when the sum of all social network structure effects are accounted for in an aggregated form. This section of the chapter discusses the implications of the findings concerning the role of social network structure for theory, research, practice and policy.

6.4.1 Contribution to theory

6.4.1.1 Contributions to the resource-based view of the interconnected firm

At the outset, the results from this thesis provide further empirical support for the theoretical position of the resource-based view of the interconnected firm of Lavie (2006). The findings support the conceptualisation of social network structure as a firm’s ‘resource’, held by creative workers, that has an ability to increase firm sustainability. However, the direct impact of social network structure for the labour outcomes of creative workers is comparatively less than their organisational business acumen. Furthermore, the role of social networks structure as a mechanism that directly enhances the organisational business acumen of creative workers, and through this, indirectly impacts on labour precarity through this path, provides an arguably more interesting appraisal of the role of social network structures for these workers.
To some extent then, these results suggest that the overall impact of social network structure, when other factors (such as organisational business acumen) are considered, may be somewhat overstated in existing research, as well as in theory. That is not to suggest that social network structures in themselves do not possess theoretically beneficial qualities. Rather, the impact of social network structures becomes more or less pronounced when the impact of, and relationships with, other theoretically significant factors are appropriately accounted for. However, with respect to this conclusion, Lavie’s (2006) conceptualisations of the resource-based view of the interconnected firm becomes an even more important theoretical foundation for future research than a network theory in isolation. This is because Lavie’s (2006) position allows for the effect of multiple, network- and non-network-based resources to be accountable for the generation of firm performance.

The results of this thesis call for the treatment of social network structures in future research and theory development to move from being conceptualised as ‘an end in themselves’ or a ‘means to an end’, to being conceptualised as a dynamic resource that impacts on, and is impacted by, other resources possessed by a firm or a network actor. As noted, this does not directly challenge the theoretical positions of Lavie (2006), Gulati et al. (2011), Burt (1992), Bourdieu (1986), nor Granovetter (1973) as they have been treated in this study. Rather, this position seeks to consolidate more comprehensively these theories by encouraging future research to expand the scope of network analysis to include all possible effects of network and non-network factors on tested dependent variables.
For the resource-based view of clusters theory of Brown et al. (2010), results from this thesis provides an empirical example concerning the processes by which firms in clusters benefit from network interaction with other firms. This was displayed both in the qualitative and quantitative results, with those creative workers that engaged heavily with clusters experiencing a significant increase in organisational business acumen and a reduction in their level of creative labour exploitation. However, it is important to note that, when other (non-cluster based) network factors were considered, this positive impact on exploitation became insignificant. This means that regionally embedded networks can be significant in generating positive labour outcomes for creative workers, and it is possible that their effect is slightly more pronounced than other (less-regionally dependent) social network structures. However, creative workers that focus exclusively on cluster engagement as a network development strategy to improve their labour outcomes are likely to experience only a limited result. A more comprehensive strategy would be to develop all network structures simultaneously (including non-local networks).

6.4.1.2 Contributions to Social Capital Theory

In reference to Bourdieu’s (1986) theory of social capital, the findings from this thesis provide a tangible example by which a creative worker’s social network structure, representing part of their ability to mobilize resources within a field, benefit their field position (in the form of a reduction in labour precarity). However to restate, of potentially more theoretical significance, the findings highlight the process by which a creative worker’s social capital (in the form of social network structure) positively impacts on their development of cultural capital (in the form of organisational business acumen), and vice versa. This complex, and mutually beneficial, interaction
offers a detailed model concerning the impact of ‘forms of capital’ (plural) than that, which is offered, by an individual model of one particular ‘form of capital’ (singular) in isolation. To date, however, research has typically focussed on one form of capital in isolation (Kadushin, 2004; Throsby, 1999). The results from this thesis call for an expanded treatment of the forms of capital to include the interaction dynamics that exist between them.

