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Mining community resilience explored through sustainable community development and  
perceptions of community wellbeing

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Thesis submitted in fulfilment of the requirements for the degree of  
Doctor of Philosophy

Discipline of Psychology  
College of Healthcare Sciences  
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November 2018

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### **Declaration of Ethics**

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007). The proposed research methodology received human research ethics approval from the James Cook University Human Research Ethics Committee (approval number H5913).

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Date

### **Statement of Contribution of Others**

I recognise the financial contribution of James Cook University provided through a Postgraduate Research Scholarship.

I recognise the financial and infrastructural contribution of James Cook University through providing me with a workstation, access to resources, and funding to conduct my research and attend conferences.

I recognise the support, guidance and input provided by my advisory panel Dr Connar McShane, Dr Meegan Kilcullen and Dr Anne Swinbourne.

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Date

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## Abstract

The aim of this project was to investigate the resilience of mining communities throughout different stages of mining activity. This aim was achieved through the in-depth exploration of mining community wellbeing and sustainability. The sustainability of mining communities is subject to many factors such as economic market trends and the longevity of the resource being mined (Black, 2005). Sustainable development requires consideration of the actions needed at a local level that contribute to or hinder sustainability (Callaghan & Colton, 2008; Epps, 2002; Lubbers & Koorevaar, 1999). As sustainability was investigated at a community level, the community capital framework suggested by Callaghan and Colton (2008) was used. This framework provides a comprehensive view of the factors that can influence community sustainability. These factors are environmental, human, social, cultural, public structural and commercial capital. Social capital is particularly important to consider for community sustainability as it facilitates coordination and cooperation for the mutual benefit of those involved thus allowing for the use of other forms of capital to be more efficient (Putnam, 1993, 2000). This project explored the relationships between community capital and community wellbeing in mining communities. Additionally, this project explored mining community residents' perceptions of the impacts of mining activity. Due to the limited literature on mining community wellbeing in an Australian context, an exploratory approach was taken in this project.

Semi-structured interviews were conducted in three Queensland mining communities. Interviews were conducted with a sample of 37 residents (nine male, 28 female) from three research sites - Mount Isa (three male, 17 female), Emerald (four male, seven female) and Moranbah (two male, four female). An exploratory qualitative approach was used within an Interpretative Phenomenological Analysis (IPA) framework. IPA provides a framework for the in-depth description and interpretation of how participants perceive and make sense of their experience within their community (J. A. Smith, Flowers, & Larkin, 2009; J. A. Smith & Osborn, 2008). Thematic analysis was conducted within the IPA framework to identify, analyse and report on patterns within the data (Braun & Clarke, 2006).

The reported factors that influence general community wellbeing were reflected in the six forms of community capital and highlighted the interconnected relationships between the forms of community capital. Social capital elements were recognised as playing a key role in residents' perceptions of the community's wellbeing. Additionally, mining activity was perceived to have various impacts on mining communities. Although participants reported some positive impacts, participants more consistently identified mining activity's negative impact on community wellbeing. Again, social capital elements were identified as playing a key role in residents' perceptions towards the mining industry and the negative impacts of mining activity. Social capital elements need to be considered within sustainable community development as these social capital elements were reported as key determinants of community wellbeing. Building trusting and reciprocal relationships between general community members, and community leadership and industry stakeholders is key to facilitating sustainable community development.

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## **Introduction**

Community resilience has been defined as a community's ability to adapt to gradual or sudden changes to ensure it remains viable in the long-term (Callaghan & Colton, 2008; M. D. Smith, Moran, & Seemann, 2008). Building community resilience through a bottom-up approach also builds regional, state and national resilience (Longstaff, Armstrong, Perrin, Parker, & Hidek, 2010). Resilient communities may therefore ensure the resilience of the wider systems of which they are a part. Community resilience can be improved through sustainable community development to ensure a community's ability to continue into the future. However, disagreement within the literature regarding what sustainable community development is and how it may be approached means that consideration of the local level factors that contribute to or hinder sustainability is required (Callaghan & Colton, 2008; Epps, 2002; Lubbers & Koorevaar, 1999). Sustainable community development, and resultant community resilience, requires the in-depth consideration of the context of specific communities. Residents' perceptions of community well-being can inform sustainable community development which can promote the community's resilience.

The resilience of mining communities is subject to many factors such as economic market trends and the longevity of the resource being mined (Black, 2005). Additionally, despite the increased number of people who work in the Australian mining industry (Australian Bureau of Statistics, 2013a), the quality of mining community life has not necessarily improved (Hossain et al., 2013; Lawrie, Tonts, & Plummer, 2011; Storey, 2001). For a mining community to be resilient, it needs to be sustainable in spite of the challenges that mining activity brings to the community. Resilient mining communities can foster the resilience of the regions and states of which they are a part as well as Australia. Identifying the local level factors that facilitate the sustainability, and therefore resilience, of mining communities is important to wider sustainability.

Callaghan and Colton (2008) suggest a community capital framework to understand the local factors that can influence community sustainability. Community capital factors include environmental, human, social, cultural, public structural and commercial capital. All forms of capital are valuable because of their ability to produce outcomes. Social capital in particular can enhance the production and use of the other forms of community

capital. Social capital is argued to facilitate coordination and cooperation for the mutual benefit of those involved (Putnam, 1993, 2000). These cooperative effects of social capital can allow for the more efficient use of other forms of capital. A community as a whole would need to experience these beneficial components of social capital for it to function cohesively and to promote its sustainability.

Given the factors that can diminish the resilience of mining communities, the aim of this project was to investigate the resilience of mining communities throughout different stages of mining activity. This aim was achieved through the in-depth exploration of mining community residents' perceptions of community wellbeing and the impacts of mining activity. Specifically, this project explored the dynamic interrelatedness between community capital, specifically social capital, and community wellbeing in mining communities.

This thesis consists of 11 chapters. Chapters 1-5 present an exploration of the literature on community and sustainable development (1), community capital (2), social capital (3), mining activity impacts on community (4), and project aims and research questions (5). First, an understanding of sustainable community development is provided which leads to an exploration of the usefulness of a community capital framework in providing a comprehensive view of the factors that can influence community sustainability. Next, social capital is explored in more detail to establish its usefulness in enhancing other forms of capital which is followed by an outline of this project's context which is mining activity in Australia. Chapters 6-9 then present the method and qualitative thematic results of the research, and Chapters 10-11 discuss the findings and implications of this project.

## **Chapter 1: Community and Sustainable Development**

Resilient communities are argued to ensure the resilience of the wider systems of which they are a part (Longstaff et al., 2010). Sustainable community development can improve a community's resilience by ensuring its ability to continue into the future. While resilience may require the experience of a crisis to investigate, the factors involved in sustainable community development are more accessible. The aim of this chapter is therefore to provide an understanding of sustainable community development. First, a discussion on community and its conceptualisation in this project is provided. Following this, an exploration of sustainable development within a community context is presented.

### **1.1 Community**

Scrutiny has been placed on the term 'community' due to varying definitions and uses of the term from different perspectives (Obst, Smith, & Zinkiewicz, 2002). Gusfield (1975 as cited in Obst et al., 2002) identified two main uses of the term 'community' within the literature – communities of interest and geographical or place communities. A community of interest may refer to the quality and character of social relationships without reference to a location (Gusfield, 1975 as cited in Obst et al., 2002). Therefore, communities may be based on shared interests, language or ethnicity. A geographical community may refer to a neighbourhood, town, city or region. In this sense of the word, community is a geographical area where face-to-face relations occur (Fielding-Lloyd, 2009). For example, traditional working-class towns where there is generally a limited variety of industry are associated with high levels of social solidarity. The shared meanings and understandings between residents through the limited variety of industry facilitate community. Furthermore, the physical isolation and a lack of physical and social mobility often associated with these communities contributes to their increased solidarity (Fielding-Lloyd, 2009). Based on these two identified uses of the term 'community', the key component of 'community' is a place or network where members have a sense of belonging.

Despite the findings for social cohesion in geographical communities, some researchers have argued that identifying communities by geographical place is redundant

(Bhattacharyya, 2004). Due to globalisation, an individual could be argued to belong to many places. The places in which an individual belongs may vary depending on work, sleep, commerce and recreation (Bhattacharyya, 2004). For example, the use of commute workforces results in some individuals working in a different town to where they live. However, considering community as a geographical area is appropriate where there is physical isolation and low physical and social mobility as indicated in the previous example of traditional working-class towns. In the context of this project, community was investigated in terms of rural Australian, mining industry based towns. A geographical community provides a useful proxy in this case as many mining industry based towns are in rural and remote areas and therefore experience some degree of physical isolation. These communities generally have defined physical boundaries where residents use the same services, share the same local government and share a sense of belonging (Black, 2005). Therefore, in this project community was defined as a community of place or a geographical community. Specifically, community was defined as a group of people who identify with and share a common physical environment, resources, services and threats (Black, 2005; Longstaff et al., 2010). Community resilience can be improved through sustainable development by ensuring the community's ability to continue into the future.

## **1.2 Sustainable Development**

Sustainable development addresses the many elements involved in improving the sustainability of a community of place. There is limited consensus on sustainable development's definition and measurement as it has been applied within competing approaches, outcomes, and contexts (Black, 2005; Cocklin, Bowler, & Bryant, 2002; Storey, 2010). A commonly cited definition for sustainable development is that which meets the needs of current and future generations (World Commission on Environment and Development, 1987). This broad definition of sustainable development encompasses social, economic and environmental relationships. The vague inclusion of many factors within the definition has allowed for contentious debate on whether the importance for successful sustainable development should be placed on societal, economic or environmental components (Cocklin et al., 2002; Maxwell, 2004; Robinson, 2002). Ultimately, those advocating for sustainable development tend to approach it from the perspective that

achieves their own goals (Maxwell, 2004). What becomes important when considering sustainable development is what the process aims to achieve.

Robinson (2002) suggests two overarching opposing views in which sustainable development has been applied – economically based sustainability and ecologically based sustainability. Economically based conceptualisations of sustainable development tend to focus on development that fosters economic growth (Grootaert, 1998; Serageldin, 1996). Sustainable development can be defined as the process in which future generations have access to equal or greater resources than previous generations (Serageldin, 1996). In this sense, economic development and growth are perceived as the end goal of sustainable development (Grootaert, 1998). Yet Serageldin (1996) acknowledges that this idea of sustainable development needs to consider more than economic and/or material factors. Sustainable development also needs to incorporate environmental, human and social factors as these factors can also generate income (Serageldin, 1996). An example of other factors generating income is when environmental assets (such as soil and water) provide goods and services (such as renewable or non-renewable resources). Even though the economically based approach attempts to be comprehensive, the goal is still to increase the income that these factors can create, whether it is social, environmental or human.

Alternatively, ecologically based conceptualisations of sustainable development tend to focus less on economic growth and more on the reduction of environmental degradation. The aim of this approach is non-declining ecological and social factors (Ekins, 1993). Specifically, attention is focused on ensuring that ecological and social systems are not strained beyond their capacity by development. Ultimately, there is a perceived limit to growth rather than the exponential growth aspired to in more economically-based conceptualisations (Ekins, 1993). The ecologically based approach attempts to consider social factors however, the primary concern is the environment. Both the economic and ecological-focused approaches attempt to comprehensively include the factors involved with sustainable development yet each still provides greater emphasis on either economic or environmental factors.

The basis for divergence in the two sustainability approaches can be traced to how substitutable or complementary factors are perceived to be. An economically based sustainable development focus may consider that individual factors can be substituted for

each other (Serageldin, 1996). For example, the mining of non-renewable resources is sustainable if it is being converted into economic wealth. Therefore, sustainability is perceived as the overall maintenance of resources rather than considering the performance of individual factors contributing to sustainability (Serageldin, 1996). Conversely, an ecologically based sustainable development focus may consider a more complementary approach to the factors involved. For example, any depletion in non-renewable energy should be directly counteracted by investment in the production of renewable energies (Serageldin, 1996). Therefore, impacts on the individual factors are considered and compensated for rather than the goal being simply the maintenance of total resources. A more complementary view of the factors involved with sustainable development, such as social, environmental, human and economic factors, is more likely to ensure that sustainable development meets the needs of current and future generations.

Further disparity in sustainable development conceptualisations arise due to differing contexts in which sustainable development has been applied (Black, 2005). For example, Black (2005) identified that sustainable development and the concept of sustainability have been investigated in terms of businesses and industries, social practices, economies, communities and societies. However, what may be sustainable in one context may be incompatible with what is sustainable in another context. For example, sustainable development for a business may require land clearing to allow for expansion of business operations. Yet, land clearing may be detrimental to the sustainable development of the wider community in terms of environmental degradation, quality of water systems and quality of life. In this example, sustainable development at the business level inhibits sustainable development at the community level. The divergence of sustainability in different contexts highlights the need to provide a clear context in which sustainable development is being defined and applied.

### **1.3 Sustainable Community Development**

In the context of a community of place, sustainable development should entail development that contributes to a sustainable community. A sustainable community is one where residents are able to carry out healthy, productive and enjoyable lives now and in the future (New South Wales Premier's Department Strengthening Communities Unit, 2001).

This definition for a sustainable community clearly relates to the previously noted World Commission on Environment and Development's (1987) definition for sustainable development – development that meets the needs of current and future generations. Within a community, the focus of sustainability is on a community's current and future residents. In order for the residents to carry out healthy, productive and enjoyable lives, a sustainable community should be economically, environmentally and socially healthy (New South Wales Premier's Department Strengthening Communities Unit, 2001; President's Council on Sustainable Development, 1997). Therefore, a sustainable community in the previous instances is defined as one that is 'healthy' across a range of different factors.

Describing a sustainable community as one that is economically, environmentally and socially healthy still leaves room for varying interpretations. As seen with sustainable development, competing approaches may place different importance on society, economy and environment. Given this variability, some authors have argued that due to the social construction of 'sustainability', the focus should shift from finding a universal *meaning* of sustainability to investigating the *process* of sustainability (Cocklin et al., 2002). Further, Cocklin et al. (2002) argue that the lack of consensus in the sustainability arena should be expected as different communities and even cultures will contest the emphasis placed on economic growth, social justice and environmental protection. Therefore, as noted previously, an understanding of the context in which sustainability is being investigated is needed. Specifically, further understanding is needed of the varying meanings of sustainability, the role actors play, the evident power relationships, the authority of competing knowledges and discourses and the implications of the various pathways to sustainability. Greater understanding of sustainability's process means competing approaches are not simply overlooked but rather that the biases and objectives of competing approaches are acknowledged and understood.

The process of sustainability can be further understood through understanding the local context in which it is applied (Epps, 2002; Lubbers & Koorevaar, 1999). Global indices may not be useful or appropriate for individual communities. For example, population decreases within a community may indicate sustainability if this decrease is associated with improved living conditions (Epps, 2002). Therefore, a deeper knowledge of the community is required for a greater understanding of what is sustainable for that

community. Which aspects of a community should be sustained may also differ between communities (Black, 2005) as what may be important to one community may not be so for another (Callaghan & Colton, 2008). As a result, communities will place differing priorities on factors perceived to contribute to community sustainability. Therefore, the operationalisation of sustainability targets can and should be different in each community. Appropriate and effective sustainability targets can be established by understanding the local context in which sustainability is being applied.

#### **1.4 Community Wellbeing**

Similarly to sustainable development, community wellbeing is dependent on the context in which it is applied (D. Cox, Frere, West, & Wiseman, 2010; Wiseman & Brasher, 2008). Again, competing approaches and disciplines has resulted in differing assumptions about community wellbeing. Broadly, community wellbeing can include social, economic, environmental and cultural factors that are of importance to a community (Wiseman & Brasher, 2008). This vague definition highlights that what constitutes community wellbeing will differ dependent on the community. Therefore, as is the case with sustainable community development, the focus needs to move beyond establishing a universal meaning of community wellbeing (D. Cox et al., 2010) towards a greater understanding of the process of achieving community wellbeing. To understand the process of community wellbeing would therefore require the investigation of the local context in which it is applied.

#### **1.5 Conclusion**

Sustainable development requires consideration of the actions needed at a local level that contribute to or hinder sustainability (Callaghan & Colton, 2008; Epps, 2002; Lubbers & Koorevaar, 1999). At the basis of the concept of sustainability is a system's capacity to continue into the future (Ekins, 1993). Therefore, sustainable community development facilitates a community's capacity to continue into the future, or in other words, its ability to be resilient to changes. As highlighted above, there will be conflict within communities regarding where and how sustainable development efforts should be focused. However, exploring the factors affecting specific communities will provide a

greater understanding of these conflicting ideas. As this project investigated sustainability at a community level, a community capital framework was applied to gain a comprehensive understanding of the community factors that may contribute to or hinder sustainable development.

## Chapter 2: Community Capital

A geographical community is a complex social and physical system which consists of many different factors or types of capital (Longstaff et al., 2010). Capital is the resources, both tangible and intangible, that are available to an individual at a point in time (Costanza et al., 1997). More specifically, capital can be defined as resources which have value due to their ability to produce outcomes (Folke & Berkes, 1998 as cited in Flora, 1999). Therefore, the value is not inherent to the resources themselves but rather lies in their ability to produce outcomes. The concept of community capital provides a framework within which to investigate a community's resources and the ability of these resources to provide outcomes. Therefore, by investigating the forms of community capital, areas of community can be identified that require improvement to increase overall community sustainability. This chapter provides an overview of different proposed community capital frameworks and an overview of the forms of community capital used within this project.

### 2.1 Community Capital Frameworks

Different community capital frameworks have been proposed through which to investigate community sustainability. Flora (1999) conceptualised community capital as encompassing human (education and skill), social (relationships), natural (environment) and financial/built (economic wealth and buildings) capital. Specifically, Flora (1999) used this community capital framework in the context of investigating sustainability through the interaction between people and their environment. Flora (1999) indicates that some forms of capital affect each other and that the wider society can affect each form of capital thereby having multidirectional relationships (Figure 1). Flora conceptualised wider society as a society that has a healthy ecosystem, vital economy and social equity. As depicted in Figure 1, no account is made for the forms of community capital influencing wider society thereby presenting a unidirectional relationship. Nor is the influence of the forms of capital on each other across the diagram (e.g., human and financial/built capital) taken into account. Flora further claims that the four proposed forms of community capital should act as both the means to and the end of sustainability. Incongruently to this non-linear conceptualisation and the graphical representation of the community capital framework

(Figure 1), Flora (1999) also suggested that there is an order in which each form of capital should be addressed when considering community development. The suggested order to address community development was human, social, financial/built and then natural capital. For example, to improve natural capital, first the knowledge and skills (human capital) of the community need to be recognised, which then involves increased communication and networks (social capital). The assumption here is that the improvement of natural capital is the end goal. However, as identified in Chapter 1, different communities may value the improvement of different forms of capital as the end goal of sustainable community development. Additionally, the role of financial/built capital is not explicitly addressed in this explanation. Flora (1999) argues a unidirectional relationship between financial and built capital. Financial capital is argued to lead to built capital, which ignores any contributions built capital may have on financial capital. However, distinguishing the relationship between financial and built capital is made more difficult through the superficial combination of the two instead of treating them as distinctly different capital. Regardless of these issues, this framework has been presented within this thesis as a basis for investigating sustainability through community capital.

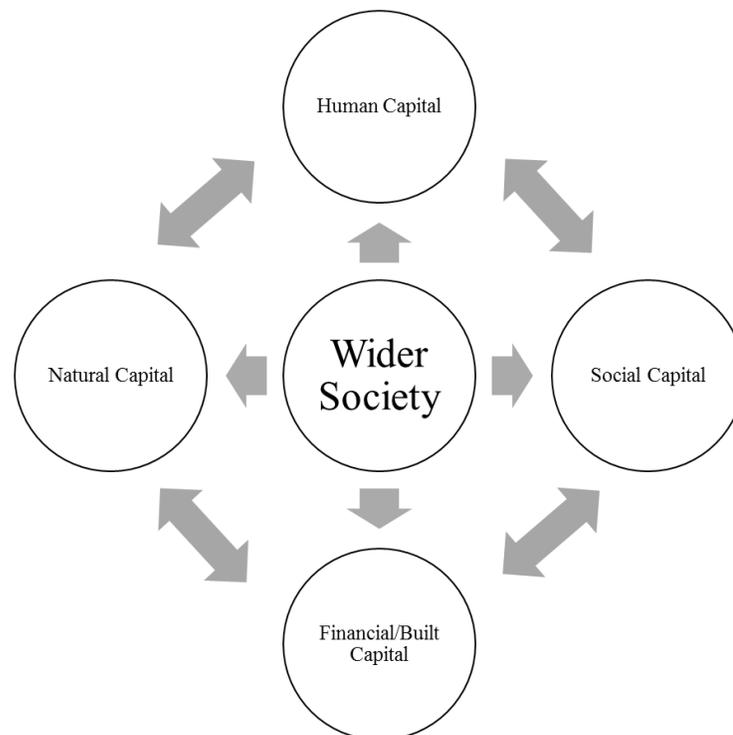
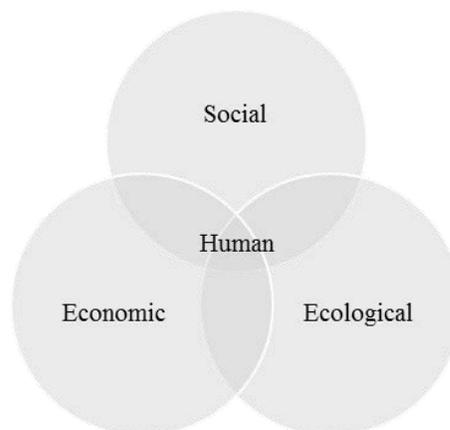


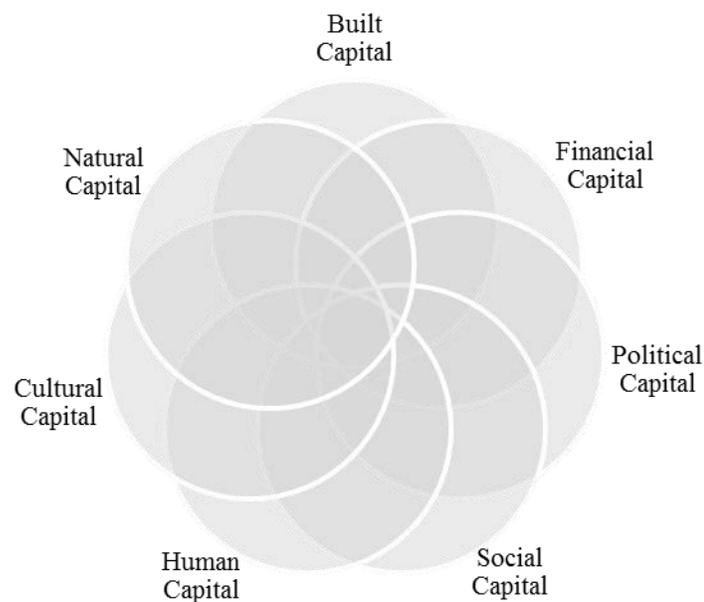
Figure 1. Flora's (1999, p. 401) community capital framework.