A final theoretical implication stemming from the results concerning the role of social network structures relates the nature and impact of non-local networks. To date, this kind of network structure has received little theoretical and empirical attention, yet the results suggest that this social network structure possesses interesting and beneficial properties for network actors. As noted in the qualitative analysis, it appears that non-local networks provide a pathway by which creative workers adopt beneficial processes that they observe in distant contexts to their immediate surroundings. This process influences the degree of power that they negotiate within their immediate field. In addition, the possession of non-local networks appears to go some way towards legitimizing the focal actor within their region (recall the statement by Enriquez: ‘as a result of my non-local networks…my clients appreciate my diverse methods of working, and I also believe they feel more confident in my ability to deliver’). This network structure therefore has the effect of reducing the levels of labour precarity that creative workers experience.
6.4.2 Implications for Research

The results from this thesis suggest that the direct role of social network structure for the labour outcomes of creative workers may be somewhat overstated in existing research. This is not to suggest that previous claims concerning the nature and impact of social networks in the creative industries are wrong, or that social networks are not an important factor for creative workers. Rather, the results of this thesis seem to suggest that social networks play a very integral supportive role for creative workers, as well as a smaller direct role on reducing labour precarity. Within this supportive role, social network structures are directly beneficial for the acquisition of organisational business acumen, which by contrast plays a very direct role in comprehensively enhancing the labour outcomes of creative workers.

The proposition of Potts et al. (2008), who argued that the supply and demand chains of the creative industries are largely comprised of social networks, remains unchallenged by the findings of this thesis. However, the results indicate that, while social network structures might be the pathway by which creative goods move to a market, the vehicle driving the development of such goods may more accurately represent a creative worker’s organisational business acumen. Similarly, Belussi and Sedita (2008) indicate that social networks are important for the diffusion of employment opportunities for creative workers operating within a studied performing arts cluster. Again, results from this thesis do not suggest that this finding is incorrect, yet, in addition to the effect of social networks, other factors (such as organisational business acumen) may have played a potentially more significant, yet unmeasured, role for the creative workers in the study of Belussi and Sedita (2008).
From a research design perspective, the quantitative results, generated through the use of the psychometric network approximation method, provided an advantageous mechanism to account for the impact of social network structures and organisational business acumen for the labour outcomes of creative workers. The quantitative method equipped the study with a much more robust way to capture the impact of social network structures on labour outcomes than the social network analysis design presented in the supplementary pilot investigation. This method was effective in developing robust and reliable statistical measures representing creative workers network size, structural hole, cluster membership and non-local networks. The items representing these constructs were retained through the confirmatory factor analysis process, and provide a validated tool that can be utilised in future research. Furthermore, as the psychometric network approximation method is very much in its infancy (Yang & Liu, 2012), the success in generating results using this method encourages future replication and expansion of this research.

6.4.3 Implications for Practice and Policy

Current policy approaches to stimulate the creative industries are partial to network development initiatives. These often take the form professional profiling websites, government-funded network meeting and sharing activities, global tradeshows and conferences, as well as product information workshops. The results from this thesis suggest that such network development activities remain centrally important considerations for the career ascension of creative workers. However, the results indicate that such network development initiatives, rather than being of primary benefit for improving labour outcomes, have the most significant benefit in improving
the business acumen of creative workers. In this way, social network enhancement needs to be seen as a process for improving the business performance of creative workers, rather than exclusively an opportunity to acquire employment opportunities.

Results from this study suggest that existing public policy tools that seek to encourage cluster membership for creative workers present as a sound public investment. However, accentuating the role of such clusters as mechanisms that enhance the organisational business acumen of members will likely have additional benefits. Furthermore, initiating strategies to enhance the number of non-local networks for creative workers presents as a strategy with a significant positive benefit for the way creative workers conduct business, as well as their labour outcomes.

In summary, the results from this study call for a re-evaluation of the role of social network structure for the labour outcomes of creative workers for practice and policy. The results indicate that enhancing social network structures will likely be of limited direct benefit to labour outcomes of creative workers. However, enhancing such structures will positively impact on the acquisition of organisational business acumen. Hence, strategies that seek to enhance social network structure in order to improve the labour outcomes of creative workers should not be viewed as a panacea, but rather as an important component benefiting the development of business skills; in combination, the possession of both social networks and business skills appears to achieve a more comprehensive result.
6.5 Implications: The combined role of Organisational Business Acumen and Social Network Structure

The interaction between organisational business acumen and social network structure has already received significant attention in this chapter, and presents as a very significant overall finding stemming from this investigation. This final section offers a further elaboration concerning the implications of the combined positive impact of organisational business acumen and social network structure on the labour outcomes of creative workers for theory, research, practice and policy.

6.5.1 Implications for Theory and Research

As noted, the beneficial impact of organisational business acumen on social network structure and vice versa, as evidenced in the results, pertains most significantly to the theoretical position of Rae (2004) concerning the entrepreneurial learning of creative workers. The results provide empirical support for the notion that creative workers use their social network structures to generate their business skills, and additionally use their business skills to find new social networks. In both instances, the ultimate aim of these processes is to enhance labour and market outcomes. As noted, future research should seek to investigate the developmental phases of social network structure and organisational business acumen progress for creative workers. Possessing a more detailed knowledge concerning the nature of development phases, as well as the ways in which these phases progress and the key learning experiences that underpin each phase, would radically improve the current conceptualisation concerning the nature of entrepreneurship within the creative industries.
6.5.2 Implications for Practice and Policy

A consistent argument presented throughout this chapter is that the combination of both organisational business acumen and social network structure form the mechanism by which creative workers can practically enhance their labour outcomes. A final discussion point, related to the practical and policy implications that ensue as a result of the finding of this study, concerns the treatment of these results through a neo-liberal lens. As noted in Chapter Two, the creative industries have been the subject of considerable debate owing to a perception of underlying neo-liberal ideologies embedded within the existing creative sector policies of the United Kingdom and Australia (Flew & Cunningham, 2010; Gibson & Klocker, 2005; Miller, 2002; Oakley, 2006).

The results of this study could be viewed as supporting a neo-liberal economic agenda for the creative industries that encourages the reduction, and commoditisation, of creative processes and products into an economic value (in this case labour outcomes). A consistent argument presented in this chapter has been the recommendation for creative workers to generate organisational business acumen and social network structures to mitigate the poor labour outcomes typically associated with creative work. An equally valid argument could be for governments to re-adopt a cultural industries (public subsidy) model, in addition to the development of more effective creative worker unions, in an effort provide more sustainable income for creative workers. Such an action would require very little organisational business acumen development for creative workers, and may result in a dramatic improvement in the labour outcomes afforded to some creative workers. However, such a suggestion would be out of step with the ever increasing decentralisation of public
service delivery, and the reduction in public subsidy, from western governments generally (Diefenbach, 2009; Osborne, 2006).

The current structure of creative industries policies could be described as ‘mixed’. To this end, there are features of current policies that accentuate entrepreneurialism on the part of creative workers, however there is still provision for government subsidy. The results from this study do not support an extreme change to current policies. However, a thorough and informed expansion of both approaches is encouraged.

For the provision of public subsidy, a foundation of targeted, top-down support and public provision is needed to help creative workers develop resources such as business acumen, as well as clustered and non-local network structures. However, this should be complemented from the bottom-up. To this end, creative workers need to capitalize on a foundation of support in order to enhance their labour outcomes. The latter action has the macro-level benefits of democratically and positively contributing back (through taxation and community wellness) to robust political systems.

**6.6 Chapter Conclusion**

This chapter has examined the findings of the study against the posed hypotheses. In the main, hypotheses concerning the impact of organisational business acumen on the labour outcomes of creative workers were supported. In contrast, many of the hypotheses concerning the impact of social network structure for creative workers were qualified. To this end, while the study found evidence that the aggregate of a creative worker’s social network structure reduces labour precarity, the impact of this
variable on other labour outcomes was not significant. The chapter discussed the implications of these findings for theory, research, practice and policy. In summary, the reciprocal and positive impact of social network structure on organisational business acumen, and vice versa, presents as a novel finding which has the potential to expand current public policy initiatives concerning the improvement of labour outcomes within the creative industries, as well as key implications for theory, future research activities and methods.

Chapter Seven – Thesis Conclusion

The previous chapter compared the findings against posed hypotheses, and discussed the implications of these findings for theory, research, practice and policy. The aim of this chapter is to conclude the study by offering a brief recapitulation of the theory, literature and research design underpinning the study; as well as the findings and implications of the study.