Similarly to Flora (1999), Hancock (2001) described community capital as the combination of four types of capital including human (health and education), social (networks), ecological (environmental quality) and economic capital (economic wealth). In this conceptualisation of community capital, Hancock (2001) proposed that human capital was not a foundational capital but was instead an outcome of the three other forms of capital (Figure 2). Therefore, networks, environmental quality and economic wealth improve health and education. The implication that the other forms of capital influence human capital excludes any possibility that human capital may influence the other forms of capital. Additionally, Hancock's (2001) community capital model assumes that an increase in any of the forms of capital is a positive outcome for all. The assumption of positive outcomes when any capital is increased is particularly problematic when considering social capital. Increases in social capital can sometimes have negative outcomes (which is explored in the following chapter). Additionally, assuming increases in capital are positive ignores the possible negative influence one capital may have on another. For example, increases in economic capital could mean reductions in ecological capital (land clearing to make room for businesses). Also, Hancock (2001) described a healthy community as one where the four forms of capital increase together. Thus community capital is seen here as the outcome of the four forms of capital and therefore inherently the result of high levels of the four proposed forms of capital. This community capital model does not consider that communities may value different forms of capital resulting in different importance placed upon the forms of capital across contexts.



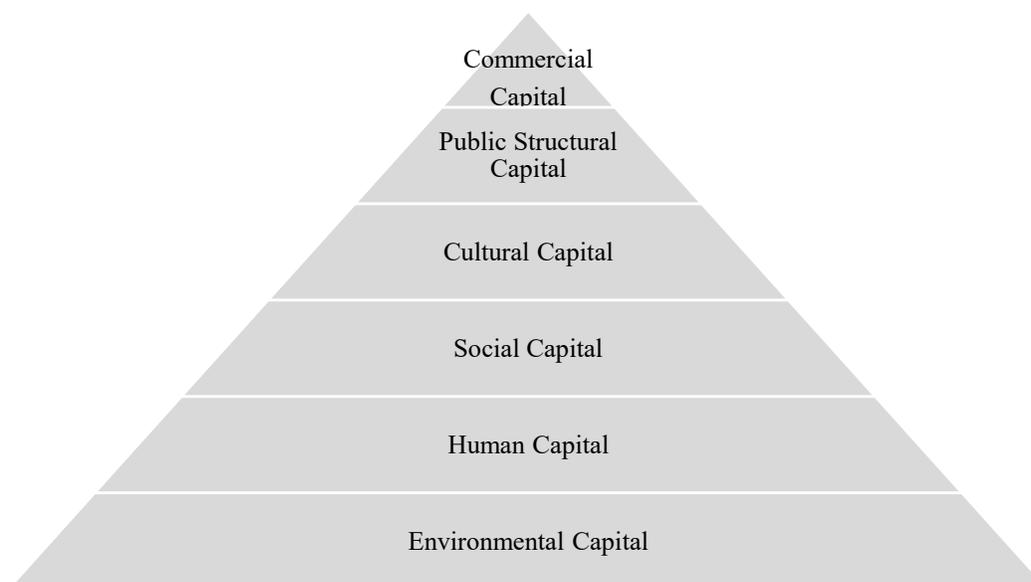
*Figure 2.* Hancock's (2001, p. 277) community capital model.

Emery and Flora (2006) include further forms of capital within their proposed community capital framework. The concept of community capital in this case was expanded to distinguish between natural, cultural, human, social, political, financial and built capital (Figure 3). Emery and Flora's (2006) community capital framework is more comprehensive of the factors that can influence community sustainability than earlier frameworks (Flora, 1999; Hancock, 2001). This later framework distinguishes between financial and built capital and also includes cultural (traditions and language) and political (access to power) capital. Political capital refers to the ability of people to access power through their relationships, which may also be considered an aspect of social capital. As access to power through relationships can be considered an outcome of social capital (discussed further in the next chapter), the distinction between political and social capital is not theoretically sound. What is important to take away from Emery and Flora's (2006) framework is the identification of the forms of community capital as a multidirectional framework rather than one that is unidirectional (Figure 3). According to Emery and Flora (2006), each forms of capital can influence each other. Therefore, the strengths of this community capital framework is its comprehensiveness and inclusion of further forms of capital, and the representation of the multidirectional relationships between them.



*Figure 3.* Emery and Flora's (2006, p. 21) community capital framework.

Callaghan and Colton (2008) also propose a comprehensive community capital framework to explore community sustainability. This community capital framework consists of environmental, human, social, cultural, public structural (publicly available services/spaces), and commercial (economic/financial) capital. Callaghan and Colton (2008) argue that the different forms of capital should not be valued above one another but rather that each form of capital provides the foundations for other capital to be generated (Figure 4). In contrast to the hierarchical and formative nature of the framework presented in Figure 4, Callaghan and Colton (2008) also suggest that changes within any of the forms of capital can contribute to or detract from any of the other forms of capital. Moreover, as each form of capital builds off the other, each form of capital would not function efficiently without the others. Callaghan and Colton (2008) also recognise that different communities may require different stocks of each capital to be resilient to changes. The community-specific requirements of each capital means that there is no generically set level of each form of capital that is required to ensure community sustainability. Furthermore, as communities may place different values on certain forms of capital as the community changes, more emphasis may be placed on a particular community capital at specific points in time to ensure that 'balance' is maintained within the community (Callaghan & Colton, 2008). This community capital framework is used to guide this project as it currently provides the most comprehensive and theoretically sound view of community capital.



*Figure 4.* Callaghan and Colton's (2008, p. 938) community capital framework.

## 2.2 Forms of Community Capital

Within the previously discussed community capital framework literature, justification is not provided for the inclusion of the forms of capital. This lack of justification then makes it difficult to determine the reasoning behind the inclusion of some types of capital over others. As indicated in the previous overview of community capital frameworks, there are differences in the forms of capital included and the proposed relationships they have with each other and their contribution to community sustainability. The following sections provide an overview of the forms of capital suggested by Callaghan and Colton (2008) in terms of how they are conceptualised for this project and the justification for their inclusion.

**2.2.1 Environmental capital.** Environmental capital, also referred to as natural capital, is comprised of local, regional, and global eco-systems (Callaghan & Colton, 2008). Environmental capital consists of water systems, soil and land, geographical location, atmosphere, and climate. The environmental capital of a community can be assessed through both the stock and services of the eco-systems (Callaghan & Colton, 2008). Environmental stock is the physical form of environmental capital which can include the number of trees, animals, or level of minerals native to and realistic for that region (Callaghan & Colton, 2008; Costanza et al., 1997). Eco-system services are the benefits that humans can receive either directly or indirectly from the eco-system and its functions (Fisher, Turner, & Morling, 2009). These services can play a provisioning (e.g. food, water, fuel), regulating (e.g. erosion control, water purification), cultural (e.g. recreation, aesthetic, spiritual), and supporting (e.g. nutrient cycle, primary production) role within a community (Millenium Ecosystem Assessment, 2005). The previous examples highlight that environmental capital plays a vital role in supporting many aspects of human life within a community and as such, is important to include and assess in terms of community sustainability.

**2.2.2 Human capital.** Human capital within a community context consists of knowledge and skills (Becker, 1994; Hancock, 2001; Machlup, 2014), and physical and psychological health (Becker, 1994; Hancock, 2001) possessed by community members (Callaghan & Colton, 2008). Knowledge here represents individual knowledge in areas such as practical (professional, political), intellectual (intellectual curiosity, scientific

learning), pastime (entertainment, emotional stimulation), spiritual (religious instruction) and unwanted (knowledge outside of one's interests) knowledges (Machlup, 2014). The institutions that can build knowledge, skills and health, are proposed to include schools, churches, recreational centres and medical services (Callaghan & Colton, 2008). Therefore, improvements in human capital can be achieved through the availability of institutions which fulfil basic human needs as well as providing the opportunity to increase individual capacity (Callaghan & Colton, 2008). As human capital incorporates knowledge, skills and health, it is essential in terms of sustaining and enhancing quality of life and as such, is important to include and assess in terms of community sustainability.

**2.2.3 Cultural capital.** Cultural capital has traditionally been researched in terms of the individual. Three elements are identified: embodied capital (the disposition of the individual that characterises their actions and likes), objectified capital (cultural expression e.g. painting, writing, etc.), and institutionalised capital (academic qualifications) (Bourdieu, 1986; Jeannotte, 2003; Throsby, 1999). Other researchers have measured cultural capital as formal (measured through individual, mothers' and fathers' education level) and spiritual (measured through individuals' and parents' number of books) cultural capital (Lewicka, 2005). However, these individual measures tend to overlap with human capital. For example, as seen in the previous definition of human capital, education level can be considered part of human capital. Investigating cultural capital within a community context may assist in clarifying the distinction between cultural capital and other forms of capital.

Throsby (1999) argues that culture is an expression of collective behaviours demonstrated through a group's activities and belief systems. In this way, cultural capital would be a property of the group rather than of the individual. Some researchers propose that cultural capital is built through both tangible and intangible factors (Callaghan & Colton, 2008; Throsby, 1999). Tangible cultural capital consists of locations, structures, and buildings which have cultural significance (cultural heritage), and private goods such as paintings, sculptures, and other artworks and artefacts (Throsby, 1999). Intangible cultural capital includes values, ideas, beliefs, traditions, and practices as well as public artworks such as literature and music (Throsby, 1999). All of these aspects of cultural capital provide an asset to the community through the cultural value that they possess. Furthermore, these

factors identify and bind together a community providing the community with a sense of identity. In this way, what is valued culturally by a community will be determined collectively (Callaghan & Colton, 2008). Given that cultural capital consists of a community's sense of identity, which can in turn promote other forms of capital (e.g. infrastructure, services, natural systems, collective action), it is important to evaluate cultural capital as a part of community sustainability.

**2.2.4 Public structural capital.** Public structural capital, also referred to as built capital, is the services and spaces within a community that are available for the public to use (Callaghan & Colton, 2008). These services and spaces include things such as roads, water systems, libraries, parks and youth centres. Generally this capital is provided to the community by government however it is not uncommon for private sector organisations to donate services and spaces to the community (Callaghan & Colton, 2008). A community that has a strong human, social and cultural capital basis will also be able to build strong and well supported public structural capital (Callaghan & Colton, 2008). Public structural capital draws out the interactions that residents have with government within the community, in terms of the provided infrastructure and services. Most community residents may not personally interact with members of the government but rather with the contributions they have made to the community in the form of infrastructure and services. Therefore, the inclusion of public structural capital allows for a clearer distinction of the residents' interactions with government rather than previous uses of political capital. As public structural capital incorporates the basic services required to sustain a community's population (e.g., water systems) it is important to include and assess in terms of community sustainability.

**2.2.5 Commercial capital.** Commercial capital, also referred to as economic capital, is the for-profit sector provision of goods and services and is the result of engaging in commercial activities (Callaghan & Colton, 2008). The terms economic and financial capital have been used interchangeably generally referring to an individual's or organisation's available amount of economic wealth (Emery & Flora, 2006; Flora, 1999; Hancock, 2001). Commercial capital provides a more comprehensive approach to economic wealth within the community as it refers to the use of an individual's or organisation's economic wealth. Commercial capital therefore consists of commercial transactions, such

as purchasing goods and services, and/or agreements, such as employment (Callaghan & Colton, 2008). For community sustainability, it is important that this economic growth is consistent with the values of the community. For example, the growth of commercial capital could result in the decline of the other forms of capital that are important to the community. In order to build a new factory, land may need to be cleared decreasing the environmental capital of the community. Therefore, it is important to consider the impact that the growth or decline of commercial capital can have on the other forms of capital. As commercial capital consists of the use of economic wealth within a community and therefore, the functioning of a community's economy, it is important to include and assess in terms of community sustainability.

**2.2.6 Social capital.** Social capital as defined by Callaghan and Colton (2008), is based upon relationships built on shared values, norms and trust (J. S. Coleman, 1988; Putnam, 1993; Western, Stimson, Baum, & Van Gellecum, 2005). However, there is a lot of contention in the social capital literature regarding what constitutes social capital. Due to the complexity of and tension surrounding the conceptualisation of social capital, it is discussed separately in the following chapter.

### **2.3 Conclusion**

The community capital framework (Callaghan & Colton, 2008) provides a holistic understanding of community wellbeing and a comprehensive view of the factors that can influence community sustainability. These factors include environmental, human, social, cultural, public structural and commercial capital. As capital is valuable based on its ability to produce outcomes (Folke & Berkes, 1998 as cited in Flora, 1999), one form of capital that can enhance the production and use of the other forms of community capital is social capital. Due to the complexity of and tension surrounding social capital, the definition used for social capital within this project is explored in the following chapter.

## Chapter 3: Social Capital

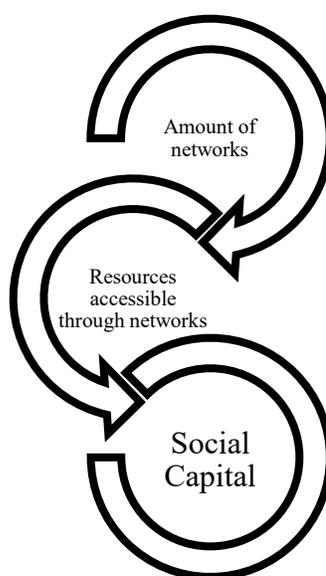
Contention exists within the social capital literature regarding the variables that constitute social capital and its outcomes. This chapter provides an overview of the major points of disagreement within the literature and provides the definition used for social capital within this project. First, the major research from which modern social capital research emanated is explored followed by the resultant approaches and problems within the social capital literature. Following this, a discussion is provided on possible future directions for social capital research.

### 3.1 Where it all Began - Foundations of Modern Social Capital

The term social capital refers to the productive value of social relationships. Yet there are competing approaches within social research to how and which aspects of social capital should be measured (Scrivens & Smith, 2013). Competing approaches differ on the importance placed on the types of networks and relationships (e.g.; friends, family or professional relationships), the importance of tangible (e.g.; networks and the associated activities) or intangible (e.g.; norms and trust) components, and the scale or level at which social capital can occur (e.g.; micro, meso, macro levels) (Scrivens & Smith, 2013). The multiple conceptualisations of social capital have stemmed from the work of three researchers in the area including Bourdieu and Coleman who take a sociological perspective, and Putnam who takes a more political perspective. The following discussion explores the contribution these researchers have made to the social capital literature.

**3.1.1 Pierre Bourdieu.** Bourdieu (1986) discusses the concept of capital in terms of three forms: economic (can be directly converted into money for example, property rights); cultural (in certain conditions can be converted into economic capital for example, educational qualifications); and social (social obligations or connections which in certain conditions be converted into economic capital, for example a title of nobility). Social capital was defined by Bourdieu (1986) as ‘the aggregate of the actual or potential resources which are linked to...membership in a group – which provides each of its members with the backing of the collectively-owned capital’ (1986, p. 249). Therefore the degree of social capital that an individual has depends on the extent of the networks to

which they have access and the amount of capital or resources accessed through these networks (see Figure 5 below) (Bourdieu, 1986). In this way, social capital is productive as it is defined by the outcomes of or the resources an individual has access to through their membership within a social network (Winter, 2000). Social capital as defined by Bourdieu (1986) is the outcome of an individual's social relationships.



*Figure 5.* Bourdieu's conceptualisation of social capital as an outcome.

Through obligations (connections) held by members of a social network, individuals can gain material (e.g. economic capital) or symbolic (e.g. prestige) profits. Social capital for Bourdieu occurs at the individual level and is defined in terms of an individual's ability to access resources based on their membership of particular social groups. Therefore, the perceived value of social capital lies in how networks can increase an individual's resources. Yet Bourdieu (1986) also discusses how a group's social capital can be concentrated by delegating an individual or a small group of individuals to represent the whole group. The delegate/s can speak and act on behalf of the group and thus can exercise power greater than their own personal capital with the aid of the communally owned capital. Therefore, individuals can have greater access to resources through the concentration of the group's social capital as opposed to the resources they can access through their own individual social capital.

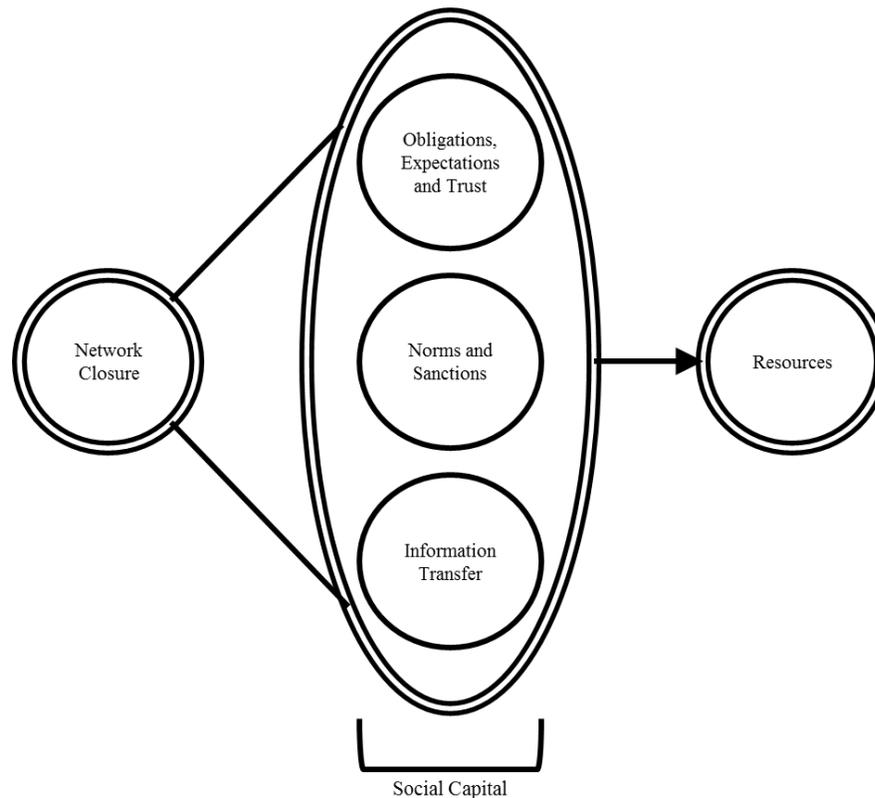
Bourdieu (1986) emphasises that there needs to be an endless effort made to maintain social networks. An individual's profit from maintaining their networks increases relative to the amount of resources available through the network. Therefore, an individual with a large social network would be sought after for their social capital and in turn, would have many resources available to them through their networks. As a consequence of this argument, Bourdieu (1986) ascertains that social capital is unequally distributed among the social classes. Those in higher classes would have access to more economic capital and therefore more social capital. Bourdieu (1986) uses a title of nobility as an example of where an individual would be known by many others thus increasing their ability to access resources. A more contemporary example is well-known members of a community such as celebrities who are sought after for their social capital therefore providing them greater access to resources. Bourdieu's social capital definition is circular as gains in status and wealth can lead to gaining more connections resulting in access to more resources and therefore greater status and wealth (Schuller, Baron, & Field, 2000). This bias towards the economic form of social capital suggests that only higher social classes can obtain social capital. Bourdieu's focus on economic capital therefore ignores the social capital that may be present among the lower social classes.

Although Bourdieu (1986) emphasises the importance of social interactions in gaining social capital, there is limited mention of the characteristics of social networks that allow the individual to increase their economic capital (Schuller et al., 2000). For example, the characteristics of networks or relationships (such as trust) may result in more or less access to different outcomes. This lack of specificity regarding the characteristics of social networks is understandable as Bourdieu's main interest was not social capital itself but rather how social capital may increase economic capital. Further, this classist view of social capital reflects the cultural influences of the time and place of this research. Nevertheless, despite these gaps in Bourdieu's (1986) definition of social capital, this work continued to provide the foundation for future researchers to explore social capital as an outcome. As a consequence of this lack of specificity regarding the characteristics of social networks that provide access to different outcomes, there has been different applications and operationalisations of social capital within contemporary research.

**3.1.2 James Coleman.** In contrast to Bourdieu (1986), J. S. Coleman (1988) defined social capital by its function rather than by its outcome. Coleman identified the characteristics of social relations that constitute useful capital resources. These characteristics included obligations and expectations of people that depend on the trustworthiness of the social environment; the ability of social structures to transfer information; and social norms which provide behavioural sanctions (see Figure 6 below). J. S. Coleman (1988) argues that obligations, expectations and trust; information transfer; and norms and sanctions are each a form of social capital. Obligations and expectations are described as ‘credit slips’ where A does something for B and trusts them to reciprocate, thus A has an expectation of B and an obligation is placed on B to reciprocate. This conceptualisation of reciprocity is quite rigid in its *quid pro quo* basis. This rigid view of reciprocity could result in people being less willing to perform favours for each other unless they are certain that a specific person will repay their favour. Coleman also argued that social relationships had value in their ability to provide information to others that can facilitate action. Coleman illustrates this through the example of a researcher who remains up-to-date on research through interactions with their colleagues who keep up-to-date. Therefore the individual is able to act on information more efficiently than if they had to source the information themselves. Social norms and sanctions provide rules by which the individuals in a social structure abide. Individuals can internalise these norms or they may be enforced through external rewards for behaviours that fit with the social norms and disapproval or punishment for behaviours that violate these norms (J. S. Coleman, 1988).

J. S. Coleman (1988) argues that obligations, expectations and trust; information transfer; and norms and sanctions can all facilitate certain actions and simultaneously constrain other actions. For example, norms and sanctions regarding youth behaviour may constrain youths’ perceived ability to have fun. Network closure is suggested to make the enforcement of norms and the other forms of social capital possible (J. S. Coleman, 1988). Coleman refers to closure within a social structure as enough ties between members to ensure that the group’s social norms are observed. Therefore, the behaviour of individuals within the social network is controlled as members can observe norm compliance and apply consequences such as the withdrawal of support or resources if norms are violated. Additionally, network closure can ensure greater transmission of trustworthiness between

members as group members are better able to ensure obligations are fulfilled than an individual can on their own. As such, the network closure can ensure member trustworthiness. In this way, for Coleman's definition of social capital, network closure is essential (refer to Figure 6 below).



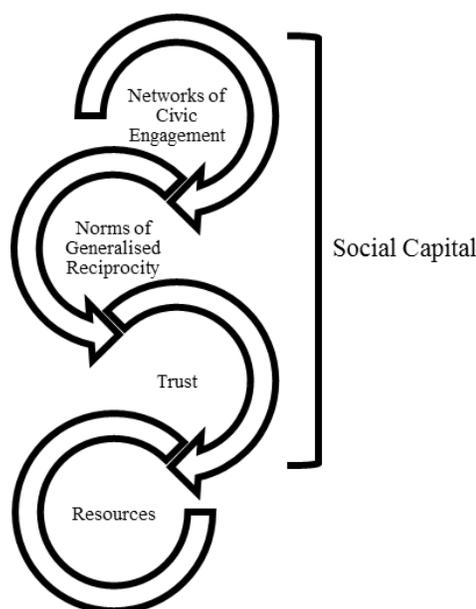
*Figure 6.* Coleman's conceptualisation of social capital as characteristics of social relationships.