7.1 Contextualising the study

This study undertook an investigation concerning the impact of organisational business acumen and social network structure on the labour outcomes (exploitation, labour precarity and earnings satisfaction) of creative workers. To initiate this investigation, three pertinent themes underpinning existing creative industries research were presented, these themes being:

i) the role of the creative industries in economic development,

ii) the role of social networks in the makeup of the creative industries, and

iii) the poor labour outcomes typically associated with creative work.
The investigation sought to connect the latter two research themes, and in this way to build a more connected understanding concerning the impact of social network structures for the labour outcomes of creative workers. In addition, the study also sought to explore the role of organisational business acumen, as recent creative industries research has suggested a possible link with this and market and labour outcomes for creative workers (Crombie & Hagoort, 2010; Throsby & Zednik, 2010).

This study sought to build new, evidence based framework to guide creative workers to achieve better labour outcomes. The study connected with a range of theories including the resource based view of the firm, and Bourdieu’s (1973: 1976) field of cultural production and forms of capital theories. These theories were used to generate hypothesis concerning the sets of dynamic relationships that exist between the variables organisational business acumen, social network structure and labour outcomes.

The study adopted a mixed methods approach, guided by a pilot study examining relationships between the network structure and performance outcomes of regionally embedded musicians. The quantitative study employed psychometric scales to determine the social network structure of creative workers, as well as their level of organisational business acumen and labour outcomes. SEM analysis was used to determine the strength of hypothesised path relationships that connect these constructs. The qualitative phase analysed interviews with fifteen creative workers, and was used to explain the significant path relationships identified through the quantitative analysis.
7.2.1 Summary of the Limitations

A number of limitation were highlighted in the thesis. In the first instance, several of the psychometric constructs used in the quantitative analysis warrant further development in future research to improve their reliability. Furthermore, as the total population of the creative sector in the context where this study was undertaken (Australia) not accurately known, the degree to which these results are representative of the industry is impossible to adequately determine. Future research should seek to replicate this study to establish the degree to which the findings from this study are generalisable. Despite these key limitations, the sample size used in the quantitative study was large enough to undertake factor analyses. In addition, the qualitative results, which largely supported the quantitative results, were used to support the quantitative findings (in line with the explanatory mixed methods design). Finally, future research should seek to focus on either firm-level or individual properties of creative workers.

7.2 The Results of the Study

The quantitative study produced a number of concerning the role of business acumen and social network structure on the labour outcomes of creative workers. A summary of these findings is as follows:

- Organisational business acumen was shown to enhance the earnings satisfaction of creative workers, and reduce perceptions of labour precarity and exploitation. The comprehensive and positive impact of organisational
business acumen on the labour outcomes of creative workers presents as one of the key findings from this study.

- Creative workers’ social network structure had a small effect on reducing their labour precarity, yet the variable did not impact on the other labour outcomes measures of earnings satisfaction and exploitation.

- Non-local networks were shown to significantly enhance the earnings satisfaction, and reduce the labour precarity of creative workers. However, this effect disappeared for, the most part, when the impacts of other social network structures were accounted for.

- Cluster membership had a significant impact on reducing the exploitation of creative workers. Nevertheless, as with non-local networks, this effect completely disappeared when the impact of other social network structures were accounted for.

- Organisational business acumen and social network structure were shown to positively impact on each other. These variables each possessed a direct relationship with labour precarity, as well as an indirect relationship (through the other variable) with this factor.

These quantitative results were references that informed the coding of the qualitative data. In this way, the qualitative study examined convergence and divergence in the responses concerning the key findings stemming from the quantitative study.

The qualitative findings displayed strong convergence with the quantitative results. In addition, the qualitative study provided tangible examples, as well as further elaborations, concerning the mechanisms by which a creative worker’s organisational
business acumen and social network structure impact on their labour outcomes. The following provides a summary of these elaborations:

- The acquisition of organisational business acumen likely occurs in phases and is influenced by the contact a creative worker has with their social network.

- Organisational business acumen, not only appears to benefit the labour outcomes of creative workers, but also may act to help them value their artistic goods more effectively. In addition, this resource helps equip creative workers with organisational skills to get the most out of their creative time, and mechanisms to access new markets and funding.

- Cluster engagement can be used as a mechanism to improve the labour conditions (exploitation) of cluster members through collective action. The possession of non-local networks appears to enhance the legitimacy of creative workers who work within their own region, as well as providing alternate modes of operating to inform their practice.