Similar to Bourdieu, J. S. Coleman (1988) describes social capital as productive because it allows for the accomplishment of certain ends that otherwise would not be possible (Winter, 2000). For example, the ability to receive information through the social structure can lead to the access of resources that otherwise would not have been achievable. This productive view of social capital is a circular argument as social capital is then only identified in the instances where otherwise out of reach resources are gained (Lin, 1999). Consequently, the cause of social capital is defined by the effect of social capital. In contrast to Bourdieu, Coleman's definition of social capital heavily emphasises the importance of social interactions. Social capital is described as evident within the

relationships and interactions between individuals. In this way, social capital is the property of the group and not primarily the property of the individual as suggested by Bourdieu (1986). Furthermore, Coleman's in-depth description of the characteristics of social relationships that allow resource gain addresses the previous gap in Bourdieu's arguments. Regardless of this in-depth description, Coleman's investigation into social capital within an educational setting is incongruent with his conceptualisation of social capital. Coleman operationalised social capital within the family as the amount of time parents spent with children which was measured as the presence of parents at home (judged by whether parents worked or not and if it was a single parent home) and how many siblings were within the family (more siblings reducing amount of parental time spent with each child). Within these measurements there are many assumptions that what is being measured indicates the *quality* of relationships between children and parents. Social capital outside of the family was operationalised as the closure of parents' networks (essential for social capital to develop) measured through the amount of ties between children's parents, parents' relations with community institutions and how often the family had moved. Furthermore, distinction between the type of school (public, religious private or nonreligious private) was used to indicate social capital as it was argued that religious private schools are surrounded by a community based on a religious organisation therefore constituting greater social capital. The use of these indicators suggest that where network closure is present, so too must the forms of social capital be present. These operationalisations of social capital do not take into account the characteristics of the relationships (i.e. norms, trust, etc.) that were so heavily emphasised by (J. S. Coleman, 1988). Though conceptually sound, there is a gap between this conceptualisation of social capital and how it then might be operationalised.

**3.1.3 Robert Putnam.** Putnam (1993) defined social capital as the characteristics of social organisation that facilitate the coordination and cooperation of members for mutual benefit. Putnam described these characteristics as networks, norms, and trust (Putnam, 1993). Social capital is proposed as the characteristics of social relations through which action is facilitated and resources achieved which is congruent with the definition provided by J. S. Coleman (1988). Specifically, Putnam argues the value of social capital is the enhanced benefits of investment in other forms of capital.

Putnam (1993) argues that the norm of reciprocity is central to the facilitation of action and achieving resources. Putnam (1993) discusses the concept of reciprocity differently from J. S. Coleman (1988) who conceptualized reciprocity as credit that a person can draw on if they needed. Putnam refers to generalised reciprocity as trust. For example, “I’ll do this for you now, in the expectation that down the road you or someone else will return the favor” (Putnam, 1993, p. 3). This concept of generalised reciprocity would be more useful within a group where all members are willing to perform favours for each other rather than simply trying to fulfil obligations between individuals as suggested by Coleman. Putnam suggests that networks of civic engagement in particular are important for developing norms of generalised reciprocity. However, this proposed relationship between networks of civic engagement and norms of generalised reciprocity implies directionality as networks are proposed to foster trust. Therefore, social capital is not merely the presence of networks, norms and trust, but rather a directional relationship between civic networks and the resultant norms of generalised reciprocity and therefore trust (refer to Figure 7 below). This difference in Putnam’s definition of social capital leaves space for misunderstanding of social capital.



*Figure 7.* Putnam’s conceptualisation of social capital as a process.

Putnam (1993) further proposed that networks of civic engagement facilitate coordination, communication, and information transfer regarding individual trustworthiness. Information transfer is regarded as essential for trust. Specifically, Putnam suggests that opportunism and misconduct is reduced in dense networks where information is easily transferred as the reputation of individuals is easily established and accessed. This idea of the importance of dense networks is similar to Coleman's concept of network closure. For Putnam, the facilitation of communication and information transfer is a fundamental aspect of networks of civic engagement in establishing norms of generalised reciprocity and trust.

Further, the stocks of social capital (trust, norms and networks) are theorised to be self-reinforcing and cumulative. This notion of how social capital accumulates is similar to Bourdieu's (1986) where those with greater stocks of social capital are able to accumulate more – "them as has, gets" (Putnam, 1993, p. 4). Putnam also describes social capital as a public good as it does not decrease with use and is available for everyone to use, and is therefore not the private property of those who may benefit from it. This perception of social capital suggests that it is equally available to everyone where it is evident. Although everyone may have access to social capital, some individuals are better able to access social capital and therefore, better able to access other resources. This idea of the accumulation of social capital suggests that higher social classes are better able to obtain social capital. For example, higher social classes would be part of a self-reinforcing process where they have access to greater social capital and therefore resources and vice versa. Therefore, Putnam's suggestion for how social capital accumulates aligns with the circular arguments made within Bourdieu's work.

Putnam's focus on networks of civic engagement raises questions regarding the importance of other networks. Putnam (1993) acknowledges that the ties, norms and trust that have been established in one social setting can be transferred to others. In fact, social capital is described as the by-product of social activities. However, the continual focus on networks of civic engagement suggests that it is only these networks in which norms and trust can be established. If only civic associations are considered as social capital in the instance that they achieve desirable or pro-social outcomes, consensus needs to be gained on what constitutes such desirable outcomes and whether each civic association strives for

these outcomes (Grootaert, 1998). The problem may lie in Putnam's initial focus in researching social capital to understand what contributed to political efficiency. Specifically, Putnam's research focus was on how social capital can support democratic institutions to ultimately lead to increased economic development. Social capital, evident in norms and networks of civic engagement, were seen as a precondition for regional economic development and effective government. Therefore, the presence of social capital was investigated at a regional and national level rather than an individual or community level. This led to an incongruity between social capital's initial conceptualisation and subsequent operationalisation. Essentially, Putnam defined social capital at an individual or community level and then measured its presence as outcomes at regional or national levels. When investigating social capital at the regional or national level, the outcome measured is generally one that is mutually beneficial for all, thus ignoring the other possibly negative effects that social capital may have (Winter, 2000). For example, political corruption is suggested to indicate a lack of social capital within the region (Putnam, 1993). Conversely, corruption could also indicate the presence of social capital in terms of a group of individuals working together to secure benefits for themselves. Nevertheless, Putnam's focus on mutual benefits provided the basis for future researchers to exclude the negative effects of social capital.

**3.1.4 Comparing Bourdieu, Coleman and Putnam.** Although there are obvious differences in what is emphasised within the above conceptualisations of social capital, there are also some similarities. Bourdieu defined social capital by focusing on the resources an individual has access to through their membership within a group. Coleman defined social capital by its function rather than its outcome arguing that the characteristics of social relations are of value. Finally, Putnam defined social capital as the process through which action is facilitated and resources achieved. Therefore, as the term 'social capital' suggests, the previous conceptualisations include some social aspect such as social relationships, organisations or networks. Furthermore, all three researchers assume social capital to develop within dense ties. Consequently, these three seminal works essentially ignore the presence of social capital within loose ties. As is explored in the following section, loose and dense ties both offer valuable outcomes.

What becomes apparent after considering these three seminal works on social capital are the differences in whether relationships are valuable on their own or because of the resources to which relationships provide access. A relationship may be a valuable asset because of the resources it provides access to, whether these be physical resources or social support. In this sense, the outcomes of relationships would constitute social capital as suggested by Bourdieu (1986). Conversely, a relationship may be valuable based on its characteristics which may provide access to an outcome or resources as suggested by J. S. Coleman (1988) and Putnam (1993). According to this argument, the value of relationships is their potential to provide resources rather than the actual resources that are received through them. Therefore, the relationships themselves are valuable as they have the potential to increase resources. This view of the value of relationships is consistent with how capital was defined for this project as resources which have value in their ability to produce outcomes (Folke & Berkes, 1998 as cited in Flora, 1999). Therefore, the value is not inherent to the resources themselves but rather lies in their ability to produce outcomes. The value of social capital within this project subsequently aligns more closely with Coleman and Putnam.

### **3.2 Then what Followed - Social Capital Approaches**

As the previous section indicates, different conceptual approaches have been taken within social capital research that stem from the varied foundations of social capital research. From these foundational works, the body of social capital literature can be broadly separated into two major approaches. According to Kawachi, Subramanian, and Kim (2008), these two major approaches can be described as a *network theory approach* and a *social cohesion approach*. Consider Bourdieu's foundational work on social capital, for example. Bourdieu takes a network theory approach to social capital to the extent that social capital is defined by the resources embedded within a social network for the purpose of being accessed by and directly beneficial for the individual (Kawachi et al., 2008). Therefore, within this approach, social capital can be conceptualised and therefore measured, as an attribute of the individual as well as the social network. Within a network theory approach, social capital can be measured as the resources received (such as money or prestige) or the social networks an individual has that could provide resources (such as

political connections). On the other hand, Coleman and Putnam take more of a social cohesion approach to social capital where social capital is an attribute of the social network rather than belonging to any one individual (Kawachi et al., 2008). Within this approach, social capital is defined as the characteristics of the social networks, such as norms, with outcomes achieved for the benefit of the group. Within a social cohesion approach, social capital can be measured as the contextual characteristics of a group where indicators such as the number of community events (to indicate extent of networks or connectedness) or crime rates (theorised result of low social capital) have been used. As can be seen from these examples, the differences between these two approaches present varying ways in which social capital has been defined and therefore operationalised. This variance has resulted in different subsequent operationalisations of the concept of social capital making comparisons within the body of social capital research difficult. However, the two identified approaches can be used as a framework to categorise the literature to allow for comparisons to be made within each approach. As such, the following sections explore the current social capital literature within the frame of these two approaches.

**3.2.1 Network theory approach.** Within this approach, social capital is often defined as the resources (e.g., information, prestige) fixed within an individual's social network (Kawachi et al., 2008; Lin, 1999). Therefore, social capital can be seen as the property of both an individual and the social network itself. For example, some researchers within the network theory approach define social capital as the assets or resources available in a network (Huber, 2009), or more specifically as "resources embedded in social networks accessed and used by actors for actions" (Lin, 1999; 2002, p. 25). Therefore, the resources available within the network are used or could be potentially used by the individual. Based on this definition, social capital consists of resources and the access to and use of these resources. Lin (1999) further operationally defines social capital as an individual's investment in relationships through which they can access resources embedded in a social network that enhance returns. This definition then suggests that investment in social relationships constitutes social capital rather than the previously suggested embedded resources. This lack of clarity regarding whether social capital is represented in the resources or investment in relationships makes it difficult to identify what social capital incorporates within Lin's (1999) definition.

Lin (1999) explains that the embedded resources within a network enhance outcomes from actions by facilitating the flow of information, exerting influence, providing social credentials and reinforcing the identity and recognition of the individual. However, this explanation of the processes embedded resources can facilitate does not address the nature of the embedded resources. As seen in Figure 8 below, Lin (1999) attempts to provide clarity on this issue by describing social capital as two elements; access to and use of social capital. Social capital is then defined as embedded resources and proposed to be measured by the access and use of resources. Therefore, the outcome of social capital (use of resources) is used to indicate social capital. This description and definition of the proposed social capital elements still does not provide an explanation of what exactly constitutes social capital. Adding to this lack of clarity, embedded resources that may be important to an individual are claimed to be dependent on the outcome the individual wishes to obtain from that resource (Lin, 1999). Therefore, the resources to be measured are proposed to change depending on how the outcome is defined. As seen in Figure 8 below, Lin (1999) proposes two types of social capital returns (resources); instrumental (wealth, power and reputation) expressive (health and satisfaction). Conflictingly, only measures of wealth, status and power are suggested to indicate embedded resources. Therefore, if wealth, status and power are used as indicators of resources, and are also the desired outcomes of these resources, then social capital will always be indicated by these factors. However, if the outcome an individual wants to gain was emotional support through the social network, then wealth, status and power would not be useful indicators. These issues identified within Lin's (1999) arguments highlight the issues with defining and measuring social capital by its outcomes.

Taking into account the identified gaps in Lin's (1999) arguments, there are also some strengths within this approach. Lin (1999) addresses the precursors to social capital, which are the characteristics of social networks that allow for the access and use of embedded resources (as seen in Figure 8 above). Structural and positional variations refer to contextual differences of structures (e.g. cultural diversity, education, physical and natural resources, etc.) and individual positions (e.g. cultural, political and economic strata). Collective assets, identified as trust and norms, are also identified as precursors for social capital and not social capital itself (Huber, 2009; Lin, 1999). Therefore, trust and

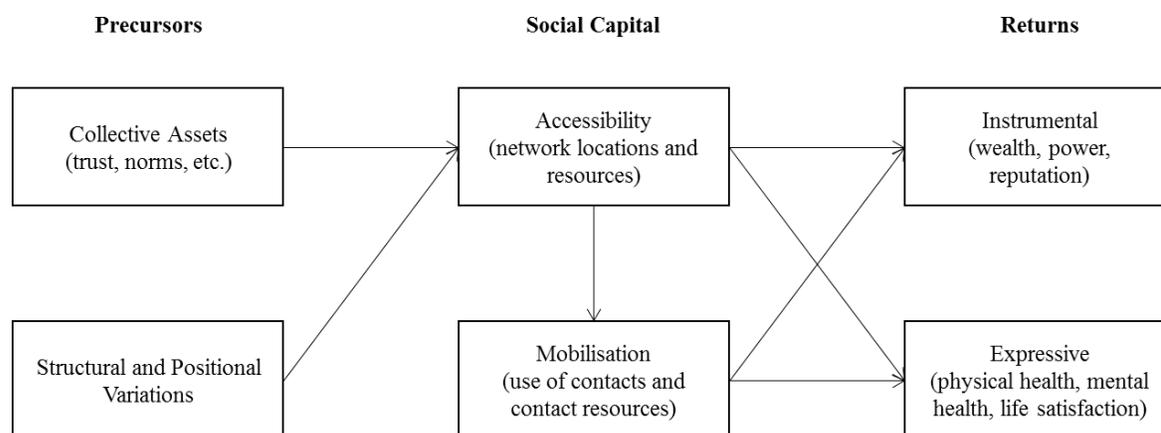


Figure 8. Lin's (1999, p. 41) model for a theory of social capital.

norms are suggested to assist in gaining social capital. Based on Lin's work, Huber (2009) further argues that networks in and of themselves do not constitute social capital as it is the resources within the networks that are of importance. One of the strengths then of this approach is that social capital is not dependent on dense or close ties as indicated, for example, by J. S. Coleman (1988). Therefore, this approach accounts for the benefits achieved through loose ties between groups. Regardless of these benefits, which resources constitute social capital is still unclear making it difficult to explore the effects of social capital.

Woodhouse (2006) expands on the previous definitions by defining social capital as the stock of resources an individual can access through relationships that accomplish an end or further a pursuit. This definition posits social capital as the resources that can be gained from social relationships, closely aligning with Bourdieu (1986). Woodhouse (2006) describes social capital as being intangible. Conversely, Bourdieu conceptualised social capital as tangible by operationalising social capital as access to economic capital (money). Due to the suggested intangible nature of social capital by Woodhouse (2006), social capital was measured through the characteristics of society in which it is developed. Even though Woodhouse (2006) conceptualised social capital as a resource, it was then measured and assessed as a process. The proposed characteristics of society through which social capital is developed include; association (formal [group membership] and informal [friends and family] networks); thick and thin trust; tolerance; civic-mindedness, generalised reciprocity,

social sanctions and community cohesiveness. Therefore, according to Woodhouse (2006), social capital is the resources gained through the above characteristics. However, Woodhouse (2006) fails to clarify which “intangible resources” are gained through these characteristics. As a result, social capital’s productive value is hard to distinguish based on this definition and suggested measurement.

As it is the resources of social relationships that are measured within the network theory approach, often only positive resources are considered. For example, only the wealth or the position of actors within the social relationships are considered. If social capital’s definition is limited to factors that increase wealth and is assessed by the presence of wealth, then by its circular conceptualisation, research will find that social capital leads to increased wealth. A major limitation within the network theory approach is that the resources embedded within social relationships may not always lead to these positive outcomes. For example, an individual could use their social relationships to access contraband, however this indicator is rarely, if ever, used to indicate the presence of social capital. By measuring social capital through the resources one has access to, which is indicated by the generally positive outcomes of using these resources, other outcomes of social capital are ignored. Therefore, as opposed to the network theory approach where outcomes are used to indicate resources, the characteristics of the relationships should be measured as social capital rather than the outcomes of these relationships. In doing so, the problems associated with only measuring the positive outcomes of social capital are avoided. Additionally, if the resource being measured has to change depending on the outcome, as dictated by network theory approach, a more useful definition of social capital may be the characteristics of social relationships that allow access to resources. In doing so, the problems associated with the circular nature of social capital within the network theory approach and the difficulties in the comparison between different research is avoided. Therefore, the relationship itself acts as the capital for without it access to resources would not have been achievable.

**3.2.2 Social cohesion approach.** Within this approach, social capital is often defined in terms of the resources (e.g., values and norms) characteristic of a social group (Kawachi et al., 2008). Therefore, social capital is the property of the group and not the property of a given member. Within the social cohesion approach, social capital can be

defined as encompassing the networks, trust and norms of a social organisation that can increase the group's efficiency through facilitating cohesion (Onyx & Bullen, 2000; Woolcock & Narayan, 2000). This definition considers social capital at a group or community level rather than at an individual level thus closely aligning Putnam (1993).

Definitions from other researchers are more specific about the relationships between networks, trust and norms to indicate social capital. For example, social capital has been defined as the social relationships or networks that have developed through shared values, norms and trust that allow individuals to act collectively (Callaghan & Colton, 2008). Collective action allows the group to access resources or support as well as to problem solve. This definition indicates the direction in which the social capital factors are related to each other rather than just stating them as separate elements. Additionally, social capital is defined at a group level identifying the benefits achieved by the group through collective action, or social cohesion. Therefore, through the collective action achieved by the group, the individual can benefit.

Social capital has also been argued to be indicated by networks of social relations characterised by shared norms of reciprocity and trust which can sustain society and enable individuals to act for mutual benefit (Stone, 2001). This definition specifies that it is not any social norm or value within a community that is important to social capital, but rather that it is specifically the norms of reciprocity and trust. This particular distinction in social norms is logical as most social capital definitions agree that social capital consists of social relationships that allow collective action (Callaghan & Colton, 2008; Onyx & Bullen, 2000; Putnam, 1993; Woolcock & Narayan, 2000). The specific norms of reciprocity and trust would facilitate the ability of individuals to work together efficiently. That is, individuals will be more willing to perform favours for others in a group where they trust that their favour will be repaid, whether it is by that individual or someone else.

Other research has not explicitly referred to reciprocity in allowing collective action to occur. For example, Ostrom and Ahn (2003) defined social capital as a characteristic of an individual as well as their relationships that facilitate collective action to solve problems. In this case, three forms of social capital were proposed: trustworthiness, networks, and formal and informal rules. The trustworthiness of an individual and the rules within networks allow collective action to occur. While trustworthiness is a characteristic of an

individual, it is the group's perception of trustworthiness that influences collective action. That is, whether others perceive an individual as trustworthy or not influences their willingness to work with that individual. In this way, trustworthiness and the rules within networks that allow collective action to occur can be considered reciprocity. Reciprocity would occur when the members of a group are perceived as trustworthy and the rules within the group allow collective action. Therefore, reciprocity still plays a key role in social capital research even where it may not be explicitly included.

As the social cohesion approach conceptualises social capital as a group asset, the factors used to indicate its presence are typically at a group level. Therefore, as noted above, these measurements often only reflect pro-social group outcomes, such as low levels of crime. Some researchers have even argued that only pro-social outcomes should be measured (E. Cox & Caldwell, 2000). These researchers argue that transferrable and generalised trust lead to pro-social outcomes and therefore social capital, whereas localised and internal trust within a group do not. This distinction between what is and is not social capital is theoretically unsound as a group that has localised and internal trust could still achieve pro-social outcomes (the following section further explores the benefits of social capital within and between groups). Furthermore, many criticise considering only pro-social outcomes as a tautology within social capital research (Fine, 2001; Portes, 2000; Stone, 2001; Winter, 2000). For example, if social capital is defined as everything that increases cooperation and efficiency, then research will find that social capital causes cooperation and efficiency within networks. Yet, as the theoretical basis of the social cohesion approach suggests, high social capital could also result in anti-social behaviour (Portes, 1998). For example, high social capital could exist within criminal gangs (close ties within group) which allows collective action and further access to resources, even though their behaviour may be perceived as anti-social. This could be due to a lack of networks between the gang and other groups and members within society, thus the social norms are different between the gang and others within society. Therefore, research that uses crime rates as a proxy measurement of low social capital, discounts the social capital that could be evident within groups. The use of proposed outcomes of social capital as indicators of social capital, such as reduced crime, results in social capital being present everywhere the outcome is observed (Nardone, Sisto, & Lopolito, 2010; Portes, 2000).

Therefore, similar to the shortcomings of the network theory approach, social capital is always found to have positive outcomes. Social capital may not be the answer to reducing crime rates for example, as crime may be the culmination of social capital. Therefore, the aspects of social capital that are under investigation need to be clearly identified because social capital, as an umbrella term, masks the underlying components and characteristics of relationships. As noted previously, the characteristics of the relationships, such as trust, should be measured as social capital rather than the outcomes of these relationships. In doing so, the problems associated with only measuring the positive outcomes of social capital are avoided.

The previous examples of definitions within the social cohesion approach define social capital as a characteristic of groups. Therefore, to understand the social cohesion approach and the strengths and weaknesses of this approach, the different components of groups need to be considered. The following sections explore the different types of connections between individuals and groups, and the underlying mechanisms behind these connections.

**3.2.2.1 Bonding and bridging social capital.** Social capital researchers make distinctions based on the nature of social relationships. A distinction is made between strong social ties (bonding social capital) and weak social ties (bridging social capital). Bonding social capital is the social capital found within social groups such as family or volunteer groups which provide a social network where the members have a common purpose (Pretty, Chipuer, & Bramston, 2003; Woodhouse, 2006; Woolcock & Narayan, 2000). Bridging social capital consists of the social networks between social groups such as partnerships between different volunteer groups (Pretty et al., 2003; Woodhouse, 2006; Woolcock & Narayan, 2000). Bridging social capital can be broken down further to horizontal, and vertical or linking relationships (Ahuja, 2000). Horizontal bridging relationships are the social networks formed between groups of similar power or status (Pretty et al., 2003). Horizontal bridging relationships are suggested to allow groups access to a greater amount of resources similar to what the group may already possess. Vertical bridging relationships are the social networks between groups at different levels of power or status (Pretty et al., 2003). These links to external sources of power, often referred to as linking social capital, allow for the relationships between society and government to be

included in social capital research (Harpham, 2008). The concept of vertical bridging relationships aligns with the discussions presented in J. S. Coleman (1988) where hierarchical relationships were discussed in terms of both bonding and bridging social capital. Possessing vertical relationships whether it is within or between groups, benefits the individual or group as they have access to a wider variety of resources to draw upon if needed. Given these arguments, the nature of social relationships influence the amount and type of resources an individual or group can access.

The need for the distinction between bonding and bridging social capital has been identified within previous research due to the varying effects each may have (Putnam, 1995). Bonding social capital can be useful for the individual in terms of receiving support from others and maintaining group resources. Bonding social capital allows members of a group to 'get by' in life (Narayan, 2002; Stone, 2001). In this case, one group may benefit while another group is harmed as strong bonds within groups can lead to the rejection and discrimination of those from other groups (Ostrom, 1997 as cited by Putzel, 1997). For example, strong bonds within police services could result in collusion to not report the use of excessive force (Langbein & Jorstad, 2004). Therefore, bonding social capital can have positive and negative effects. Bridging social capital can be useful for groups in terms of providing groups with extra resources (Ahuja, 2000; Pretty et al., 2003). As noted previously, both horizontal and vertical bridging can allow access to different types of resources from other networks that can further aid in goal achievement. As a result, bridging social capital is proposed to allow members of a group to 'get ahead' (Narayan, 2002; Stone, 2001). This distinction between bonding and bridging social capital highlights the differences in outcomes that can be achieved based on the nature characteristics of social relationships.