The overarching implications of this study were explored in Chapter Six. This included an analysis of the mutually beneficial processes that exists between a creative worker's organisational business acumen and their social network structure. The results appear to provide empirical support for the claims of Rae (2004), who suggested that creative workers use their social network structures to undertake entrepreneurial/business learning and, in addition, use their business skills in combination to with their social networks to find, and undertake, employment opportunities.
The second half of Chapter Six discussed the implications of the findings for theory, research, practice and policy. The study extends the resource-based view of the firm theory by examining labour outcomes as a pertinent representation of the degree to which a creative worker achieves a sustainable competitive advantage. Discussion focused on the enhanced ability of this set of performance measures, and their antecedents (organisational business acumen and social network structure), to capture the challenges of entrepreneurial sustainability in a sector where long-term labour precarity is a major issue.

For Bourdieu’s (1986) ‘forms of capital’ theory, results from this study call for a more inclusive scope of the dynamic effect creative by multiple forms of capital in future research and theory development. One of the most significant findings stemming from this study concerns the mutually beneficial relationship that exists between organisational business acumen (representative of an aspect of a creative worker’s cultural capital) and social network structure (representative of an aspect of a creative worker’s social capital). Future research adopting a theoretical foundation that is informed by Bourdieu’s (1986) ‘forms of capital’ theory can provide a more adequate depiction of the outcomes of capital, by capturing inter-capital dynamics as well.

For Bourdieu’s (1983, 1985) ‘field of cultural production theory’, the results suggest that, while a traditional market logic is present within the creative industries, organisational business acumen may have the potential to alleviate tensions that have been traditionally associated with the field of cultural production. Organisational
business acumen presented as a form of cultural capital that enhanced the ability of creative workers to operate within a traditional market place. However, it also appeared to enhance the ability of creative workers to generate artistic outcomes (with an increased potential for intellectual consecration). The possession of organisational business acumen may allow creative workers to find a complementary space that surpasses the field logic associated with either the ‘restricted’ mode of cultural production, or the ‘large-scale’ mode. Further research is needed to conclude this dynamics associated with organisational business acumen, yet a significant development to the ‘field of cultural production’ may be warranted if the initial findings presented here are applicable to a wider context.

For current creative industries policy initiatives that seek to enhance the efficiency of the sector, several suggestions stemming from the findings of the study were discussed in Chapter Six. Previous institutionalised initiatives (tertiary education courses) that have sought to boost the levels of business skills for creative workers appear to have had limited impact on the overall labour outcomes faced by creative workers. Hence, one of the key implications for policy stemming from the findings of this study is that creative workers’ social network present as an appropriate, and alternative forum (to tertiary education), that may provide a more effective setting to diffuse organisational business acumen across the sector.

Chapter Six concluded with a commentary concerning the implications of the findings for existing criticisms regarding the neo-liberal undertones present within creative industries policies. The results of the study call for mechanisms to enhance the levels of organisational business acumen and social network structure for creative workers.
Establishing equitable ways to enhance these forms of social and cultural capital for creative workers, coupled with an adequate framework of public investment into creative workers, has the potential to generate more collective benefit and enhance the innovation generated by the creative sector.

7.3 Conclusion

This study has investigated the nature and impact of organisational business acumen and social network structure on the labour outcomes of creative workers. The findings conclude that organisational business acumen has a broad and positive impact on the labour outcomes of creative workers. In addition, social network structure appears to reduce the labour precarity for creative workers. Social network structure and organisational business acumen positively and directly affect each other, and have an additional indirect impact on the labour outcomes of creative workers.

Developed market economies continue to enable the devolution of labour structures into casualised and freelance forms. Within this context, the role of evidence based research in contributing to debate concerning fair and effective labour systems is essential. The creative industries provide a very relevant field to examine, and try to affect, labour outcomes that are subject to ever widening critique. To more rigorously inform debate concerning labour structures, particularly within the freelance-dominated creative sector, this study sought to meticulously outline a methodological approach. The aim of this was to contribute useful research tools to investigate a significant labour issue, which too frequently is subject to uninformed commentary and rhetoric that results in a reproduction of unfair practices. While the tools
developed in this study are in their infancy, they provide a novel and customised foundation for future research.

With consideration for the poor labour outcomes often faced by creative workers, this study has presented compelling and robust findings that offer a novel platform from which to generate future research and debate. In addition, this study offers new perspectives on theories concerning the ‘field of cultural production’, applied to the creative industries, and provides evidence-based recommendations that creative workers and policy makers can utilise to enhance creative labour outcomes.


Appendix

Table 3.7: Profile of Music Groups, DJs and Singers belonging to the Cluster.

<table>
<thead>
<tr>
<th>Title</th>
<th>Style of Music</th>
<th>Years of operation</th>
<th>Network Size Percentile Rank</th>
<th>Structural Hole Percentile Rank</th>
<th>Cluster Activity Level</th>
<th>Description of Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band 1</td>
<td>Contemporary (Original music)</td>
<td>More than 5</td>
<td>100%</td>
<td>55%</td>
<td>Very Active</td>
<td>Performed weekly at markets; performed at bar 1 and at both festivals</td>
</tr>
<tr>
<td>Band 2</td>
<td>World Music (Original music)</td>
<td>Between 1 and 2</td>
<td>29%</td>
<td>45%</td>
<td>Not very active</td>
<td>Performed at bar 1 and festival 1</td>
</tr>
<tr>
<td>Band 3</td>
<td>Rock (Cover music)</td>
<td>Between 1 and 2</td>
<td>71%</td>
<td>9%</td>
<td>Not very active</td>
<td>Performed at bar 1 and festival 2</td>
</tr>
<tr>
<td>Band 4</td>
<td>Rock (cover music)</td>
<td>Between 1 and 2</td>
<td>14%</td>
<td>64%</td>
<td>Not very active</td>
<td>Has an ongoing commercial relationship with music manager 1</td>
</tr>
<tr>
<td>Band 5</td>
<td>World Music (Original music)</td>
<td>Between 3 and 5</td>
<td>57%</td>
<td>36%</td>
<td>Very Active</td>
<td>Is housed within studio 1 (and operates the centre), performed at both festivals and at bar 1</td>
</tr>
<tr>
<td>Band 6</td>
<td>Contemporary (Original music)</td>
<td>Less than 12 months</td>
<td>29%</td>
<td>45%</td>
<td>Active</td>
<td>Band 6 played performed once at Bar 1 and at Markets 1. They also recorded at Studio 1.</td>
</tr>
<tr>
<td>DJ 1</td>
<td>World Music</td>
<td>Between 1 and 2</td>
<td>86%</td>
<td>91%</td>
<td>Active</td>
<td>DJ 1 performed at bar 3 as well as at festival 2; DJ 1 collaborated with other horizontal actors.</td>
</tr>
<tr>
<td>DJ 2</td>
<td>Hip Hop &amp; Pop</td>
<td>Between 3 and 5</td>
<td>71%</td>
<td>27%</td>
<td>Active</td>
<td>DJ 2 also had multiple relationships with other horizontal actors, and performed at bar 3 and festival 2.</td>
</tr>
<tr>
<td>DJ 3</td>
<td>Pop and Funk</td>
<td>Between 3 and 5</td>
<td>71%</td>
<td>18%</td>
<td>Very Active</td>
<td>DJ 3 had a weekly performance at bar 2.</td>
</tr>
<tr>
<td>Singer 1</td>
<td>Original and cover music</td>
<td>Between 1 and 2</td>
<td>71%</td>
<td>73%</td>
<td>Very Active</td>
<td>Singer 1 received a residency at café 1, performed at festival 1 and was well networked with other horizontal actors.</td>
</tr>
<tr>
<td>Singer 2</td>
<td>Jazz and children’s music</td>
<td>More than 5</td>
<td>43%</td>
<td>100%</td>
<td>Active</td>
<td>Singer 2 had a relationship with Lateral Actor 1 (who provides funders for festival 1 and 2), as such Singer 2 received performance opportunities in these activities.</td>
</tr>
<tr>
<td>Singer 3</td>
<td>Original (country &amp; rock)</td>
<td>More than 5</td>
<td>14%</td>
<td>73%</td>
<td>Very Active</td>
<td>Singer 3 is a solo musician who regularly performs in the live music venues (bar 1) in the cluster.</td>
</tr>
<tr>
<td>Singer 4</td>
<td>Original (acoustic groove)</td>
<td>More than 5</td>
<td>29%</td>
<td>82%</td>
<td>Not very active</td>
<td>Singer 4 has a commercial relationship with Management 1 and performed once within the twelve-month period.</td>
</tr>
<tr>
<td>Singer 5</td>
<td>Original</td>
<td>Between 3 and 5</td>
<td>29%</td>
<td>45%</td>
<td>Not very active</td>
<td>Singer 5 has a commercial relationship with Management 1 and performed once within the twelve-month period, as part of festival 1.</td>
</tr>
</tbody>
</table>
Table 3.8: Profile of Vertical Actors belonging to the Cluster.