Different levels of bonding and bridging social capital can result in either positive or negative outcomes for the community (Putnam, 1995; Putzel, 1997). Strong bonding social capital within a community may facilitate the community's ability to cope with adversities that the group may encounter. However, without strong bridging capital, the community may not be able to improve their situation. The inverse scenario (low bonding, high bridging) could ultimately lead to an individual leaving one community for another. This is due to the individual having no strong ties with others within the community but

strong ties or weak ties and opportunities outside of the community. Therefore, both bonding and bridging social capital is needed for a social group to cope with and adapt to adversities that they encounter.

Research conducted by Onyx and Bullen (2000) in Australia suggested that social capital was higher within rural areas than urban areas. More specifically, rural areas tended to score higher on factors such as strong social bonds at the local level and high levels of community participation (bonding social capital). Comparatively, urban areas tended to score higher on factors such as tolerance and individual initiative (bridging social capital). This highlights the distinction between bonding and bridging social capital evident within different communities and that bonding and bridging social capital can have differential benefits. These findings also draw attention to flaws in measuring a general social capital factor as the factors of social capital present differently within different communities. Even though communities scored differently on bonding and bridging social capital, Onyx and Bullen (2000) included a general scale of social capital which combined the two components. While a community may have more bonding or bridging social capital in comparison to another community, this does not necessarily equate to 'better' social capital in general but rather different forms of social capital. As noted previously, different levels of bonding and bridging social capital can result in differential benefits. Another limitation of Onyx and Bullen's (2000) operationalisation of social capital was the use of social capital outcomes, such as feelings of safety, as indicators of social capital's presence. The use of social capital outcomes as indicators of social capital has been identified as a flaw in the design of research of both the network theory and social cohesion approaches (Grootaert, 1998; Nardone et al., 2010; Portes, 2000). Therefore, researchers need to consolidate the definitions of social capital to establish a coherent theory of social capital.

**3.2.2.2 Structural, cognitive and relational components.** Some researchers distinguish between three components of social capital – structural, cognitive and relational. The structural dimensions of social capital encompass the links, networks and interactions existing within a social structure (Harpham, 2008). In other words, structural social capital is the objective relationships between individuals or groups. Social networks can be both formal, as seen in formal membership of groups or organisations (e.g., sports, religion and hobbies), and informal (e.g., family, friends and neighbours) (Callaghan &

Colton, 2008; Harpham, 2008; Stone, 2001; Woodhouse, 2006). Formal and informal social relationships influence an individual's ability to overcome problems that they share with others (Stone, 2001). For example, there may be a particular concern within the community that many members feel strongly about which can lead to a solution led by the community. Structural social capital can therefore influence an individual's ability to achieve an outcome.

Shared values and norms, such as reciprocity, are considered the cognitive elements of social capital (Harpham, 2008; Tsai & Ghoshal, 1998). The shared values and norms within a social system facilitate understanding of collective goals between members and behavioural sanctions by which members abide (Tsai & Ghoshal, 1998). Shared goals and common values within a social system can facilitate individual or group actions that benefit the wider social system. For example, norms of reciprocity mean that an individual will give to the community expecting personal benefit from the community's gain (Flora, Flora & Wade, 1996 as cited in Flora, 1999; Putnam, 1993). However, as noted by J. S. Coleman (1988), norms may also constrain behaviour that does not fit with these norms. Therefore, cognitive social capital may facilitate coordination within a group as long as all the members adhere to the group's norms.

Relational dimensions of social capital describe the nature of the relationships between individuals, such as trust and trustworthiness (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). The nature of relationships held between individuals will influence how they behave with each other. For example, high levels of trust are argued to decrease the opportunism within transactions thus reducing the need for external or authoritative monitoring (e.g. laws) and costs of transactions (Putnam, 1993). Distinguishing the relationship between trust and reciprocity, as done with the distinction between cognitive and relational social capital components, can be problematic. Individuals are more willing to perform favours for others where they trust that their favour will be repaid (Putnam, 1993). However, the norm of trust could be present because of the norm of reciprocity or the norm of reciprocity could be present because of the norm of trust. Regardless of the direction in which the relationship may occur, both are important for the occurrence and maintenance of the other.

These sections highlight that both bonding and bridging social capital is needed for a social group to cope with and adapt to adversities that they encounter. Bonding and bridging capital is characterised by structural, cognitive and relational components of social capital. Investigating social capital by these characteristics rather than its outcomes will assist in establishing a coherent theory of social capital.

### **3.3 Where to Now? – A Conceptualisation of Social Capital**

The above exploration of social capital identified different foundations and therefore different approaches to researching social capital. As a result, research has used many different indicators of social capital. Grootaert (1998, p. 15) summarises some examples of social capital indicators that have been used in cross-country research, which can be found in Table 1 below. Part of the lack of clarity surrounding social capital indicators has been due to the level of application used (individual vs community level) (Portes, 2000). The unclear separation between what constitutes social capital and the outcomes of social capital at a community level means varying indicators can and are used. However, it can be argued that consideration of social capital at both the individual and community level should not occur separately. That is, social capital can be beneficial for the individual (e.g. by providing access to support or resources through networks) but it can also be concurrently beneficial for the community (e.g., an individual's contribution to social capital through their networks is beneficial for the community as it increases community cohesion and efficiency) (Putnam, 2000). Thus by increasing an individual's networks that share norms of trust and reciprocity, the overall functioning of the community should be enhanced.

The other major issue identified in the review of previous social capital research is that social capital is often referred to as a singular phenomenon when researchers actually apply many different meanings to the term, which are not explicitly acknowledged within their research (Huber, 2009). Researchers can then choose or create a definition that aims to achieve their own purpose under the guise of social capital. Fine (2001) notes that "social capital thereby becomes a sack of analytical potatoes" (p. 742). However, perhaps a universal meaning is not required. Rather, what may be of more importance is an understanding and acknowledgement of the different foundations and approaches of social

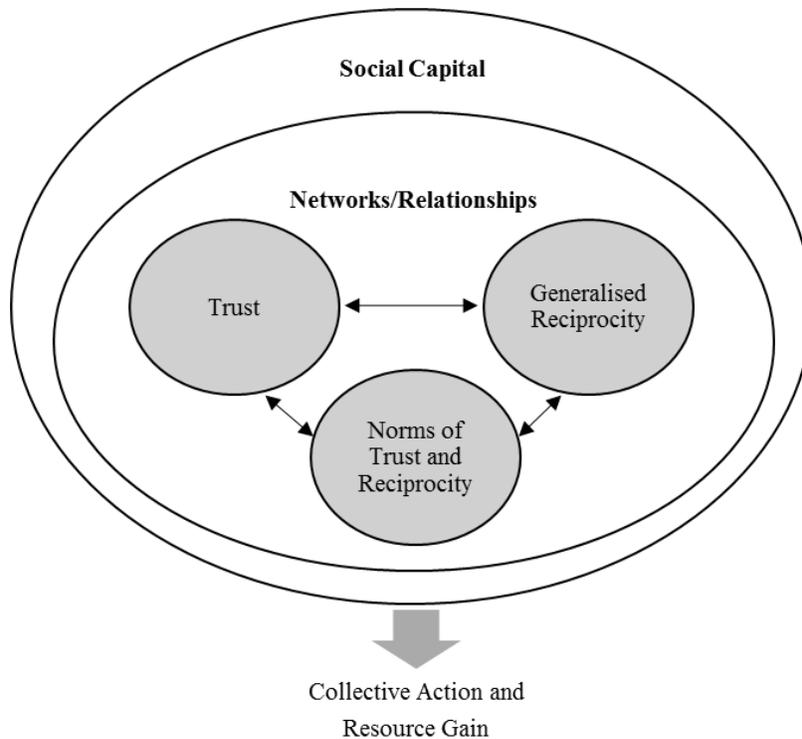
Table 1

*Indicators of Social Capital*

		Indicators
Horizontal associations	Number and type of associations or local institutions Membership of organisations Participatory decision making Trust in community members and households Income and occupation homogeneity within group Kin homogeneity within group Trust in government	Perception of extent of community organisations Trust in trade unions Reliance on networks of support Percentage of household income from remittances Percentage of household expenditure for gifts and transfers Old-age dependency ratio
Civil and political society	Index of civil liberties Percentage of population facing political discrimination Index of intensity of political discrimination Percentage of population facing economic discrimination Index of intensity of economic discrimination Percentage of population involved in separatist movements Freedom House index of political freedoms	Index of democracy Index of corruption Index of government inefficiency Strength of democratic institutions Measure of 'human liberty' Measure of political stability Degree of decentralisation of government Voter turnout Political assassinations Constitutional government changes Coups Gastil's index of political rights
Social integration	Indicator of social mobility Measure of strength of 'social tensions' Ethnolinguistic fragmentation Riots and protest demonstrations Strikes Homicide rates	Other crime rates Prisoners per 100,000 people Illegitimacy rates Percentage of single-parent homes Divorce rate Youth unemployment rate Suicide rates
Legal and governance aspects	Quality of bureaucracy Independence of court system Expropriation and nationalisation risk	Contract enforceability Contract-intensive money Repudiation of contracts by government

capital. The underlying components and characteristics of relationships are then masked by the use of the term social capital. Social capital researchers have a responsibility to be precise in their discussions regarding social capital. The aspects of social capital that are under investigation need to be explicitly stated and defined to allow for a more congruent exploration of social capital. In doing so, the disparity in the conceptualisations and operationalisations within social capital research can be met with less contradiction allowing further understanding of competing knowledge and discourses.

As noted throughout this chapter, defining and measuring social capital as the characteristics of relationships avoids creating circular arguments resulting from measuring social capital by its outcomes. For this project, social capital was conceptualised as networks/relationships characterised by trust and generalised reciprocity, and therefore the norms of trust and reciprocity that govern this, that allow for collective action and resource gain (Winter, 2000, see Figure 9). A network's perceived norms of trust and reciprocity are considered social capital and not the outcome of these things (collective action and resource gain). Individuals and groups can cohesively interact with each other and access resources through relationships characterised by trust and reciprocity. That is not to say that social capital is the property of an individual but rather that they can benefit from trusting and reciprocal relationships. Therefore, for a community, social capital would entail the residents' perceptions of their networks characterised by trust and generalised reciprocity.



*Figure 9.* Conceptualisation of social capital for this project.

### **3.4 Conclusion**

The cooperative effects of social capital are argued to increase the productivity of investment in other forms of capital. Social capital facilitates coordination and cooperation for the mutual benefit of those involved thus allowing other forms of capital to be more efficient (Putnam, 1993, 2000). A community as a whole would need to experience the beneficial components of social capital for the community to function cohesively and to promote community sustainability. However, as different groups within a community can experience varying components of social capital, it is important to link or bridge these groups so that they operate as a cohesive unit. One such community where distinct groups are present within the community, and as such require efforts to bridge these groups, are mining communities.

## Chapter 4: Mining Activity Impacts on Community

The sustainability of mining communities is subject to many factors such as economic market trends and the longevity of the resource being mined (Black, 2005). For the purposes of the current project a mining community was defined as a community with mining operations nearby. The following sections provide an overview of the currently understood mining activity impacts on community and the Australian mining industry context at the time this project was conducted.

### 4.1 Mining Activity Impacts on Community

The following sections explore mining activity's impact on communities' environment and health; education, economy and social cohesion; and housing and services.

**4.1.1 Environment and health impacts.** The most straightforward impact that mining activity can have on a community's environment and residents' health is via environmental pollution due to mining activity. Research has identified high levels of toxic elements in the soil and water of mining communities, likely the result of mining activity (Gamino-Gutierrez, Gonzalez-Perez, Gonsebatt, & Monroy-Fernandez, 2013; Munoz, Fuz, Acosta, Martinez-Martinez, & Arocena, 2013; von Braun et al., 2002). High concentrations of heavy metals have also been identified within an Australian mining community's water systems (Taylor & Hudson-Edwards, 2008). These results suggest that some mining practices have potentially caused environmental pollution, which could pose a health risk to mining community residents.

Environmental harms, both real and perceived, resulting from mining activity can cause an array of concerns for the residents living within mining communities. In addition to actual environmental pollution that mining activity may create, residents' perceptions of environmental pollution are also important to consider. Residents' perceptions are important to consider as their perceptions can influence their acceptance of mining activity (explored further within this chapter). Perceived degradation or loss of sustainable water supply has been indicated as a major concern for mining community residents (Schueler, Kuemmerle, & Schroder, 2011; Wasylcyia-Leis, Fitzpatrick, & Fonseca, 2014; Zakrison et

al., 2015). Additionally, in Brazil, Wasylycia-Leis et al. (2014) highlighted residents' concerns regarding access to clean air, biodiversity, agricultural continuation and mining activity's impact on the community's aesthetics. This research highlights that higher perceived or actual environmental harms cause concern for residents, which may ultimately influence their acceptance of mining activity.

Other research has investigated the incidence of health conditions resulting from environmental harms within mining communities. One such study identified a higher mortality risk from a variety of cancers among men living near underground mines and both women and men who lived near open cut mines in Spain (Fernandez-Navarro, Garcia-Perez, Ramis, Boldo, & Lopez-Abente, 2012). The authors associated this increased risk of mortality with occupational and environmental exposure to carcinogenic pollutants from mining activity. Munoz et al. (2013) identified a health risk to the residents of a mining community in Bolivia due to high levels of toxic elements. Gamino-Gutierrez et al. (2013) and von Braun et al. (2002) also found increased blood lead levels or a significant risk of lead poisoning as a result of mining activity in Mexico and Russia respectively. Furthermore, Hendryx, Wolfe, Luo, and Webb (2012) identified a higher rate of self-reported diagnoses of cancer within a mining community when compared to a control community in USA. Additionally, Hajkowicz, Heyenga, and Moffat (2011) also found that mining activity in Australia was negatively associated with life expectancy. However, in this case, as the authors noted, this association could reflect the lower life expectancies of people who live in remote Indigenous Australian communities, typically where mining activity occurs, and not the result of mining activity (Hajkowicz et al., 2011). In conjunction with these identified health risks, Zakrison et al. (2015) also noted that participants from communities in El Salvador expressed concern over the perceived health effects of mining activity such as dermatological and neurological conditions, and hematologic cancers. Therefore, increased health risks, both perceived and actual, have been associated with mining activity for both mining industry employees and mining community residents, particularly near open cut mines.

However, some research has also indicated that health differences are minimal between mining and non-mining communities. For example, though Bortey-Sam et al. (2015) in Ghana found concentrations of metals within meat, the authors established that

the levels were unlikely to cause adverse effects. Ruiz-Castell et al. (2012) also identified that the mean metal concentrations in the blood of pregnant women living in a mining community in Bolivia were much lower than the intervention threshold (10 micrograms per decilitre). Additionally, exposure to metals was found to have no effect on the children's neurological development at 10 and 12 months of age. Furthermore, in Australia, Lockie (2011) found no differences in women's reported physical and mental functioning and well-being based on place of residency or their partner's involvement in mining, shift work and/or long distance commuting. Together, these results indicate that mining activity may not always result in worse health compared to other communities or populations. The discrepancy of health impacts in the literature demonstrates that different mines can have different effects on the community. From comparing this literature, such differences may come down to differences in mines or mining companies' application of effective environmental policies to protect the community from health risks.

**4.1.2 Education, economy and social cohesion impacts.** Mining activity can also affect a community's education levels. Research has identified a positive correlation between education levels and mining activity in Australia (Hajkowicz et al., 2011; Kotey & Rolfe, 2014). However, other research conducted in Jordan has indicated that as mining value per capita increases, human development indicators (e.g.; life expectancy, education and income per capita) and literacy rates decrease (Al Rawashdeh et al., 2016). These results indicate that legislative differences between countries may result in mining activity affecting education differently.

In addition to the relationship between mining activity and education, changes in employment and economy have also been associated with mining activity. Some research has found mining activity to be positively associated with improved income and employment (Hajkowicz et al., 2011). Kotey and Rolfe (2014) also identified that statistical local areas (SLAs) in Australia where mining was the major industry had more equitable income distributions, larger workforces, lower unemployment, and higher personal, household and family incomes than 'non-mining' SLAs. The authors suggest that these findings indicate a vibrant economy within mining SLAs but that they may also indicate a dependence on the mining industry with limited economic diversification. Limited economic diversity increases the vulnerability of these communities exposed to the effects

of the volatile energy and minerals markets. Further support for Kotey and Rolfe's (2014) finding is demonstrated by those of Wasylcia-Leis et al. (2014) who reported that mining activity in Brazil resulted in economic dependence on the mining industry and a lack of diversification within the economy. Schueler et al. (2011) also found that surface mining resulted in the substantial loss of farmland, reducing the economic diversity of a community in Ghana. Similarly, Australian research identified participants' concerns regarding decreased food security resulting from mining activity occurring on or near agricultural land (Everingham et al., 2013). Therefore, regional level indicators, particularly regarding employment and income, may mask underlying vulnerabilities within the community.

Other research found that higher levels of resource dependence were associated with lower unemployment rates, percentages of low-income households, and levels of welfare expenditure per capita in Australia (Tonts, Plummer, & Lawrie, 2012). Additionally, multi-company communities were found to have lower unemployment rates and welfare expenditure per capita compared with single company communities. However, communities that relied on more than one commodity performed worse on unemployment rates and welfare expenditure. Therefore, the nature of the resources being mined seems to be more important than the diversity of the resources being mined. For example, a community could mine different resources, however if the resources all have volatile markets then residents are at no greater advantage than if one resource was mined. Consequently, the resource being mined can have implications for employment opportunities and income within the community.

Changes in employment availability within mining communities have been associated with negative social impacts. For example, population loss of low-income families within an Australian community due to the introduction of mining activity was reported to disrupt social networks (Everingham, Devenin, & Collins, 2015). Similarly, job loss and the resultant population loss within a mining community in USA was suggested to have disrupted social networks resulting in lower reported trust and fewer social networks than a non-mining community (Bell, 2009). Additionally, there was conflict within the mining community due to the opening of a mine by a company whose employees were not members of a union. As the mining community was situated in a heavily unionised region,

the authors suggested that the introduction of this new company caused a breakdown in the community's trust, shared norms and reciprocity. Other research has also found increased conflict (Schueler et al., 2011), tension (Everingham et al., 2015) and decreased community cohesion (Zakrison et al., 2015) due to the introduction of mining activity. Additionally, the primary reason that people generally move to mining communities is financially driven and often viewed as a temporary move to save money (Sharma & Rees, 2007). The sense of belonging and connectedness to community is resultantly lowered within the community. Indeed, Everingham et al. (2015) identified that the introduction of mining activity in a previously agricultural region disrupted the community's sense of place and identity. Therefore, the introduction of or change to mining activity can result in the disruption of social networks and identity within the community.

In addition to the previous economic and social impacts, other research has found that as mining value per capita increases, unemployment rates tended to increase and the percentage of people living below the poverty line increased in Jordan (Al Rawashdeh, Campbell, & Titi, 2016). Mining activity has also been associated with reduced job security, limited employment opportunities outside of the mining industry (Wasylycia-Leis et al., 2014) and decreased employment opportunities for women (Shandro, Veiga, Shoveller, Scolbe, & Koehoom, 2011). Furthermore, research has identified concerns in mining community residents regarding non-resident workers being chosen for employment instead of residents (Carrington & Pereira, 2011; Zakrison et al., 2015). Additionally, Zakrison et al. (2015) found mining community residents to be sceptical of the promised economic growth associated with mining activity due to the perceived cost of the environmental clean-up, negating the community's received economic gain. However, some participants acknowledged the contributions that mining activities made to the local economy through the generation of opportunities for wealth for communities and regions. Therefore, mining community residents seem to hold both negative and positive perceptions of mining activity's impact on their community's economy. These results indicate that even though mining can generate employment opportunities and improved income, mining community residents perceive that these employment opportunities are available for a limited number of residents.

**4.1.2.1 Economic cycles.** In conjunction with the previous characteristics associated with mining activity, the mining industry's economic cycles also have consequences for mining communities. Shandro et al. (2011) interviewed health and social service providers in a Canadian mining community who reported violence against women as a concern during both economic boom and bust periods. The participants identified that bust periods were particularly stressful for the community. This increased stress was due to financial hardships, the process of moving to a different community for new employment, and uncertainty about the future. Adding to this, counselling was available while the mine was in operation, however, due to the decline of population once the mine was closed, counselling and other health services were removed (Shandro et al., 2011). The participants identified that the closure of a mine coincided with higher reports of alcohol abuse, stress, anxiety and depression. However, it should be noted that family stress, violence towards women and addiction issues were noted for both boom and bust periods (Shandro et al., 2011). Al Rawashdeh et al. (2016) also identified that as the mining value per capita increases, indicative of a boom period, infant mortality rate increases in Jordan. These results indicate that there are differences in the health concerns of mining community residents dependent on the economic state of the mining industry.

Although mental health issues have been identified in both boom and bust periods, the same is not true for periods of stability. Results from longitudinal research completed in communities that have experienced boom periods, suggest that the poor well-being associated with rapid growth is reduced or entirely disappears once the boom period stabilises (M. D. Smith, Krannich, & Hunter, 2001). The rapid growth of a community is suggested to result in the residents feeling less connected with the community due to the increase of new residents. As the boom period stabilises, the average length of residency increases thus perhaps re-establishing a greater sense of connectedness to the community (M. D. Smith et al., 2001). This suggests that not all stages of mining activity are associated with negative impacts on the community. Boom and bust periods may be associated with poor outcomes but stable periods may be associated with outcomes that are more positive.

**4.1.2.2 Workforce practices.** The workforces used by mining companies can also affect a community's economy and social cohesion. A commute work system employs individuals who do not live within the community in which they work, including those who

fly-in/fly-out and drive-in/drive-out (Australian Bureau of Statistics, 2013b). Commute workforces are often segregated from the community as they may live in separate mining camps and work 12 hour rotating rosters (Hossain et al., 2013; Petkova, Lockie, Rolfe, & Ivanova, 2009). Commute employee time off is generally spent outside of the mining community and their families spend no time within the mining community (Petkova et al., 2009). These characteristics of the mining industry result in commute workforce employees having less time and accessibility to participate and contribute to the community in which they work (Carrington & Pereira, 2011). This decreased participation and contribution often results in the non-resident workforce not participating within the community leading to an 'us' verse 'them' mentality between residents and non-residents (Hossain et al., 2013) which can lead to disunity within the community. Indeed, residents of mining communities have been identified to perceive commute workforce practices as inhibiting the integration of temporary residents into the community (Haslam McKenzie, 2010; Storey, 2001). Given the discussions on social capital in the previous chapter, it can be seen that this division within the community can inhibit the sustainability of a community due to a lack of collective action.

Further evidence also supports the negative social effects the mining industry workforce practices can have on the community. Petkova et al. (2009) identified non-mining residents of mining communities held negative attitudes towards the shift work mining companies use. Shift work practices were seen to be associated with criminal and antisocial behaviour, substance abuse, family hardships, increased motor vehicle accidents, a decline in community organisations, and a lack of community integration (Petkova et al., 2009). The increased presence of non-resident mining workforces has also been associated with perceived poorer community safety, and increased crime and justice issues (Carrington & Pereira, 2011). However, Lockie (2011) identified no differences in the prevalence and incidence of intimate partner abuse between mining communities and the national level. These findings indicate that the perception of violence may increase within mining communities even though the reported levels of violence may not. Therefore, the workforces that the mining industry use has far reaching consequences within the actual and perceived social dynamic of the community.

The use of a commute work system can also lead to the influx of money going back into the home communities of the workers (Storey, 2001). As a result, the economic stimulus from mining activity more often flows out to source communities rather than staying in the community. Additionally, the mining camps adjacent to the mining community are generally self-sufficient, sourcing many of their goods and services from urban centres and not the community within which the camps are situated (Hossain et al., 2013). Communities as a result miss the economic benefits provided by mining as well as the opportunity to diversify their economy. The use of commute work systems places less importance on maintaining the sustainability of mining communities to supply the goods and services for the mine.