<table>
<thead>
<tr>
<th>Vertical actor</th>
<th>Description of actor</th>
<th>Description of engagement with other cluster actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar 1</td>
<td>Bar 1 is a large concert venue (200 people capacity) and adjacent restaurant. Venue is suitable for large ensembles. Concerts typically occur 1-3 times weekly.</td>
<td>Bar 1 has contracted band 1, 2 and 5 over the twelve-month period to perform. Its venue is also utilised for festival 1.</td>
</tr>
<tr>
<td>Bar 2</td>
<td>Bar 2 is a lounge style bar (approximately 100 people capacity) suitable for small ensembles and electronic music. Opens 4 nights a week.</td>
<td>Bar 2 has an ongoing commercial relationship with DJ3, and some affiliation (friends) with the owners of bar 2.</td>
</tr>
<tr>
<td>Bar 3</td>
<td>Bar 3 is a nightclub that employs touring DJs. 200 people capacity. Opens 2 nights a week.</td>
<td>Bar 3 has a relationship with festival 1, and also has strong ties to bar 2. Bar 3 only had one performance in the twelve-month period by a cluster member (DJ 1).</td>
</tr>
<tr>
<td>Bar 4</td>
<td>Bar 4 is a small nightclub/resort.</td>
<td>While Bar 4 did not engage any local artists in paid activity over the twelve-month period, its venue space was used as part of festival 1.</td>
</tr>
<tr>
<td>Café 1</td>
<td>Café 1 is a large bistro that hosts musical performance on Sunday afternoons.</td>
<td>Café 1 is a popular tourism destination and hence has a relationship with lateral actor 1. It also has an ongoing music performance residency for Singer 1.</td>
</tr>
<tr>
<td>Festival 1</td>
<td>Festival 1 is a large annual festival that occurs over a four-week period. The festival is comprised of a number of music-based activities.</td>
<td>As can be noted from the network map, Festival 1 is a hub for multiple artists and venues for the cluster. Festival 1 also receives its core funding from Lateral actor 1.</td>
</tr>
<tr>
<td>Festival 2</td>
<td>Festival 2, in comparison to festival 1, is a smaller festival that occurs over one weekend. It comprises two music stages.</td>
<td>Like festival 1, Festival 2 receives its core funding from lateral actor 1. Many local musicians perform at festival 2, however it has less relationships with other vertical actors than festival 1.</td>
</tr>
<tr>
<td>Studio 1</td>
<td>Studio 1 is an independent recording studio that is frequently used. The recording studio has quality infrastructure and is highly utilised by cluster members and musicians from outside of the cluster.</td>
<td>Many of the horizontal actors have recorded music at studio 1. The studio is independently owned, yet one of the musicians from band 5 is employed as a sound technician at the studio; and the band use the studio for rehearsal.</td>
</tr>
<tr>
<td>Cluster Member</td>
<td>Outdegree Score</td>
<td>Outdegree Percentile Rank</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Band 1</td>
<td>9</td>
<td>100%</td>
</tr>
<tr>
<td>Band 2</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>Band 3</td>
<td>6</td>
<td>71%</td>
</tr>
<tr>
<td>Band 4</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>Band 5</td>
<td>5</td>
<td>57%</td>
</tr>
<tr>
<td>Band 6</td>
<td>3</td>
<td>29%</td>
</tr>
<tr>
<td>Singer 1</td>
<td>5</td>
<td>57%</td>
</tr>
<tr>
<td>Singer 2</td>
<td>6</td>
<td>71%</td>
</tr>
<tr>
<td>Singer 3</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>Singer 4</td>
<td>4</td>
<td>43%</td>
</tr>
<tr>
<td>Singer 5</td>
<td>3</td>
<td>29%</td>
</tr>
<tr>
<td>DJ 1</td>
<td>7</td>
<td>86%</td>
</tr>
<tr>
<td>DJ 2</td>
<td>4</td>
<td>43%</td>
</tr>
<tr>
<td>DJ 3</td>
<td>5</td>
<td>71%</td>
</tr>
</tbody>
</table>
Table 3.11: Structural Hole Position and Ranking of Horizontal Actors