Research also identified mining community residents' concern regarding decreased economic stimulation for local businesses due to non-resident workers being housed in temporary accommodation and spending their wages in their home community (Carrington & Pereira, 2011). Reportedly due to this perceived decreased economic stimulus, participants perceived a lack of meaningful attachment to the community, and reduced community support from mining companies and the commute workforces (Carrington & Pereira, 2011). As a result, mining community residents' acceptance of new mining projects changed depending on the level of non-resident workforce the project proposed to employ (Carrington & Pereira, 2011). When the mining project intended to use mostly residential employees, support appeared greater than when the mining project intended to use mostly non-resident workforces. These results indicate that the nature of the workforce employed by the mining industry impacts differently on the perceived connectedness between residents within the community.

One of the arguments for the use of commute workforces is that less strain is placed on housing availability within mining communities however, opposing evidence has been found. Research has indicated that mining community residents perceive that the use of commute workforces leads to decreased housing availability and affordability (Carrington & Pereira, 2011; Hossain et al., 2013; Petkova et al., 2009). Mining community residents perceive decreased housing affordability to result in financial strain for low income earners and one income families, difficulty in attracting and retaining employees in non-mining businesses, and a high population turnover (Petkova et al., 2009). These findings indicate

that commute workforces actually exacerbate residents' perceptions of decreased housing availability and affordability rather than reduce the strain placed on the community.

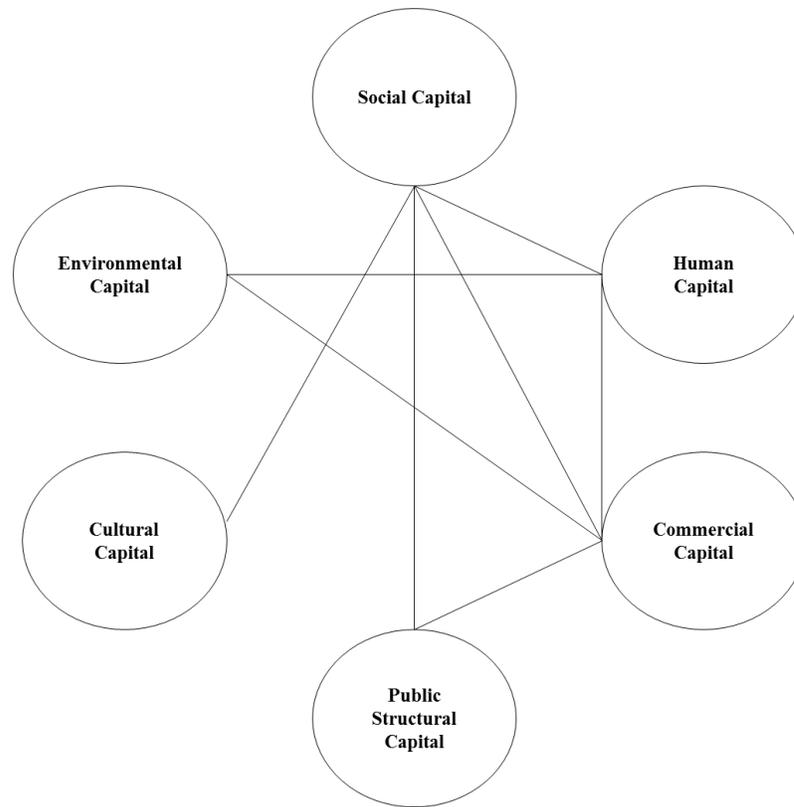
**4.1.3 Housing and services impacts.** As noted above, mining activity has been identified to have negative and positive effects on housing affordability. Hossain et al. (2013) and Everingham et al. (2015) noted that residents were concerned regarding the higher cost of living and housing prices perceived to be associated with mining activity. Additionally, some mining communities have reported concern over the displacement of residents due to nearby mining activity (Zakrison et al., 2015). Moreover, Australian research identified a perceived loss of control over individual property resulting from mining activity (Everingham et al., 2015). However, other research has identified mining activity as being positively correlated with housing affordability (Hajkowicz et al., 2011) or at least identified no difference in rental costs between mining and non-mining communities (Kotey & Rolfe, 2014). Incongruently, Kotey and Rolfe (2014) also identified higher mortgage repayments within mining communities. The authors suggested that the lack of rent differences might be due to rent subsidies that are available for mining industry employees. The combination of rental subsidies and mining industry increased incomes could inflate the reported housing affordability within mining communities. Additionally, some mining community residents perceived rising accommodation prices to benefit existing home owners within the community through higher selling and rental prices (Petkova et al., 2009). Therefore, those who do not work in the mining industry may struggle to find affordable housing within mining communities, causing ongoing implications for their quality of life.

In addition to housing availability and affordability, mining activity can also affect community infrastructure. Mining community residents report concern regarding commute workforces placing burden on local services, recreation amenities and local infrastructure (Carrington & Pereira, 2011). Other research also identified a perceived increased use of infrastructure resulting in the perception of reduced infrastructure quality (Everingham et al., 2015). Furthermore, some mining communities have reported concern that providing public infrastructure required for mining exploration would place an economic strain on the community (Zakrison et al., 2015). Alternatively, Hajkowicz et al. (2011) found that mining activity was positively correlated with access to communication technology which can

increase the connectedness of a community. These findings indicate that while some infrastructure may be improved, residents perceive mining activity to decrease the adequacy of community public places, services, and infrastructure.

**4.1.4 Summary of impacts.** The previous discussion of the characteristics and impacts of the mining industry has highlighted that the community is influenced in many ways during the presence of mining activity. Conflicting evidence was identified with the impacts of mining activity in every aspect of the community capital framework. Mining activity (commercial capital) can contribute to pollution or other changes in the environment (environmental capital) leading to decreased health (human capital). However, some research also identified no such link. Mining activity was also indicated to disrupt a community's social aspects (social capital) through the mining industry's use of certain employment practices (commercial capital) or through the resultant population changes (human capital) due to changes in the mining industry. Disruption to a community's social aspects (social capital) was identified to change a community's sense of place and identity (cultural capital). Mining activity was also identified to have positive and negative effects on education levels and housing affordability (human capital). Furthermore, many interrelationships within the forms of community capital were identified. For example, within commercial capital, mining activity was associated with positive and negative changes to employment, income and economy. As seen in Figure 10 below, the current research into mining activity impacts leaves many gaps when considering the components of community sustainability. Much of the research is concerned with commercial capital resulting in a heavily biased view of the importance of the relationship between commercial capital and mining activity. Additionally, there was limited research identified on mining activity's impact on cultural capital. The implications drawn from the previous literature indicate that mining activity can considerably influence the sustainability of nearby communities however there are still gaps present in terms of identifying the potential full extent of mining activity's impact.

Yet, what is also clear from the literature is that there are more factors involved with the negative experience of mining communities than simply the presence of mining activity. Some factors that have been indicated to be associated with lower mining community social wellbeing include resource type (Bulte, Damania, & Deacon, 2005), governance of the



*Figure 10.* Identified mining activity impacts on community capital.

country (Andersen & Aslaksen, 2008), and institutional capability (Atkinson & Hamilton, 2003). In particular, it seems that the unequal distribution of the wealth generated from mining activity is more likely to be the factor leading to lower social wellbeing rather than the presence of mining activity per se (Luong & Weinthal, 2006). The more communities perceive that mining activity benefits are distributed fairly, the more likely they are to trust the mining industry (Moffat et al., 2017; Moffat, Zhang, & Boughen, 2014). Communities can provide companies and industry what is termed a social licence to operate which is determined by whether or not a community supports a project, company or industry to operate within a region (Luke, 2017). This social licence to operate depends on the community's perception of whether the industry's benefits outweigh the problems that the industry presents for the community (Luke, 2017; Moffat et al., 2017; Moffat et al., 2014). Even though discrepancies were identified in past research regarding real and perceived impacts, these perceptions of mining activity's impacts should not be ignored. Understanding community residents' perception of the mining industry requires an

understanding of the local factors that influence these perceptions. Yet to understand the effect that the mining industry can have on communities that are in close proximity to mines within Australia it is first necessary to understand how the mining industry operates within Australia.

## **4.2 The Australian Mining Context**

The following sections provide an overview of the context in which the research project was conducted. A brief description of the progression and current state of the mining industry within Australia and particularly Queensland is provided, as well as a brief overview of the political and social climate within Australia regarding mining activity.

**4.2.1 The Australian mining industry.** The mining industry in Australia began at the end of the 18<sup>th</sup> century (McKay, Lambert, & Miyazaki, 2001). The discovery of gold in the mid-1800s started the transition from an agricultural and pastoral based national economy to an economy largely based on mining. Since this time there have been booms and depressions within the mining industry however, despite these cycles, it has still been one of the major contributors to the economy and infrastructure of Australia (McKay et al., 2001). Many mining communities have been established during this time as the mines required a town for the workers as well as engineering and machinery suppliers and transport facilities. During periods of depression within the mining industry, many towns remained economically viable as they became hubs for the surrounding agricultural and pastoral industries, and/or were placed on convenient points on established transport routes (McKay et al., 2001). Therefore, other employment and economic opportunities were available outside of the mining industry within these communities. Thus, these communities were not entirely economically dependent on mining activity.

From 2003, Australia experienced a decade long resources boom. This resource boom provided a strong economic stimulus for Australia and particularly Queensland where there was concentrated mining activity (Australian Bureau of Statistics [ABS], 2009). Specifically, coal mining and metal ore mining industries experienced strong growth in export values from 2004-05. The mining industry experienced growth through to 2013 except for a slowdown during 2008-09 as a result of the global financial crisis (ABS, 2009).

Due to this extended boom period, mining communities, Queensland and Australia developed an economic dependency on the mining industry.

Recently, however, the mining industry within Australia has been experiencing a downturn. Between the years 2013-14 and 2014-15, the export price index for mining fell by 21% mainly due to the falling prices for metallurgical coal (used in the production of steel), thermal coal (used in the generation of electricity) and iron ore (ABS, 2016c). For the same time period, the sales and service income for the mining industry decreased by 3.9% that equates to around AUD8.5 billion. However this decrease in income was not consistent across all areas of mining (ABS, 2016c). The areas of the mining industry that experienced decreases were coal mining, iron ore mining, non-metallic mineral mining and quarrying, and exploration and other mining support services. The areas of oil and gas extraction, gold ore mining and bauxite, nickel and other metal ore mining all experienced increases (data not available for copper ore, mineral sand, or silver-lead-zinc mining)(ABS, 2016c). This data highlights the variability in economic stability of the mining industry based on the product being mined thus also having implications for the economy of mining communities.

Due to the falling export prices and the overall decrease in income, employment within the mining industry has also reduced. For the same time period as above (2013-14 to 2014-15), employment for the mining industry decreased by 6.9% which equates to 12 806 people (ABS, 2016c). The only areas of the mining industry that experienced increases in employment were mineral sand (4.6%, 164 people) and bauxite, nickel and other metal ore mining (29.6%, 1 683 people). The largest decrease in employment was within exploration and other mining support services (-19.3%, 8 396 people) (ABS, 2016c). During the year 2014-15, 28.7% (39 727 people) of mining industry employment was within Queensland which had decreased from the previous year by 3.8% (1 569 people) (ABS, 2016c).

Furthermore, the Department of Employment projected that the industry would have a decrease in employment of 4.5% or around 12 300 people from 2014 to the end of 2018 (Labour Market Research and Analysis Branch, 2014). The majority of this decrease within the mining industry is expected to be within the sectoral level areas of metal ore mining, exploration and coal mining. This projected decrease in employment could have significant impacts on the economy of Queensland and the rest of Australia due to the economic

reliance on the mining industry that developed during the resources boom period. Furthermore, mining communities, particularly metal ore and coal mining communities, could also experience hardships due to the uncertainty that comes with job losses and decreases in production.

**4.2.2 The political climate.** Globally there has been mounting pressure placed on the mining industry and governments to reduce emissions and the use of non-renewable resources. The global push to reduce emissions is reflected in the Paris climate agreement, which was ratified and enacted within a year of its announcement (Kemp, 2016). This quick uptake from countries can be seen as international support for climate action albeit the signatory countries' legal obligations are similar to what is already practiced (Kemp, 2016). In Australia specifically, there has been much public debate surrounding the mining industry and the advantages and disadvantages it provides the nation. In 2012, a minerals resource rent tax was introduced by the government to increase the national revenue received from mining industry profits (Australian Taxation Office [ATO], 2016; Giurco & Morrison, 2013). This tax only applied to coal and iron ore mining thus excluding other commodities such as copper, gold and nickel (Heaney, 2011). This difference in the type of commodities that are taxed further highlights the variability in the economic stability of the mining industry based on the product being mined. This tax also demonstrates the external pressures that can be placed upon the mining industry that flow through to the mining community. However, this tax was short-lived as, in 2014, the then government repealed the minerals resource rent tax (ATO, 2016). Additionally, at the time of recruitment for this project, the same government claimed that coal was essential to the economic future of Australia (ABC News, 2014). Therefore, the political climate within Australia at the time of recruitment was supportive of mining industry operations and the economic stimulus it provides.

**4.2.3 The social climate.** At the time of recruitment to the current study, the CSIRO conducted an Australia wide survey of Australian's attitudes towards the mining industry (Moffat et al., 2014). Respondents included those who lived in metropolitan, regional and mining areas. On average, respondents were accepting of mining within Australia. Job creation was reported as one of the main perceived benefits of mining. However, the economic benefits of mining were perceived to not be distributed fairly. Furthermore, low

trust of the mining industry was reported. However, respondents reported that mining was worthwhile in Australia as the benefits were reported to outweigh the costs. Thus, it seems that the Australian public recognises some downfalls within the mining industry, they accept and perceive the mining industry to be a worthwhile endeavour for the country.

**4.2.4 The rural context.** In addition to the previously outlined contextual factors that can influence mining communities, they are often also within rural and remote areas. Rural and remote communities within Australia face many challenges to community sustainability such as reduced access to services, limited industry opportunities and smaller or decreasing population sizes (Hossain et al., 2013; Petkova et al., 2009). Additionally, Australians living in rural and remote areas have been identified as experiencing lower levels of health and life expectancy in comparison to metropolitan areas (Australian Institute of Health and Welfare [AIHW], 2018). As highlighted in the previous sections, many of these challenges can be amplified in mining communities. For example, mining activity has been identified as contributing to reduced health which is already an issue for rural and remote communities. Furthermore, mining communities tend to be reliant on a transient population base and an industry which can often be volatile. These identified challenges to sustainability in rural and remote communities can be exacerbated by the presence of mining activity.

### **4.3 Conclusion**

The previous discussion of the characteristics and impacts of the mining industry has highlighted that the community is influenced in many ways by the presence of mining activity. Mining activity was identified to considerably influence the sustainability of nearby communities however there are still gaps present in terms of identifying the potential full extent of mining activity's impact. Given Australia's and Queensland's economic reliance upon the mining industry (ABS, 2009), the projected downturn could place Australia, Queensland and individual mining communities at significant risk of hardships. Despite this risk, there is political and social support for the mining industry within Australia meaning that mining activity is likely to continue within Australia for the near future. However, given international political climates and growing pressures to reduce greenhouse gas emissions (Kemp, 2016), the sustainability and wellbeing of mining

communities is at-risk. Given the Australian mining industry context and the currently understood mining activity impacts on community wellbeing, identifying the factors that facilitate the sustainability and wellbeing of mining communities is important to ensure their continuation into the future.

## Chapter 5: Integrative Summary

The current chapter provides an integration of the previous literature chapters, and the resultant research aims and questions used to guide this project. To reiterate, Chapter 1 provided an understanding of sustainable community development. Chapter 2 provided an overview of the forms of community capital and their potential use for sustainable community development. Chapter 3 explored the major points of disagreement within the social capital literature and the definition used for social capital within this project. Chapter 4 provided an overview of the currently understood mining activity impacts on community and the Australian mining industry context.

As noted in Chapter 4, the Australian, and specifically Queensland's economy has developed a reliance upon the mining industry (ABS, 2009). Variability in the economic stability of the mining industry has implications for the economy of not only Australia and Queensland but for the individual mining communities as well. Due to the projected decrease in mining industry employment (Labour Market Research and Analysis Branch, 2014), mining communities are expected to experience hardships due to the uncertainty that comes with job losses and decreases in production. Despite this projected economic downturn and uncertainty within the mining industry, the political and social climate within Australia at the time of recruitment was supportive of mining industry operations and the economic stimulus it provides (ABC News, 2014; Moffat et al., 2014). In light of the political and social support for the mining industry, mining activity is likely to continue within Australia for the near future. However, given international political climates and growing pressures to reduce greenhouse gas emissions (Kemp, 2016), the sustainability and wellbeing of mining communities is at-risk. Therefore, identifying the factors that facilitate sustainability and wellbeing of mining communities is important.

The community capital framework suggested by Callaghan and Colton (2008) in Chapter 2 provides a comprehensive view of the local factors that can influence community sustainability. Community capital factors include environmental, human, social, cultural, public structural and commercial capital. Capital is valuable based on its ability to produce outcomes. Social capital can enhance the production and use of the other forms of community capital thereby increasing their value. The cooperative effects of social capital,

as outlined in Chapter 3, are argued to increase the productivity of investment in other forms of capital. Social capital facilitates coordination and cooperation for the mutual benefit of those involved thus allowing other forms of capital to be more efficient (Putnam, 1993, 2000). A community as a whole would need to experience the beneficial components of social capital for it to function cohesively and to promote its sustainability.

As noted in Chapter 1, at the basis of the concept of sustainability is a system's capacity to continue into the future (Ekins, 1993). Therefore, sustainable community development should incorporate development that ensures a community can continue into the future. Sustainable development requires consideration of the actions needed at a local level that contribute to or hinder sustainability (Callaghan & Colton, 2008; Epps, 2002; Lubbers & Koorevaar, 1999). A community's ability to adapt to gradual or sudden changes to ensure it remains viable in the long-term can be conceptualised as community resilience (Callaghan & Colton, 2008; M. D. Smith et al., 2008). For a mining community to be resilient, it needs to be sustainable in spite of the challenges that mining activity brings to the community. Building community resilience from a bottom-up approach consequently builds the regional, state and national resilience as well (Longstaff et al., 2010). The premise being that resilient parts constitute a resilient whole. Therefore, resilient communities ensure the resilience of the wider systems of which they are a part. Resilient mining communities can foster the resilience of not only the regions of which they are a part but of Queensland and Australia as well.

## **5.1 Research Aims and Questions**

Given the previous literature and the role mining communities can play in wider sustainability and resilience, the aim of this project was to investigate the resilience of mining communities throughout different stages of mining activity. This aim was achieved through the in-depth exploration of mining community residents' perceptions of community wellbeing and the impacts of mining activity. Specifically, this project explored the dynamic interrelatedness between community capital, specifically social capital, and community wellbeing in mining communities. The following research questions were developed to guide the project:

- Do residents perceive the components of social capital to promote community wellbeing within mining communities?

This research question is based on the previous social capital literature suggesting that the cooperative outcomes of social capital can increase the productivity of investment in other forms of capital. Given this productive value of social capital, it was expected that social capital will influence the wellbeing and sustainability of mining communities.

- What impact do mining community residents perceive mining activity to have upon the community?

This research question is based on the previous gaps identified within the literature regarding the impact of mining activity on community. Given the already established extent of mining activity's impact on community in the literature, it was expected that mining activity will influence all forms of community capital.

- How do residents adapt to the challenges of living within their communities?

This research question explores how residents practically adapt to the challenges present in mining communities as outlined in the previous literature. Given the characteristics of mining communities highlighted in the literature, it was expected that residents would need to employ multiple strategies to enjoy and remain within their communities.

## Chapter 6: Method

An exploratory approach was used in this project as there is limited literature in an Australian context. An exploratory approach allowed for a more complete understanding of mining community residents' perceptions of community wellbeing. A qualitative approach was taken as this project was exploratory in nature rather than hypothesis or theory testing (Giorgi, 1986). Additionally, researchers have argued that the investigation of the mechanisms of social capital is best understood through qualitative research due to the multifaceted nature of social capital (Bell, 2009). Qualitative research allows for the full exploration of the mechanisms of social capital without reducing the concept to a single scale. As highlighted in Chapter 3, measuring social capital through a single scale is theoretically unsound. Furthermore, interviews can provide participants with an opportunity to describe their social experiences (Bell, 2009). For example, participants have an opportunity to describe how they might make use of their social networks to enhance their wellbeing rather than stating how many or if they have social networks. As noted in the Chapter 3, the individual's subjective evaluation of the quality of their social networks is important to their wellbeing. Therefore, the methodological approach determined to be most appropriate for this qualitative project was interpretative phenomenological analysis (IPA) described below.

IPA provides a framework for the in-depth description and interpretation of the lived experiences of participants (J. A. Smith et al., 2009). IPA involves exploring the individual subjective perception of an experience rather than providing an objective statement of the experience itself (J. A. Smith & Osborn, 2008). IPA therefore provided a good fit with the aim of the project which was to gain an understanding of residents' perceptions of living in a mining community. Additionally, IPA provided a good fit with understanding the mechanisms of social capital by gaining the participants' subjective description and evaluation of their social networks.

The foundation of IPA stems from phenomenology in that the situations lived by the individual in everyday life are explained (Giorgi & Giorgi, 2008). In phenomenology, the phenomenon and the context in which it appears is described as authentically as possible. To study a phenomenon, individuals who have first-hand experience are sought to describe

this experience. IPA draws on phenomenology through its emphasis on providing an in-depth description of individual experience. The active role of the researcher in the interpretation of the individual's experience is also emphasised within IPA (J. A. Smith & Osborn, 2008). Therefore, the researcher must interpret and make sense of the individual's interpretation of their lived experience rather than purely describe the individual's experience.

The interpretation of the individual experience required in IPA is influenced by hermeneutics. Hermeneutics is the analysis of texts which can include individual experiences (J. A. Smith, 2007). Hermeneutics studies the meaning and importance of human activity from the individual's perspective (J. A. Smith & Osborn, 2008). The role of the researcher within IPA is to question the participants' interpretation of their experience. The researcher needs to actively seek the underlying meaning of the account relayed to them by the participant. Therefore within an IPA framework, the researcher attempts to understand the experience of the individual from their point of view while also critically questioning these reports of the individual's experience.

Here it is important to note that the researcher can never truly know what the participant knows (J. A. Smith et al., 2009). The researcher only has access to the individual's experience through their account of the experience. Therefore, the researcher needs to acknowledge that their own perceptions will influence their interpretation of the participant's account of their experience (J. A. Smith et al., 2009). Steve Perrault (as cited in Stamper, 2017) described the process of defining words stating that "a definition is an attempt to explain a word's meaning using these certain conventions...The meaning is something that resides in the word, and the definition is a description of that" (p. 124). This quotation draws parallels with not only IPA but qualitative research in general. The researcher attempts to explain a participant's or phenomenon's 'meaning' using certain methodological conventions. Therefore, it is important to keep in mind that there is meaning that resides within the participants' words and the analysis is a description of that meaning.

Overall, IPA provided a good fit with the aim of this project which was to explore resident experiences of living within a mining community. For example, though a researcher could identify the number of services available in a community, ultimately, the

individual's perception of these services, arising from their lived experience, will influence their likelihood of engaging with them. An integral component when exploring community wellbeing is the individual's experience of living and interacting within the community. IPA provides the framework to analyse how participants perceive and make sense of their experience within their community (J. A. Smith & Osborn, 2008). The data collection and data analysis components and what each involved are outlined in the following sections.

## **6.1 Data Collection**

Within IPA, specific attention needs to be paid to how the data is collected. This includes the participants targeted for recruitment as well as how the questions are formulated and then delivered to the participants.

**6.1.1 Research sites and participants.** IPA is idiographic in nature. Understanding from an idiographic standpoint concerns the individual and the ways in which they are similar to and different from others (Howitt & Cramer, 2008). Therefore, purposive sampling was used within this project. Purposive sampling fits with IPA to understand the individuals' experience of living within a particular mining community rather than to understand the experience of all residents in all mining communities. Therefore, a select number of suitable mining communities were identified for recruitment based on the criteria described below.

Interviews were conducted with a sample of 37 residents (nine male, 28 female) from three research sites - Mount Isa, Emerald and Moranbah. There are no strict guidelines regarding sample sizes within IPA due to the importance that is placed upon the individual's experience (J. A. Smith & Osborn, 2008). Sample sizes within IPA studies vary from one (Eatough & Smith, 2006) to over 60 (L. M. Coleman & Cater, 2005). Large sample sizes are not required as the depth of analysis is important rather than breadth. Therefore, no limit was placed on the number of participants required for the project or for each target community. All residents from the target communities who expressed interest in participating within the project were interviewed. The differences in sample sizes (reported in the following sections) from each target community reflects the different population sizes of each community. For example, Mount Isa had the largest population out of the

target communities and had the largest sample size within this project while Moranbah had the smallest population and had the smallest sample size.

The target communities were chosen to provide further understanding of the impact mining activity can have on communities throughout different stages of mining activity. The target communities were chosen after considering the amount and stage of mining activity surrounding the communities in conjunction with the characteristics of the communities, such as population growth. Therefore the communities were chosen as they were experiencing stability (Mount Isa), or instability (Emerald and Moranbah). For this project, instability was conceptualised as rapid economic or population growth or decline, and stability was conceptualised as little change in a community's economy or population. The rationale for the communities being classified as stable verse unstable is explored in the following sections. Additionally, Queensland was chosen to conduct the research within due to the state's reliance on the mining industry outlined in the previous chapter. Furthermore, in order to control for regulatory differences between states, other states were not included.

Communities where the mining industry was the largest employing industry were identified as mining communities. In 2011, 31.4% of residents were employed in mining in Mount Isa (Australian Bureau of Statistics [ABS], 2016e), 22.6% in Emerald (ABS, 2016b), 44.3% in Moranbah (ABS, 2016d). These figures are well above the Australian average of 1.8% of the population employed in the mining industry (ABS, 2016a). Furthermore, the resources mined within the chosen target communities are different. This enabled an understanding of the impact the varying economic stability of different resources has on the communities, as noted within the previous chapter. The resources mined within each of the mining communities are identified in the following sections. The following sections also provide a snapshot of the target communities during the time of recruitment as well as information about the participants from each community.

**6.1.1.1 Mount Isa.** Mount Isa was chosen as one of the target communities as it has experienced stable population and mining activity over a long period of time. There were six mines (two copper and four lead, zinc and silver) in operation around Mount Isa at the time of recruitment (Mining Oil Gas, 2013). The mines in operation were owned by the same company. The mineral deposits in the Mount Isa region were discovered by a

prospector in 1923 and by the end of 1924 a rudimentary mining township was established (Centre for the Government of Queensland [CGQ], 2014c). The mining company has developed ways to efficiently and profitably treat the ore within the region which has allowed Mount Isa to be a stable and viable mining community (CGQ, 2014c). There was an increase in population in Mount Isa of 1.47% from 2012 to 2013 which is consistent with the approximate percentage of growth for the previous four years (Queensland Government Statistician's Office [QGSO], 2016). As at 2014, the population of Mount Isa was 22 717 people (ABS, 2016e).

The recruitment of residents in Mount Isa began in February 2015 and was finalised by the end of March 2015. Initially, media and social media were used to raise awareness about the study within the town. The research was promoted via local radio stations and newspapers within the community. The project was also promoted through various industries (such as health, education, mining) to capture diversity of experience of living in a mining community. A total of 20 participants (three males, 17 females) were interviewed with 16 individual interviews and two interviews conducted in pairs. The average age of participants was approximately 41 years (SD=16, Range=23-81) and had lived in the community on average for approximately 16 years (SD=16, Range=1.5-53). Twelve of the participants (60%) were involved with community groups.

**6.1.1.2 Moranbah.** Moranbah was chosen as it was experiencing instability, particularly within employment, as a result of mining activity. At the time of recruitment, six coal mines with lifespans ranging from 20 to 60 years were operating within a 35 kilometre radius of Moranbah (Mining Oil Gas, 2013). Two of these mines were opened around 1970 with three only being open since 2006. Mining began in Moranbah during the 1970s with the town being built to support the mine (CGQ, 2014b). Despite the number of mines in operation and the lifespan of some of these mines, Moranbah had been experiencing employment and population instability. In 2013, one mining company removed 185 jobs and a further 430 jobs the following year (Latimer, 2014). Additionally, a mine was opened near Moranbah that used a complete FIFO workforce (Validakis, 2014). Thus residents of Moranbah were unable to work at the new mine because they lived in the community. As at 2014, the population of Moranbah was 9 902 people (ABS, 2016d).

The recruitment of residents from Moranbah began in March 2015 and was finalised in October 2016. The same recruitment strategies were used in Moranbah as in Mount Isa. However, due to difficulties experienced in recruiting residents (such as limited numbers of and access to community and social media groups), additional recruitment strategies were applied. These strategies included attending community events and recruiting from community public areas. A total of six residents (two male, four female) participated in individual interviews. The average age of participants was approximately 48 years (SD=8, Range=38-62) and they had lived in the community on average for approximately 17 years (SD=15, Range=4-40). Four of the participants (67%) were involved with community groups.

**6.1.1.3 Emerald.** Emerald was chosen as a research site as it was experiencing growth related to the mining industry suggesting the community was experiencing instability. At the time of recruitment three coal mines with lifespans ranging from five to 20 years were operating within a 45 kilometre radius of Emerald (Mining Oil Gas, 2013). Two of these mines had only been operating since 1992 and 1993. Originally an agricultural community, coal mining began in Emerald in 1979 (CGQ, 2014a). At the time of recruitment, no news articles were found in an online search relating to mining and job loss within Emerald, suggesting the community was not experiencing the effects of a downturn. There had been an increase in population in Emerald of 3.89% from 2012 to 2013 (QGSO, 2016). This population increase was higher than the Queensland population increase which was 1.79% for the same time period (QGSO, 2016). As at 2014, Emerald had a population of 15 194 people (ABS, 2016b).

The recruitment of residents from Emerald began in June 2015 and was finalised in October 2016. Due to difficulties experienced in recruiting residents (such as limited numbers of and access to community and social media groups), the additional recruitment strategies outlined above were applied. A total of 11 participants (four males, seven females) were interviewed with nine individual interviews and one interview conducted in a pair. The average age of participants was approximately 47 years (SD=13, Range=18-68) and had lived in the community on average for approximately 18 years (SD=15, Range=1.5-52). Seven of the participants (64%) were involved with community groups.

**6.1.2 Constructing and conducting the interview.** Semi-structured interviews were chosen as they allow greater development of rapport, allow flexibility of the content covered, and facilitate the collection of richer data (J. A. Smith et al., 2009; J. A. Smith & Osborn, 2008). The use of semi-structured interviews fits with the IPA framework to allow for the full exploration of an individual's experience (Howitt & Cramer, 2008). The questions included within the interview schedule were constructed based on criteria outlined by J. A. Smith and Osborn (2008) being that questions are worded so that they are open ended and are not value laden, leading or contain jargon. Constructing questions using this criteria aids in gaining richer data from participants. Questions were designed to explore constructs based on the previous literature specifically regarding community wellbeing and satisfaction. As this project was exploratory in nature, the interview schedule was designed to encourage participants to speak about their community freely with little prompting from the researcher (J. A. Smith & Osborn, 2008). Additionally, prior to conducting the interview, the project advisors reviewed the interview schedule and provided input regarding wording and the constructs being explored.

The interview questions were designed to explore the attitudes of participants towards the mining industry, the stressors experienced as a result of the presence of mining activity, the coping strategies used to buffer these stressors, and the lifestyle elements involved with living in a mining community. These constructs are explored to gain a greater understanding of resident perceptions of the factors that positively and negatively influence both individual and community wellbeing within mining communities. Additionally, participants were asked about the general wellbeing of the community. Due to the previously noted lack of consensus within the literature regarding community wellbeing, the participant's interpretation of community wellbeing and what contributed to it was of interest here. Therefore, the residents' perception of community wellbeing was explored rather than the researcher's own conceptualisation of community wellbeing.

There were initially 14 interview questions with associated prompt questions which can be found in Table 2 below. The initial statement was included after the first two interviews to increase participant comfort with the interview process and enhance participant disclosure of their experience in the community. Ensuring participant comfort with the interview process is essential within the IPA framework to ensure rich data is

gained from interviews (J. A. Smith & Osborn, 2008). Throughout the interview process, participants had difficulty answering questions four and five which may have been due to these questions being too abstract for participants to respond. Specifically, participants were asked to describe a hypothetical community which appeared to be difficult for them to conceptualise. The two questions were subsequently removed and replaced with “What do you think the differences are between communities with good and poor well-being?” and “Where do you think your community fits?”, as participants responded more freely when providing a comparison of communities. The revision of questions during the interview process is part of the IPA process ensuring that the researcher remains sensitive to the information participants provide (Howitt & Cramer, 2008). Participants were also provided the opportunity at the end of the interview to add any information that they felt may not have been covered during the interview.

Individuals were provided with the option to participate in interviews individually or in pairs conducted via telephone or face-to-face. Two telephone and 16 face-to-face interviews were conducted in Mount Isa, three telephone and seven face-to-face interviews were conducted in Emerald, and one telephone and five face-to-face interviews were conducted in Moranbah. Face-to-face interviews occurred at a time and place within the community chosen by the participant such as public spaces or participant homes. Telephone interviews occurred at a time chosen by the participant. The researcher conducted the telephone interviews from their advisors’ private laboratory space. The interviews had an average duration of 49 minutes with approximately 27 hours of recorded data. All interviews were transcribed by the researcher for analysis. Each hour of recorded data took approximately four hours to transcribe, thus the transcribing process took approximately 110 hours to complete.

For the face-to-face interviews, participants were provided with the relevant information sheet (either individual or focus group, see appendix A) which was discussed and any questions regarding the project answered. The informed consent form was then provided for the participants to read and sign if they agreed to be interviewed and for the interview to be audio recorded (see appendix B & C). Participants were also verbally asked if they consented to the interview being audio recorded. For the telephone interviews, participants were provided with the information sheet and informed consent form before

Table 2

*Interview schedule*

Construct	Questions	Prompt Questions
Perceptions of community/community satisfaction	1. Describe to me your experience of living within your community.	Have you enjoyed living in the community?
Community characteristics/social capital	2. How would you describe your community?	Is it a friendly community? What makes it friendly? Do you trust the people in your community? What makes them trustworthy? Are there activities you do with other members of the community? What activities are there? What activities do you do?
Community satisfaction	3. How would you describe the general well-being of your community?	Are people happy within the community? Why/Why not?
Perception of community well-being	4. What would a community with good well-being look like?	What would the people be like? What would the community be like to live in?
Perception of community well-being	5. What would a community with poor well-being look like?	What would the people be like? What would the community be like to live in?
Community well-being	6. Do you have any worries about the well-being of your community?	Does anything threaten the good things about your community? How?
Community characteristics	7. What are some of the difficulties you face living in your community?	Does the community feel isolated? Why/Why not? What is it like living in this climate? What is the cost of living like? What support do you have within the community?
Mental health	8. How do these difficulties affect you?	
Individual resilience	9. How do you cope with the difficulties that you face?	Are there people you confide in? Are there activities you do?
Perception of the mining industry	10. What do you think about the mining industry?	Can you describe the characteristics of the mining industry?
Effect of mining	11. Has mining affected your community?	Has your community changed since mining has commenced/changes in industry? In what ways?
Community resilience	12. How does your community cope with the impacts of mining?	Does it bounce back after hard times?
Community well-being	13. What could improve the well-being of your community?	Are there programs that could be implemented?
Individual resilience/community satisfaction	14. Do you have any intentions of leaving the community?	Why are you going to stay/leave?
	15. Is there anything else you wanted to add that you feel like we didn't cover?	

the interview. Participants were requested to read, sign and return the informed consent form via email before the interview if possible. The information sheet was read to the participant at the beginning of the interview and any questions regarding the project answered. The informed consent form was also read to the participant and verbal consent was also gained to partake in the interview and for the interview to be audio recorded. General demographic data was then collected from participants (see appendix D). For the face-to-face interviews, participants were provided the demographic sheet which they could complete and return to the researcher at the beginning of the interview. For the telephone interviews, participants verbally responded to the questions and the researcher recorded their answers on the demographic sheet. This project was approved by the James Cook University Human Research Ethics Committee (Approval number H5913).

## **6.2 Data Analysis**

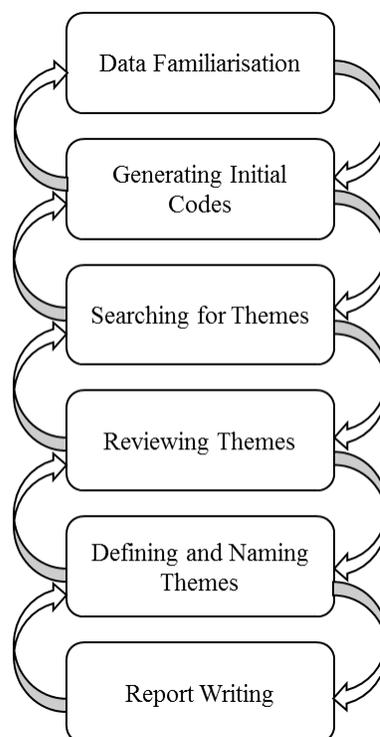
This section provides an overview of the characteristics of the research team and their contribution to the project. Following this, an outline of thematic analysis is provided as well as details of how the communities were compared. The data from each of the target communities was analysed separately. Analysing each community separately meant that the communities could be compared and contrasted appropriately. The software program NVivo 11 (QSR International Pty. Ltd., 2016) was used to assist with the analysis of the data gathered from the interviews.

**6.2.1 Researcher.** Due to the active role that the researcher needs to take within IPA, recognising one's own experiences and perceptions is essential for appropriate data analysis (J. A. Smith et al., 2009). The primary researcher had completed a Bachelor of Psychology (Hons) where she gained an understanding of research design and analysis techniques, as well as interviewing techniques. Furthermore, the primary researcher had held multiple research assistant positions requiring recruitment, conducting interviews, transcribing and initial data analysis. However, this project was the researcher's first experience with a qualitative projective of this size and analysis in this depth.

More personally, the primary researcher grew up within a small, rural north Queensland community. Additionally, her Honours project investigated the resilience of her home town in regards to natural disaster preparatory behaviours. From here, the researcher

recognised her interest in community based research. Her own upbringing within a rural community allowed her to recognise and empathise with the plight of rural communities. Before beginning this project, the researcher had had no interaction or experience with the mining industry or with mining communities. The researcher recognises that she lives a ‘modern’ lifestyle in that she uses the products of mining in everyday life. For example, the products of mining were used to be able to conduct (e.g. fuel for recruitment) and produce (e.g. computer for writing) this thesis. The primary researcher was responsible for the entirety of this project including: recruiting participants, designing and conducting the interviews, transcribing interviews for analysis and analysing interview transcripts.

**6.2.2 Thematic analysis.** Thematic analysis was conducted within the IPA framework. Thematic analysis is not a qualitative methodology but rather a process for encoding qualitative information that can be used within many qualitative methodologies and therefore fits within the IPA framework (Boyatzis, 1998). Thematic analysis is used to identify, analyse and report on patterns within data (Braun & Clarke, 2006). Braun and Clarke (2006) outline a six step iterative process by which to conduct thematic analysis. This process is graphically represented in Figure 11 and detailed below.



*Figure 11.* Iterative steps of thematic analysis.

**6.2.2.1 Familiarisation with the data.** This step of the analysis required the researcher to familiarise themselves with the data. For interview data, this is generally achieved by being involved with the interviewing processes, transcribing the interview for the recording, and reading and re-reading the interviews (Braun & Clarke, 2006). By conducting the interviews themselves, the researcher gains familiarity with the data and begins to formulate ideas about the themes that are present within the interview data. The transcription process furthers the researcher's familiarisation with the data. The data is then read and re-read to aid with the familiarisation process. Within this project, the researcher conducted and manually transcribed the interviews. The transcripts included pauses, interruptions and other verbal information to retain context. Transcripts were created as a table to allow for comments to be left regarding the researchers' thoughts on the interviews while transcribing. The interview transcripts were also read by the researcher throughout the analysis process.

**6.2.2.2 Generating initial codes.** This step involved the systematic generation of codes for important data within the entirety of the collected data. Towards the end of this step, similar data relevant to each of the codes is collated (Braun & Clarke, 2006). Notes were journaled throughout the transcribing process regarding possible meaning of participant responses. Additionally, notes in the form of memos were made for individual interviews regarding the overall nature of the interview. These overviews of individual interviews acted as a check to ensure that each individual's voice was captured within the final report. Writing notes aids with the formulation of the themes evident within the data as well as assisting with the familiarisation of the data in the previous step. The researcher created initial codes through a line-by-line analysis of the interview transcripts. Initial codes were generated through manifest-content analysis where the visible and/or apparent content of the transcripts were coded (Boyatzis, 1998). Often participants' words were used to create initial codes as a way of retaining participant meaning. For example, the participant's statement that "...oh boy it's really, really hot when it's hot" (MO02) was coded as 'It's hot'. Due to the exploratory nature of the study, no limit was placed on the amount of data that could comprise a code. No limit on the amount of data included in codes allowed for further inclusion of individual perceptions suitable with the IPA

framework. Furthermore, placing no limit on the size of the coded data facilitated multi-coding of data where the data may reflect more than one meaning (Boyatzis, 1998).

**6.2.2.3 Searching for themes.** This step involved searching for themes by identifying patterns within the initial codes. This process focusses on the relationships evident within the coding and meaningfully brings the codes together within the overarching themes of the data (Braun & Clarke, 2006). The researcher used a theory-driven approach within this project. In particular, the theory of community wellbeing and capital influenced how the initial codes were combined to create the themes. This development of themes occurred through latent-content analysis where the underlying aspects of the phenomenon being observed are coded (Boyatzis, 1998). Latent-content analysis is an interpretative process as attempts are made to explain and understand the meaning of what an individual has said. Within this project, whether participant reports of the community characteristics positively or negatively influenced community wellbeing was identified by the researcher. For example, the previous participant's report that "...oh boy it's really, really hot when it's hot" (MO02), coded as 'It's hot', was placed under the 'Negative' sub-theme for the 'Climate and Weather' factor under the overarching theme of 'Environmental Capital'. Latent-content analysis fits well with the IPA framework as it is the role of the researcher to interpret the participants' interpretation of their experience. The researcher referred to the research questions throughout the generation of initial codes and searching for themes, ensuring the data analysis was relevant to the project.

**6.2.2.4 Reviewing themes.** This step required the review of the themes to ensure the themes worked with the entire data set. Therefore, the themes are tested against the original data within the codes to ensure that the data coded under a theme is similar and fits together meaningfully, and that there are clear distinctions between each of the themes (Braun & Clarke, 2006). Within this project, the researcher reviewed the part of the interviews coded at each code to ensure that it fit with the broader theme it was coded under. Additionally, to increase the rigour of analysis, the triangulation technique was used (Patton, 1999). The project advisors reviewed and provided direct input regarding theme development throughout the analysis process.

**6.2.2.5 Defining and naming themes.** This step involved defining and naming the themes by refining the specifics of each theme and identifying how each theme differed

from the others. The story of each theme was identified within this step as well as how this fits with the broader overall story of the data in relation to the research questions (Braun & Clarke, 2006).

**6.2.2.6 Report writing.** This step is the outcome of the analysis that was undertaken. Writing about the outcomes of the analysis allowed for further reflection on the data, the analysis, and the appropriateness of analysis with respect to the data (Braun & Clarke, 2006). Within this project, this step occurred as the production of the following results chapters. The previous defining and naming themes step occurred during writing the results. Additionally, the written report was compared against the overviews of the individual interviews noted previously to ensure that each participant's perceptions were captured.

**6.2.3 Community comparison.** Once the reports were written for each community, they were combined. This part of the analysis was achieved by identifying similar and dissimilar information reported from all three communities. Similar information was placed together within a theme and any unique reports from communities were also included at this stage. Essentially, the searching for themes, reviewing themes, defining and naming themes, and report writing steps were repeated.

### **6.3 Conclusion**

Chapters 7-9 present the thematic results of this research. Chapter 7 presents participants' reports of the factors perceived to influence general community wellbeing. Chapter 8 then presents participants' perceptions of the mining industry and the perceived impact of mining activity upon the community. Finally, Chapter 9 presents participants' reports of their intentions to either stay or leave the community and the strategies perceived to facilitate adaptation to living in a mining community.

## **Chapter 7: Results – Factors Influencing Perceived Community Wellbeing**

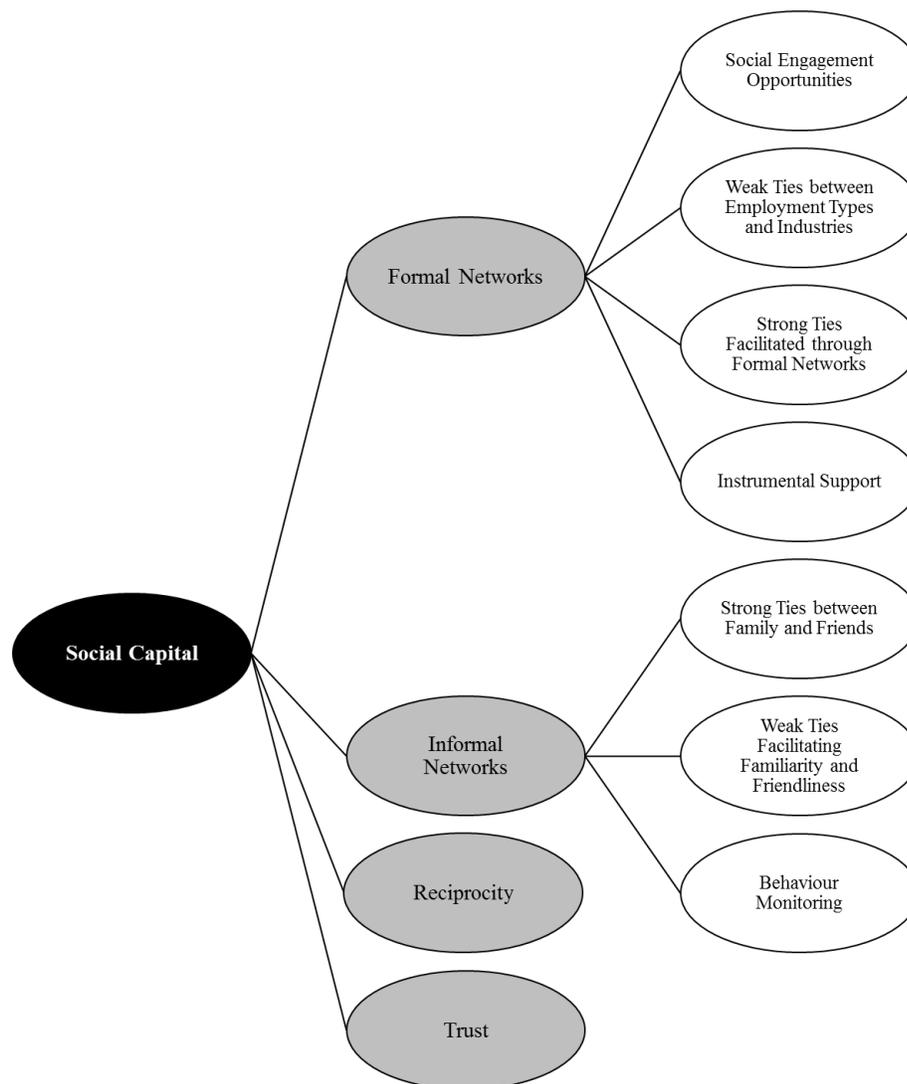
Participants were asked, “How would you describe the well-being of the community?” As to be expected, participants reported positive, ambivalent and negative perceptions of their respective community’s wellbeing. Most Mount Isa participants reported positive perceptions of overall community wellbeing highlighted in one participant’s statement that “...the whole of the community’s pretty good” (MI03). Most Emerald participants reported ambivalent perceptions of overall community wellbeing such as “I would think [the community would] be middle of the road they’d have to be, I think definitely” (EM08). Most Moranbah participants reported positive perceptions of overall community wellbeing highlighted in one participant’s account that the community was “...a very positive place to live” (MO06). An overview of these reports is in Appendix E.