<table>
<thead>
<tr>
<th>Cluster Member</th>
<th>Effective Network Size Score</th>
<th>Effective Network Size Percentile Rank</th>
<th>Efficiency Score</th>
<th>Efficiency Percentile Rank</th>
<th>Constraint Score</th>
<th>Constraint Percentile Rank</th>
<th>Average Of Effective Network Size, Efficiency and Constraint Percentile Rank</th>
<th>Overall Percentile Rank for Structural Hole Measures</th>
<th>Overall Structural hole rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band 1</td>
<td>10.238</td>
<td></td>
<td>.731</td>
<td>50%</td>
<td>.245</td>
<td>7%</td>
<td>52%</td>
<td>55%</td>
<td>6th</td>
</tr>
<tr>
<td>Band 2</td>
<td>4.5</td>
<td></td>
<td>.643</td>
<td>21%</td>
<td>.523</td>
<td>71%</td>
<td>50%</td>
<td>45%</td>
<td>7th</td>
</tr>
<tr>
<td>Band 3</td>
<td>2.944</td>
<td></td>
<td>.491</td>
<td>7%</td>
<td>.577</td>
<td>79%</td>
<td>33%</td>
<td>9%</td>
<td>11th</td>
</tr>
<tr>
<td>Band 4</td>
<td>1.5</td>
<td></td>
<td>.75</td>
<td>57%</td>
<td>.889</td>
<td>100%</td>
<td>55%</td>
<td>64%</td>
<td>5th</td>
</tr>
<tr>
<td>Band 5</td>
<td>5.25</td>
<td></td>
<td>.656</td>
<td>29%</td>
<td>.401</td>
<td>36%</td>
<td>48%</td>
<td>36%</td>
<td>8th</td>
</tr>
<tr>
<td>Band 6</td>
<td>3.333</td>
<td></td>
<td>.667</td>
<td>36%</td>
<td>.673</td>
<td>86%</td>
<td>50%</td>
<td>45%</td>
<td>Tied 7th</td>
</tr>
<tr>
<td>Singer 1</td>
<td>7</td>
<td></td>
<td>.778</td>
<td>71%</td>
<td>.311</td>
<td>21%</td>
<td>60%</td>
<td>73%</td>
<td>Tied 4th</td>
</tr>
<tr>
<td>Singer 2</td>
<td>5</td>
<td></td>
<td>.833</td>
<td>100%</td>
<td>.341</td>
<td>29%</td>
<td>67%</td>
<td>100%</td>
<td>1st</td>
</tr>
<tr>
<td>Singer 3</td>
<td>3</td>
<td></td>
<td>.75</td>
<td>64%</td>
<td>.889</td>
<td>93%</td>
<td>60%</td>
<td>73%</td>
<td>Tied 4th</td>
</tr>
<tr>
<td>Singer 4</td>
<td>3.917</td>
<td></td>
<td>.783</td>
<td>79%</td>
<td>.487</td>
<td>64%</td>
<td>62%</td>
<td>82%</td>
<td>3rd</td>
</tr>
<tr>
<td>Singer 5</td>
<td>4.083</td>
<td></td>
<td>.817</td>
<td>29%</td>
<td>.419</td>
<td>43%</td>
<td>50%</td>
<td>45%</td>
<td>Tied 7th</td>
</tr>
<tr>
<td>DJ 1</td>
<td>8.625</td>
<td></td>
<td>.784</td>
<td>86%</td>
<td>.271</td>
<td>14%</td>
<td>64%</td>
<td>91%</td>
<td>2nd</td>
</tr>
<tr>
<td>DJ 2</td>
<td>4.864</td>
<td></td>
<td>.608</td>
<td>14%</td>
<td>.422</td>
<td>50%</td>
<td>43%</td>
<td>27%</td>
<td>9th</td>
</tr>
<tr>
<td>DJ 3</td>
<td>3.5</td>
<td></td>
<td>.7</td>
<td>29%</td>
<td>.475</td>
<td>57%</td>
<td>40%</td>
<td>18%</td>
<td>10th</td>
</tr>
</tbody>
</table>
Figure 4.1: Q-Q Plots for each measure