Participants also reported factors that they perceived influenced their experience of living in the community. These factors reflected the six forms of community capital – social, human, commercial, environmental, public structural, and cultural. The following sections provide a detailed overview of the factors identified within each type of community capital and explores the research question ‘do residents perceive the components of social capital to promote community wellbeing within mining communities?’ At the end of each community capital overview, a checkpoint is provided of the main points discussed. An integrative summary of the relationships identified between the forms of community capital for all three communities is provided at the end of the chapter.

### **7.1 Social Capital**

Participants from all three communities reported the perceived effect social relationships have on the community. Four factors were identified within participants’ reports of the community’s social factors – formal networks, informal network, reciprocity and trust. Participants discussed formal networks in terms of social engagement opportunities, weak ties between employment types and industries, strong ties facilitated through formal networks and instrumental support. Participants also discussed informal networks in terms of strong ties between family and friends, weak ties facilitating

familiarity and friendliness and behaviour monitoring. The social capital factors are presented in Figure 12 below.



*Figure 12.* Social capital factors perceived to influence community wellbeing.

**7.1.1 Formal networks.** Many participants discussed formal membership to groups or organisations in the community such as sporting, religious and hobby groups or employment. Participants discussed formal networks in terms of social engagement opportunities, weak ties between employment types and industries, strong ties facilitated through formal networks and instrumental support.

**7.1.1.1 Social engagement opportunities.** Participants had positive perceptions of the presence of social engagement opportunities through their formal networks. However, in many cases participants' discussion of social engagement opportunities were negative in that there were few opportunities to engage and as such reduced opportunity to enjoy these networks. Participants' perceptions of social engagement opportunities through formal networks are discussed in light of the presence and absence of social engagement opportunities.

**7.1.1.1.1 Presence.** Participants reported that there were many opportunities to participate within groups or activities which made it more enjoyable to live in the community. Participants from Mount Isa reported "so there's always events and stuff that go on and that, is what I think makes a liveable city" (MI05), and "...social functions, like there's always...something going on in town that you can go along to and there's quite a variety of things" (MI14). However, participants noted that residents have to want to be involved in the community. For example, a participant stated "again it's all about your attitude I think, if you want to go out and find stuff you'll find stuff every day of the week" (MI05).

One Emerald participant further described their own experience of being involved in the community stating that "...we sort of slotted in the community quite early in the piece because we got involved in sport" (EM01). Another participant reported that there were plenty of sporting and cultural activities for children to be a part of when noting that:

...we've always found for the kids, the kids have always been involved in...sport whether it's gymnastics, touch football, basketball, netball...lots of variety there and then things like...playing music...town band...dancing...there's been lots of this sort of cultural activities and that here for the kids to do as well. (EM09)

Participants also reported that their local level government contributed to community events. One participant described that "we have a pretty lively council" (EM04). Another participant noted that the local council influenced the friendliness of the community stating that:

...council have always got an event on...the other night they had this bingo night, but there's always something happening in the community that will bring everyone

together and everyone's aware of it. Big race days, March race days, everyone knows to go to that. Yeah no it's very community minded Emerald and I think the council do a lot to contribute to it...They do put a lot into the community and that's what keeps people friendly, there's always an event to go to. (EM01)

Moranbah participants discussed the perception of many sporting activities available to residents stating that "...there's lots of sporting activities" (MO02), and another participant noted that "...there are so many sports, so many clubs, groups, organisations, there's so many opportunities" (MO01). The same participant also noted that residents engaged with groups and events in the community stating that:

...if you look at our events, programs and activities and how they're responded to, people come. They want to engage...and that indicates that we're still healthy as a community because people want to be part of that and you see numerous people putting a lot of different things on. You don't see where oh well those people left and we can't do that anymore so those programs and events just shrivel up because nobody wants to do it. (MO01)

Another participant reported that there were plenty of opportunities in the community to interact with other residents stating that:

...we kind of find that sometimes there's too much on and you just want to have a break at home doing nothing...it depends if you're involved in sports or community activities...there is always things to do and there's always things on which is what...I do really like about Moranbah. (MO06)

However, another participant noted that individual have to want to be involved with the community describing that:

...if you want to be involved...life's what you make it...if you choose to stay at home and not be involved well then you may have a pretty lonely existence but the opportunity's certainly there...to get out and get involved. (MO02)

*7.1.1.1.2 Absence.* Participants reported concerns that social groups and clubs were decreasing in size or closing down within their community. Participants from Mount Isa reported "...I hear stories that it's...getting more and more difficult for clubs and things like that to keep going" (MI09), and "...it is hard to keep, get that community groups going and happening and I think that, what was it? The Lions club was another one that recently shut down" (MI07). One participant noted that they found it difficult to find activities or groups in which to participate, stating that "...there's not a lot of that to encourage people to get out and...do more things and be part of the community" (MI19). Additionally, some participants perceived a lack of activities available within the community contributing to anti-social behaviour. One participant stated that "...there's a lot of gamblers 'cause there's nothing else to do" (MI13).

Emerald participants also noted events where residents had the opportunity to establish formal networks were decreasing. Participants noted that "...they used to bring in...different shows...We haven't had anything, nothing comes here anymore. No touring...theatre ballets or comedians, anything" (EM01), and another participant stated that:

...there has been a few things that have, like over the last two or three years that have sort of declined or disappeared...when I first came to town...they used to have good...boxing classes and there was...a good selection of places for yoga and that's sort of dwindling, but the boxing's dried up. (EM06)

Another participant reported difficulty in attracting residents to participate in sporting groups when stating that "we saw that in cricket. Cricket suffered, cricket went really well up to...2003...cricket just fell off the radar for young kids. [Cricket was] flat out getting a team" (EM02). However, the same participant perceived that they had contributed enough to the community when noting that "...we're at that stage of life now, we can get on and get off whenever we want so we choose, we're just so busy at the moment we choose not be in too much but...there's plenty of opportunity" (EM02).

One participant noted that there were activities available within the community but individual situations may prevent residents from accessing them. The participant noted that "...you've still gotta have money and different things...drive and what not to access, even

if you are living in a community where you've got it on your doorstep. Doesn't mean you're gonna access it" (EM10). Similarly, another participant reported that sporting clubs are expensive to be a part of when stating that "probably [the] only thing [that] is the downfall is the cost to play sport. But...it's the insurance side, it's not the clubs" (EM01).

Some participants reported that groups and activities are not available for certain age groups. One participant noted that "...for older people, it really depends...[on] what you're into. There's a few groups but there's not that many, not as much variety as you have for all the little kids" (EM05). Additionally, some participants also noted that the groups and activities available within the community may not appeal to all residents. For example, one participant stated that:

...you've got your showgirl, afternoon teas...garden parties...different charity events...There's lots of things like that that happen in the community which are nice to partake in, but...again they're within certain social networks...They wouldn't appeal to...many groups either. (EM10)

Participants from Moranbah also noted that some age groups have less opportunities reporting that "I think where it's very difficult is for that later teen early 20...because they are wanting more opportunities" (MO01). Another participant noted that young people did not participate in what was available in the community. This participant reported that "...what the town could do with is a new group of a younger generation to come in and socialise...Like all the people that I've seen around the place are in their late 30s, late 30s onwards" (MO05). One participant noted that a lack of availability of groups and events for residents to attend can increase feelings of isolation stating that:

...but I think that people can feel isolated...when you're seeing...entertainment options or things in the city that you'd love to go to or you'd love to be involved in different sports or different things that you'd love to be involved with and...you see other people participating...you could probably feel a little bit envious I guess...of that and that does make you feel a little isolated. (MO06)

However, some participants noted that groups were struggling stating that:

A community is where you live, you sew into the community...you become...a football coach...you sew into families...you start up art groups...you do all sorts of those things...but...I've come across so many people in those groups...whether it be a choir, whether it be...the gun club out here, all of those groups are suffering because...there's no one here in town that calls themselves community. (MO04)

Similarly, another participant stated that "...[residents] sorta don't get involved til the last minute...if you put anything on anywhere no one comes until the last minute and then...sometimes they don't even come" (MO03).

**7.1.1.2 Weak ties between employment types and industries.** Participants discussed the weak ties within the community across different types of employment and industries. Participants had positive perceptions of the presence of weak ties between employment types and industries. However, in many cases participants' discussion of weak ties were negative due to a lack of weak ties specifically between employment groups in the community. Participants' perceptions of weak ties between employment types and industries are discussed in light of the presence and absence of weak ties.

**7.1.1.2.1 Presence.** Some participants reported positive perceptions of the presence of weak ties between employment groups. Mount Isa participants noted that there was no overt divide within the community between residents and commute workers as one participant noted "no I don't think [there's a noticeable divide], I think once the guys...work together...I don't think there's any real hate there" (MI15).

Some Emerald participants reported positive perceptions of the connectedness within the community. Participants reported that "I don't see a divide" (EM01), and another participant stated that "no, it's...definitely not an us and them" (EM02). One participant noted that other than the clothes different occupations wear, the community was connected. This participant stated that:

Oh apart from the physical appearance...the farmers are normally in...the greens and greys and...the non-high vis stuff and the miners [are]...brighter than the rainbow. But apart from the physical appearance...it doesn't feel like there's them and us sort of thing...I think we all sort of feel like we're all part of the same community. (EM06)

*7.1.1.2.2 Absence.* More participants discussed a lack of weak ties between formal networks. Many Mount Isa participants reported division within the community between those who work in the mining industry and the rest of the community. One participant noted “...I think that there needs to be a way, perhaps just being less us and them with the mine and the town” (MI19). In particular, participants reported discord between FIFO workforces and the residential community. Participants reported “...there’s a fair amount of resentment, of [commute workers], for people like myself who live here, permanently, this our home” (MI15), and:

...look there’s a really strong old community here of people that have, are lifers or...they’ve been here forever and...they want to stay...and then you’ve got the other side of it...of a lot of transient people that are coming here just looking for work...finding that that often doesn’t work out...fly-in fly-out type people and people that are kind of disconnected because of the shifts, that they’re working. (MI09)

Some participants reported divisions between “the haves and the have nots” (MI09). One participant noted:

...if mum and dad are slaving their butts off at two minimal paying jobs and we’re earning good money and that sort of thing, you struggle to socialise together because what we can afford is different to what they can afford. (MI08)

Further, concerns were raised regarding some groups excluding others. One participant noted:

...like you know our mothers group is, is one of those things where the community as a whole is inclusive but when you get down to those kinds of group, sometimes they’re not so accepting. Sometimes you feel a little bit isolated in that respect. And it’s just human nature I think. (MI13)

However, another participant stated that "...I don't see [social divide] as a major issue I just know that it's there and don't know really what you can do it about it either, it's just the way it is" (MI08).

Some participants from Emerald noted a lack of connectedness within the community as highlighted in one participant's report that "...I would say they're segregated" (EM10).

**7.1.1.3 Strong ties facilitated through formal networks.** Participants reported positive perceptions regarding the development of strong ties through formal networks. Mount Isa participants reported that their employment created an opportunity to create close ties with other residents. As one participant noted "...the people that you work with, you get really close with" (MI17).

Emerald participants reported positive perceptions of the strong ties developed through work due to these relationships facilitating information transfer. One participant noted that:

But I find out a lot of stuff that's happening with the girls at work as well because I work around about six other women and...we all sort of pitch in and...find out something from your...next desk and things like that. (EM08)

Participants also reported community groups as providing an opportunity for developing strong ties. One participant stated that "...so all of my good friends now, I met through playgroups or...on my work and lifelong friendships...through that" (EM11). Furthermore, another participant noted that there were plenty of groups for residents to join within the community to develop strong ties. This participant stated that "mothers groups to play groups...if you're a young mother in Emerald and you say that you can't make friends, well you've just got something wrong with you, because it is thrown out there in your face" (EM01).

**7.1.1.4 Instrumental support.** Groups that provided a service to the community, such as volunteering groups, were perceived to positively affect community wellbeing. One participant from Emerald reported that "...our community...service people, our volunteers too at the neighbourhood centre, there's a lot of people that get out there and help" (EM08).

Participants from Moranbah noted that one community organisation provides new residents with information on how to be involved explaining that:

I went to [community organisation], and...they give you...a welcome to Moranbah pack, and in that pack, you get...a change of address for voting, you get a little booklet...telling you all the clubs and everything that's available within Moranbah, you get a street map, you get...information from the council on when your day to have...the hoses on and when not to, when the rubbish man comes around that day. (MO05)

However, this participant noted that they only discovered this welcome pack once they had made contact with the community organisation. Another participant reported that due to the small size of the community, it was easier to work with organisations in the community stating that “because you're smaller. You can get the elements, you can get the council on board, you can get...the schools” (MO01).

**7.1.2 Informal networks.** Many participants discussed their informal social relationships in the community such as relationships with family, friends and neighbours. Participants discussed informal networks in terms of strong ties between family and friends, weak ties facilitating familiarity and friendliness and behaviour monitoring.

**7.1.2.1 Strong ties between family and friends.** Many participants had positive perceptions of their strong ties with family or friends in the community. However, in some cases, participants' discussion of strong ties was negative in that they perceived a lack of strong ties through their informal networks. Participants' perceptions of strong ties through formal networks are discussed in light of the presence and absence of strong ties.

**7.1.2.1.1 Presence.** Mount Isa participants reported positive perceptions of relationships with friends and family in the community. Participants stated “...I'm very lucky because...I have my family, so I've got my parents...and my husband's side...we've got a couple families there” (MI13), and “...from that point onwards I tried harder to make a Mount Isa family which is sort of something that, I knew a few people talk about where you make a family of friends because everyone's alone together” (MI14). Another participant noted “...I am now really good friends with my neighbours. I know just about every single one of them...quite well” (MI01). Additionally, one participant noted that

social relationships created more employment opportunities when stating "...it's kind of like a who you know type of town not what you know" (MI18).

Emerald participants also noted strong ties with their neighbours when stating that "...I'm very lucky in that we have very good neighbours...and I know everyone in the street, I mean, some people don't even know who their neighbours are in big towns" (EM11). Additionally, a participant described social support within the community as stemming from being away from family when stating "[the community] was very, very...open and friendly. Everyone didn't have family here see, no one had family so you relied on everyone else to support you" (EM01). Some participants reported that living within the community for longer periods of time assisted with the development of strong ties. One participant stated that:

I grew up around this area so there's people here that I've known for a very long time...so in a pinch there's people here I can ask to help. But you know what, I found people here to be really quite friendly. Which is, when you're...a grownup, it's not so easy. (EM07)

Another participant stated:

Because I've lived here for so long...I know a lot of people and obviously with my line of work I know a lot of people and as I said I would have no trouble...getting help if I needed it. (EM11)

Participants from Moranbah also noted strong ties between friends in the community because most people were away from family. This is highlighted in one participant's report that:

...when we first came to Moranbah, you were isolated from extended family and so what my view of that is being is that...people that came...the, friends that they made in the community became their family because it was [a]...10, 12 hour drive to go and see...your relatives and all of ours were down in the south east corner so...you probably only saw them once or twice a year and not a lot of them wanna come and visit Moranbah. (MO02)

This participant further explained that:

...when you come into a small community you rely on, the people in that community a lot more I guess. So...you have...a probably...a broader friend space because you need the support of your friends because you're away from family. (MO06)

This participant also noted that "...if your family's here then you've grown up together so...the families are really quite close" (MO06).

*7.1.2.1.2 Absence.* Some Mount Isa participants reported perceptions of a lack of strong ties within the community. One participant stated:

...I've lived here long enough to know that there isn't anything um, and that even if you try to reach out and sort of make connections, it doesn't go very far because people are so caught up in their own lives. (MI19)

Additionally, some participants reported negative perceptions regarding relationship breakdown within the community. For example, one participant stated "it's one of the things that's well known in this town is [the town] will break a marriage" (MI10).

One participant from Emerald noted strong ties within groups but a lack of ties between groups when stating that "I would say yes there's friendships and it's friendly but that's within the groups not across sections" (EM10).

One Moranbah participant noted that a lack of family in the community to have strong ties with can influence feelings of isolation. This participant reported that "...the majority of the people feel isolated because they are away from those families" (MO04).

*7.1.2.2 Weak ties facilitating familiarity and friendliness.* Participants reported positive perceptions of the presence of their weak ties with neighbours and other community residents. Mount Isa participants stated "...I think that's a good thing in this community is the fact that you do know people. Even if you don't know their names you just sort of recognise them" (MI03), and "yep it's nice to walk into a shop and be greeted by name" (MI15). Another participant noted "you can go and sit out in your back yard and have a talk to friends and things" (MI06). Some participants reported that it was easier to

build relationships with others within the community as opposed to within a city. As one participant noted:

...we all strive for that connection with other people and this place makes it a lot easier to find that connection...I think there's been times I've felt more isolated in the city than I have ever felt out here. (MI05)

Additionally, participants stated that feeling isolated is more than being geographically isolated as one participant described "...isolation is not geographical by any stretch of the imagination...it's not at all. You could be isolated in the biggest city in the world and not be able to make any sort of connection with anyone" (MI05). Many participants also described that residents were willing to help or provide support for others within the community. For example, participants stated "yeah they're very friendly, they're very supportive" (MI04), and "...they're a very supportive community and I've experienced that through a family loss we had and the support from the community was overwhelming. So there's a lot of very good, kindly sorts of people here" (MI06).

One participant from Emerald reported weak ties with their neighbours when stating that "yeah I just give them a wave as I go past" (EM03). The same participant reported that their neighbours provide assistance when stating that "...I had to go to Brisbane...I just walked over to the next door neighbours said 'I need my dog fed', 'yeah no worries [EM03], we'll do it for you'" (EM03). Another participant stated "...you just wave to [neighbours] when you're out on the footpath but...it'll take another flood or something like that...to get everyone back together out of their comfort zone" (EM02).

Moranbah participants also noted that "I, know most people that I'll walk by. Which is fantastic" (MO01). Another participant noted that:

I love to drive around town and see...there's always kids out on the streets playing or in their yards...people having dinner...there's quite close neighbourhoods...where... people will be out the front having a beer or whatever or watching their kids play and then their neighbours will come and...I think that everyone is pretty happy. (MO06)

Another participant noted that informal networks are easier to establish in a smaller community stating that "...that's one thing that I see as small communities...there is that sense of companionship...and you're more inclined to talk to your neighbours...than you are in a big city" (MO02). Another participant also stated that:

...people you don't know, when you're walking your dog like I was walking up just before, people say hello to you and you don't get that in [other cities]...Even if I was riding my push bike...you go past and people are walking in the morning, they say hello to you, you don't get that in the bigger towns, not like you do out here at Moranbah, so I find Moranbah very friendly. (MO05)

Another participant noted that the community's informal weak ties are useful in times of need stating that:

It's easy to become invisible with more numbers. In a smaller community it's a little hard to become invisible, people start wondering where you are or...neighbours talk to you, 'oh I haven't seen you in a while how are you?'...I think if you had to weather a storm in a small community you're a little bit better off. (MO01)

This participant further explained that:

When the numbers become larger, you're not accountable in that society and it's very easy...to retract and become...a very reclusive person versus when you live in a small rural community, you have the opportunity of making a difference and to see that you make a difference. (MO01)

One participant reported no clear social divide in the community stating that "...I don't know that there's, a definite line between...well a definite noticeability in...the way people socialise and the way people kind of interact" (MO06). Another participant noted that "I basically find the Moranbah community a very welcoming place for someone new to come into it" (MO05).

**7.1.2.3 Behaviour monitoring.** Participants positively discussed behaviour monitoring resulting from network closure within informal networks in the community. Some Mount Isa participants perceived behaviour monitoring as positive in terms of

assistance with child care and property security. For example, participants stated "...let them know where their kids were. 'How did mum know that?' 'Well it's the grapevine. You know, people know that you're not allowed to do that, that's not accepted by your family'" (MI03), and "...you do get very wary of each other's yards and...protective I guess...to try and prevent anything happening" (MI05).

Emerald participants also reported that "...if my kids are being naughty I find out about it...within a very short period of time" (EM11) and that:

...the place was small enough that people associate us and our kids whether they know us or not, and that they would know...if [our kids] were with someone that they probably [should not be]...anything that looked a bit odd. (EM09)

Another participant noted that:

I personally have found it common in smaller towns because everyone's knitted in in some way like, when you go to such and such a place and you start talking to someone and you'll suddenly discover you know their father at work or their uncle somewhere else or you've come across their cousins were your best friends or, you just meet one person, and from that you meet a ton of other people and from them you meet a ton of other people, so that, by the time they've done something wrong, the whole town knows...it's a fairly tight knit community. (EM05)

The same participant further described behaviour monitoring positively as it facilitated trust with particular people within the community. The participant stated:

Also because as I said, everyone nearly knows everybody, so they know that since you know them and their family and their friends, if they did something you'd know you'd have some way of tracking them down. But also, you know all those different people so even if you've only met them personally once, you've heard quite a few stories about them from everyone else and so you're like, ok those stories were good right, or those stories weren't so oh, I'll ask some else, so. (EM05)

One Moranbah participant reported that "...our kids are accountable here in this community" (MO01). Another participant further stated that the community's connectedness facilitates trust of others noting that:

...when there's too many people, people tend to become a bit scared and withdrawn because...there's the potential for anything I guess and you don't necessarily know who's moved in next door where as small communities, you can't really do much in a small community. It's like...people know that you're in town, you may think that you've come here anonymously but...even like the likes of yourself being in town...you, being here someone'll talk to someone 'oh yeah I saw her and I had that interview' and then all of a sudden they see you up town and you don't know how they know your name. But you know she's the girl...that's coming to do the interviews so...Circles are a little bit smaller so people...tend to know more about what's going on. (MO02)

**7.1.3 Reciprocity.** Many participants discussed instances in which residents would perform favours for each other. Though some participants reported the absence of reciprocity, most participants reported the presence of reciprocity within the community. Participants' perceptions of reciprocity within the community are discussed in light of the presence and absence of reciprocity.

**7.1.3.1 Presence.** Many participants had positive perceptions of the presence of reciprocity within the community. However, in some cases, participants' discussion of reciprocity were negative.

**7.1.3.1.1 Positive.** Most participants reported a norm of reciprocity between residents which aided living in the community. Mount Isa participants stated "because the locals will look after you. I've got a few locals that soon as the see me they go 'oh yep here's your automatic 20% discount'...because I always go to that place. I support them" (MI01), and "I'm pretty happy with this community...they all pull together...it just shows on social media...you see all of our community groups and everything we have and everyone gets in to help one another" (MI18). This participant further explained that:

It does help because I tell you now, if we didn't have people like that [helping each other] in this community, it would go, downhill so bad. You would get, fly-in fly-out

people that's it, and they wouldn't even leave camp, because...your community is what makes a town great...you don't have a good community, you have nothing. (MI18)

Another participant also noted that:

...there's always that connection that you have with people so you're heading to Townsville, does anyone want me to pick anything up? So there's been times when strangers have picked up stuff for strangers because they're going over there and you do that because you know what it's like when you're here and you need something and you just do it. (MI05)

Emerald participants noted that volunteering provided the opportunity to socialise when stating "I'd like to do one day whether it's Meals on Wheels or Salvation Army of something just...to sort of have that social interaction and also...to give back a bit" (EM06). This response highlights reciprocity within the community as the participant notes "to give back a bit" suggesting they have received benefits from the community and want to repay these benefits. Similarly, another participant reported "...the fact that we're all here together and, muddling along together and helping each other out [makes the community friendly]" (EM04). Furthermore, some participants described the community as supportive particularly in times of need. For example, one participant stated "...when people are in trouble, people just get up and help you know, and one example was the 2010-11 floods" (EM08).

Moranbah participants also reported positive perceptions of reciprocity between residents. One participant noted that residents helping each other made the community enjoyable to live in stating that "...there's a sense of...kinship here...when the chips are down people will jump in and help each other" (MO02). Another participant reported that "...one neighbour has little kids and...when my kids you know outgrown things I know that they're really struggling so...I'll make sure that she gets those things" (MO01). This participant further explained that

...we don't have our families...you might five percent still have...their parents or their grandparents are here but how great is it that...you meet somebody and it's

like ‘oh I’m really stuck picking the kids up today from school’, you have a support network, you need to establish those, so people understand that because they have the same situation. So it’s a give and take. (MO01)

*7.1.3.1.2 Negative.* Some participants reported negative perceptions regarding norms of reciprocity between residents. One Mount Isa participant noted that the norm of reciprocity, the obligation to support others and therefore businesses within the community, can cause guilt. This participant noted that “...I like to shop locally but I do, sometimes, but I also buy things on the internet because it’s so much cheaper. So I feel guilty for the local shopping business people” (MI07).

*7.1.3.2 Absence.* Participants perceived a lack of reciprocity between the community and all levels of government. Participants stated that “I think the council and that sort of stuff need to have a bit better look at the bigger picture of what they can do for Mount Isa” (MI08), and “...also, in terms of...the history with this community. Federally for a long time we haven’t, I think received our fair share of service from the government” (MI14).

One Emerald participant described a feeling of being used by the government when stating that:

...it really feels like...when times are good...you get...the pat on the back and everything’s fantastic and then when times are bad...it’s like ‘well we did take a lot of money out of the community that...came out of those mines but just struggle on.’ (EM06)

One Moranbah participant reported low reciprocity based on low perceived rates of financial contributions to community organisations due to the community’s transient population. This participant stated that:

...the [organisation] turns over so rapidly...this [organisation] would not be here...relying on the funds of those people. You see...people only faithfully give into [an organisation] once they’re established in the [organisation] and because there’s such a huge turnover, how can they ever become established? They don’t. (MO04)

**7.1.4 Trust.** Many participants had positive perceptions of the presence of trust within their community. However, in some cases, participants' discussion of trust was negative due to a perceived lack of trust of local government. Participants' perceptions of trust are discussed in light of the presence and absence of trust within the community.

**7.1.4.1 Presence.** Some Emerald participants reported positive perceptions of community residents' trustworthiness. This was highlighted in one participant's report that "...if you...go somewhere and do something and said 'could you watch my shopping trolley?' They'd stay there watch and not ping off with the groceries. So...the majority of people are trustworthy" (EM05). Another participant also stated that "...generally I think they're a pretty good bunch of people" (EM06). Another participant noted that they trust their neighbours when stating that:

...oh god yeah, I mean I would trust like...in our little estate just here, I would trust anyone. Like...I leave my kids home 'cause I work full time and my husband works away, like our kids are home often by themselves, of an afternoon and they know that they can go to any one of these houses here and...be safe and, yeah I've never had any issues at all. (EM11)

Similarly, another participant reported that they trust individuals that they know when stating that "...within my, friends and groups and networks absolutely [I trust them]...within others no" (EM10). Another participant reported that individuals from farming or rural areas could be trusted when stating that:

...the majority of people have a farming or rural sort of background, and, growing up I came off a farm, and...you generally just realise that...most people off the land are fairly genuine, fairly good natured...they've had...their knocks in life and they're fairly resilient and...people that typically you can trust. (EM06)

**7.1.4.2 Absence.** Some Emerald participants reported the local council to be untrustworthy. One participant noted that "...our biggest trouble is our council" (EM03). Another participant noted that "we don't trust any of [the councillors]" (EM02).

**7.1.5 Checkpoint.** Participants from Mount Isa and Emerald reported the development of strong ties through formal networks such as employment and community groups to facilitate enjoyment of the community as well as information transfer. Participants from Mount Isa and Emerald reported the perceived presence of weak ties between formal networks to increase connectedness within the community. In contrast, the perceived absence of weak ties between formal networks was reported as division within the community suggesting a lack of bridging social capital resulting in the exclusion of those who do not fit within existing community groups. Interestingly, Moranbah participants did not report any perceptions of weak ties between formal networks. However, Moranbah participants did report weak ties within formal networks specifically in terms of the mining industry and are therefore reported in the following chapter. Participants from all three communities reported both the perceived presence and absence of formal networks available for residents. However, even where formal networks were available, participants reported barriers to accessing them such as age, money and individual differences (e.g., different preferences). Participants from Emerald and Moranbah also noted that formal networks that provide instrumental support (such as volunteering groups), improve community wellbeing.

Participants from all three communities reported that the development of strong ties through informal networks between community residents seemed to be facilitated by the perception that residents were isolated from their families. Therefore, strong ties between residents offer support that was perceived to normally be provided by family. Participants also reported that weak ties between community residents as positively influencing their enjoyment of living within the community. Being known and knowing others was reported by Mount Isa and Moranbah participants to be facilitated by the small size of the communities. Additionally, participants discussed the ability to monitor others behaviour due to both strong and weak ties within the community. The behaviour-monitoring role these networks provide was perceived to facilitate trust within the communities.

Participants from all three communities reported positive perceptions of reciprocity. Helping each other out was reported as a result of residents being away from their family. However, within Mount Isa, one participant noted that the norm of reciprocity can cause feelings of guilt. Additionally, one Moranbah participant stated that reciprocity was lacking

due to residents not financially contributing to community organisations. Only participants from Emerald reported explicit perceptions of trust in the community. Participants reported that it was through these trusting relationships that they had access to help and support from others in the community.

## 7.2 Human Capital

Participants from all three communities reported the effect that the provision of basic human needs (e.g. health) and individual capacity building (e.g. education) has on the community. Five factors were identified within participants' reports of the community's human factors – health services, health status, population change, safety and education and skills. The human capital factors are presented in Figure 13 below.

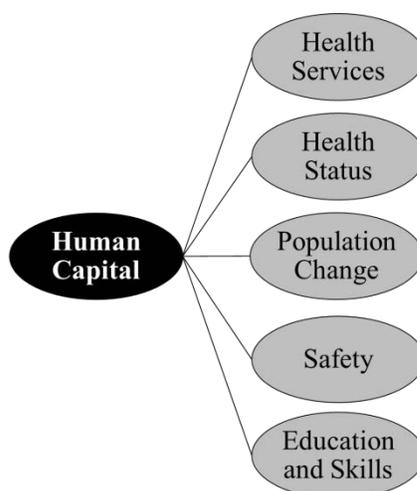


Figure 13. Human capital factors perceived to influence community wellbeing.

**7.2.1 Health services.** Most participants discussed the health services within their communities. Although some participants reported negative perceptions of health services, many participants reported positive perceptions. Positive perceptions regarded a reported adequacy of service provision and quality while negative perceptions regarded a reported lack of availability or accessibility of health services and the affordability of these services.

**7.2.1.1 Positive.** Many participants reported positive perceptions of the amount and quality of health services within their community. Mount Isa participants reported the perception of adequate and sufficient health services available within the community. One

participant reported "...I think we've got dentists, we've got an optometrist. So for me I don't feel like we've got a lack of services" (MI20). Additionally, wait times within the medical setting were reported as being similar to other metropolitan areas. One participant noted that the "...timeframes are very similar to what you would experience in Brisbane. So I think that's been good...yeah there's always plenty of doctors" (MI08). Some participants also reported the perception of sufficient therapy services and support available within the community. This was highlighted by one participant who reported that "...the mental health is coming on nicely like I'm really impressed with what they're actually pushing out there at the moment. So yeah, it's, the support is finally coming through" (MI10). Additionally, improvements in technology were perceived by participants to increase the ability for people to access services and help. For example, one participant reported "...[husband] did half of his appointments by telehealth, because he couldn't fly to Townsville every time they needed to see him" (MI10).

Emerald participants similarly perceived plenty of health services within the community available to residents. Participants noted that "so I say here we're fairly vibrant because we do have a hospital...if you've got no money you can go to the hospital and wait in that system" (EM02), and another participant reported that "...we have the hospital, several doctors...chiropractic...chemists, so they do all the diet programs and things like that so that's pretty good" (EM05). One participant noted sufficient provision of mental and allied health services when stating "...we have lots of things...we have physiotherapists and...there's psychiatry, psychiatric services...yeah I think there's quite a bit" (EM09). Additionally, a participant stated that the health services available in the community were above a satisfactory level when noting that "...the services here are very good medically" (EM08). Another participant reported increased availability of medical services due to longer operating hours within the community when they noted that "...you couldn't get to a doctor after lunch time Saturday but now you can get to a doctor Saturday ar, Sunday...at night time. You can get a doctor up to half past...nine o'clock at the super clinic" (EM02).

One participant described a positive experience of support for mental health problems within the community when stating that "support for [daughter] for anxiety was just great...we went through the public system and we went through private systems...so it, you know that was really good" (EM08). Additionally, participants reported that there were

plenty of community support organisations to assist residents experiencing mental health problems. One participant reported that:

I know there are services in town...like the neighbourhood centre that people can go to that if they are, are having...emotional difficulties and...there's...Centacare, I think that's the one where you go to for...what do you call it?...if you're having problems in marriage...oh counselling. (EM11)

Many participants also noted that there were outreach services and schemes available to residents that assisted with accessing medical care that was not primarily located within the community. Participants described their experience of accessing a breast screening bus within the community:

But health wise here, the services, that breast screening bus comes every two years, 'cause I went a few years ago and I had, and I was discovered to have breast cancer so there you go. I wouldn't have went to Rocky. I turned 50 and...went to the doctor, 'oh have you ever had this?' 'No.' 'Oh well I'll give you some forms [to] go to Rocky.'...And then within a month they advertised in the paper that screen, breast screening thing was coming and oh well while it's here I'll go, and bugger me dead I had breast cancer...So to me, that was a blessing and [the breast screening bus] comes regularly now, every 12 months I think. (EM01)

Another participant reported positive perceptions of non-residential workforces within the health industry when noting that "...[Queensland Health] have...certainly people fly-in and fly-out to still deliver services for the community...I feel that there's a lot of good things happening within the...health industry" (EM10). Some participants also reported that travel schemes made it easier to access medical specialist outside of the community. For example, one participant noted that:

...there is a quite a good, if people have to travel for medical purposes there is quite a good scheme for people to get on planes and go on to Brisbane if they have to or...drive over to Rocky so. (EM09)

Another participant reported that the use of technology in conjunction with outreach services assisted with accessing healthcare when stating that:

I'd say healthcare seems pretty good...and I think that's, Queensland Health has enabled that...taking advantage of...online like they're doing Skype, they have...certainly people fly-in and fly-out to still deliver services for the community...I feel that there's a lot of good things happening within the...health industry. (EM10)

Some Moranbah participants perceived that the community had sufficient health services available for residents. One participant noted that:

We do have a...hospital, we have radiology, we have community health, we have the nurses, the speech, we have diabetes, counselling, triple P...we have two dentists, we have a physio, we have an optometrist, you name it we pretty well have everything that you need. (MO01)

Another participant noted that medical professionals remain in the community longer compared to other mining communities. This participant reported that "...smaller mining community will struggle with that kind of stuff...just keeping doctors in a town...or keeping...a chemist...or...any of those kinds of things" (MO02). This participant further stated that "...we have a lot of visiting specialists" (MO02). Similarly, another participant explained that:

...I think the Heart of Australia van for the cardiology has ticked a lot of those boxes. So what it does is it does a...fortnight turn through rural communities in Queensland so it comes here every...other Wednesday and it stays overnight so they do sleep apnea testing, they do stress testing, they do cardiology testing...they have everything they need in that mobile van. They come out, they see the referrals and people aren't being put off so some of these people, if they were to wait the four to five months they would be dead. So here's an initiative that is being proactive with rural health rather than...us being reactive. So these people are back in the community, they're healthy. (MO01)

One participant also reported that technology allowed for greater access to services when stating that "...now there is another option...at the...Moranbah and district support services, they have a system there where you can access...a skype appointment or over the phone appointment with...counselling or whatever" (MO06).

**7.2.1.2 Negative.** Some participants reported negative perceptions of health services because of a stated lack of availability or accessibility, and affordability of these health services. Some Mount Isa participants reported limited availability and affordability of healthcare facilities. In particular, the limited availability of medicines and tertiary healthcare services was noted. One participant likened the availability of medicine to a third world country:

...I guess medication sometimes, I've been to get a medication from the chemist, they haven't got it, they have to order in, we have to wait for the next day. So sometimes things like that I get frustrated with because I think oh we're not a third world country, like send it out you know? (MI05)

The geographical isolation of the community was perceived to limit the range of medical providers available. A participant reported that "...the distance to get medical treatment that's not available here or if you want a second opinion. So things like that are a problem" (MI03).

Some participants also perceived that outreach health services can have a negative impact on the continuity of care within the community. A participant stated:

...but I do find like health professionals too will [FIFO]. Yep there are some who do that. Yeah so does that devalue our community? Like they're sort of going ok well I like being on the coast so I'll provide a service to you but I'm not gonna move my life here. So and that just makes you worry about how, like continuity of care and stuff like that...so I think not having a stable support service in terms of like counsellors and stuff like that in the community, having to retell your story over and over again...I think it can be destructive. (MI14)

Some participants also reported that more awareness of mental health services was needed in the community to assist in reducing the perceived high suicide rate. As one participant

reported "...I think the problem is that there are services but...not everyone knows it's available, and those services may not necessarily know how to target or how to get these people" (MI13). Some participants also reported a perception that funding to community groups and services could be better allocated as one participant noted that "...all the social issues that go on, it just, people are just throwing money at it and not actually doing anything about it" (MI18).

Many Emerald participants discussed the perceived difficulty of seeing a doctor within the community. One participant noted that:

What does concern me is...it's cheaper for me to go, I go away for work a reasonable amount, if I want to go see a GP for something that I know I'm gonna require where I can get a doctor that bulk bills in Rocky, I will because we don't have bulk billing facilities here 'cause there's [a] cartel amongst GPs. (EM10)

Furthermore, participants discussed the perceived inconvenience associated with needing to travel to see medical specialists. One participant stated that "...it's the travel thing and you don't have the choice, that's what really peeves me." (EM01). The same participant further discussed concern regarding older people needing to travel for healthcare when noting that:

...it's just that travel thing...expecting old people to travel in a car, in and out. Just throw 'em on a plane and take them to Brisbane. They can't handle the trip. So that's my biggest gripe would be the travel thing. (EM01)

One participant reported frustration due to the perceived difficulty of being able to see the doctor of their choice when stating "you go to the Super Clinic, unless you want to wait a month. You don't get the appointment with the doctor that you want to see, so, we've had that forced on us" (EM02). The same participant further clarified that "...we've lost the 'you only go to the one doctor'...what we've got has been forced on us by the local doctors selling out" (EM02). One participant reported that for ease of access to healthcare, "I think people tend [to] live away if they're...too unwell" (EM09).

Some participants noted that the health services within the community were restricted in the services they can deliver. In particular, some participants noted that babies were not able to be delivered within the hospital. Participants noted that "...the women

were having trouble, they couldn't even have babies here. I thought but babies supposed, are the most normal thing in the world" (EM04), and another participant stated "...for a woman who wants to give birth in town here, unless...you've had a couple of kids and it all went quite well...they generally encourage you to go to Rockhampton" (EM09).

Participants also noted that the hospital within the community does not receive enough funding reporting when stating "how can you not have funding for a public hospital? That just blows me out" (EM01).

One participant also noted their annoyance regarding the perception that private health funds do not recognise the extra costs incurred by those who live in rural areas when accessing health services. This participant reported that:

I mean I've written to the health funds, that is my biggest, bitch. I pay their, if I'm in any health fund, I pay the same money as the person in Brisbane. Now they may have to pay for parking at the hospital or wherever they go but, they don't have to pay to get there really. You know, we pay through the nose to travel you know and then first [thing] they knocked out of private health was your travel assistance, it was \$1000 they knocked it back to 600. Then, your 15 year old son has knee injury and they say 'oh send him to Brisbane, can you send him on his own?', 'No, can I use my health, my travel component on my health as going as his guardian?', 'No, you're not allowed to do that.' (EM02)

Some Moranbah participants reported a perception of insufficient health services within the community. One participant noted that "...there's no bulk billing [doctors] here so...you're paying out for that" (MO06). Some participants expressed concern regarding the lack of birthing facilities in the community. These participants stated that "...there is a lot of young families here and our hospital doesn't...provide facilities for...birth. So people have to travel away for that which can be stressful" (MO06), and another participant reported that:

...one huge disadvantage...for women is the...way that the medical fraternity has gone in not allowing babies to be born in remote areas. Like that to me is just fricken ridiculous because women have being giving birth for thousands and thousands of years, you don't have to have, a huge medical facility to make that

happen, but the fear factor is in everyone these days...and everyone's just scared of litigation because no one wants to take responsibility so it's just too easy to blame someone else and sue someone. (MO02)

One participant noted difficulty using counselling services in the community due to its smaller population stating that:

...I did start kind of seeing someone in Moranbah but that, everybody that worked at the place is, has either children my age or we do sports together like they're people I see every single day and have interactions with at school, at sports...so it's, that kind of made it really difficult. (MO06)

Similarly, another participant reported concern regarding a perceived lack of psychologists in the community stating that:

...when it comes to psychologists we don't have the psychologist that we can book in and go and see...there is only one in town...and they're only contracted to the mines, you know? So...you cannot see a psychologist here and I tell you now the mental health issues in town...the average is quite high compared to the national average. (MO04)

One participant reported a perceived lack of medical specialists in the community stating that "...medically living in a community like this it can at times be difficult...if you need to see specialists...you have to travel for and then because it is a bit of a distance" (MO06).

Another participant also stated that:

...I think where you're concern is, is that if you become...someone that say has cancer and needs to go for radiation and...chemotherapy you're being displaced...away from your family and I think that in itself would be the hardest. (MO01)

The same participant also noted that a lack of medical services can result in residents leaving the community stating that:

...by about...say 70, 75 when they're experiencing two or more health...ailments...they move to coastal communities. There aren't the retirement homes, there aren't the nursing homes, there's not the support network, there's not...the medical facilities in order to combat what they're experiencing...and that's very sad because now they're being removed from their community where they felt safe. (MO01)

**7.2.2 Health status.** Many participants discussed the perceived health levels of other residents within the communities. While some participants reported positive perceptions of residents' health, most participants reported negative perceptions.

**7.2.2.1 Positive.** Some participants reported positive perceptions of community residents' health. Some Mount Isa participants viewed the physical health of residents as good due to the perceived young population and large sporting presence within the community. A participant stated:

So I think...we've got a young population so generally quite healthy...just based on their age...because there is a big sporting community in town. I think of the average person is probably...pretty active or does something outside when it's not too hot. (MI14)

Additionally, some participants perceived the death rate to be low and consequently, the health status of residents as being good. As a participant noted "...there's not many people who are dying" (MI20). Furthermore, some participants reported that there were plenty of opportunities for people to exercise as they perceived there was a wide range of sporting and gym options in the community. Participants reported "...there's the opportunities if you're into it, to be doing...triathlon or rowing or whatever" (MI04), and "...going to the gym, we have a fair few gyms here" (MI14). Some participants also reported a perceived increase in awareness about psychological health within the community. A participant noted "...I think [the community have] become more aware and thought 'well how can we prevent [suicide]?''" (MI18).

Some Emerald participants reported that they perceived residents within the community to have good physical health. One participant reported good physical health to

be the result of residents exercising, stating that "...as far as the health of everyday people, probably an example that they are fairly healthy is when you drive early in the morning or late at night there are people walking everywhere" (EM08). Another participant reported good physical health within the community as there were few elderly people with poor physical health. The participant stated "I don't know exactly what the...average age of people is but we're not, I guess we're not a lot of old, sick people" (EM09). Additionally, one participant noted that anti-social behaviour, such as drug use and domestic violence, was not highly prevalent within the community due to the community's high employment rate. This participant reported that "I don't think [anti-social behaviour is] quite as big as some places, because most people here are working" (EM04).

Similarly, some Moranbah participants reported that community residents were healthy. Participants reported that residents were in good health because they were active. Participants reported that "...generally health wise...fitness is a big thing in Moranbah...lots of people walk" (MO02), and another participant noted that "...you see a lot of people out running and walking, there's a lot of people who walk around...town" (MO05). One participant also stated that:

...there's always people out on the streets walking or riding or...walking their dogs or playing sport...or down at the park...I think that people do like to get out and about and...keep themselves pretty...fit and healthy. (MO06)

One participant perceived residents to have good health because use of the hospital was low. This participant stated that:

...I lived [near] the hospital, for a year and a half, there wasn't that many people at the hospital...There was a couple of times the ambulance came in, couple of them were bad car accidents which have nothing to do with...the health of...Moranbah, but I'd have to say most people in Moranbah are quite healthy. Just from my overall observation and...the amount of times the ambulance went to the hospital within a year and a half it wasn't all that many times. (MO05)

**7.2.2.2 Negative.** Many participants reported negative perceptions of community residents' health. Mount Isa participant reports of poor physical health were often

characterised by discussion of overweight residents as one participant stated “there’s a lot of really overweight people in Mount Isa” (MI08). Poor health was perceived as resulting from poor quality fresh produce due to the geographical isolation of the community. Participants reported “...if you lived on the coast somewhere you’d be going to markets and getting your fruit and the veg which are a lot fresher and the quality of buying from the grower...and paying a lot less for them” (MI19), and “...[produce has] been on the truck for three or four days before it gets here” (MI04). The perceived high availability of fast food was also reported as contributing to poor health within the community. One participant reported “So when Hungry Jacks opens we’ll have the...highest proportion of fast food per capita in Queensland or it might even be Australia, I don’t know it might be” (MI14). Some participants perceived poor health as resulting from limited or poor exercise options within the community. This was highlighted when a participant reported that “...we can’t get outside and do all the activities that we really want to because it’s so hot” (MI20). Another participant identified the weather as impeding exercise opportunities to enhance physical health when stating:

Definitely the heat is an issue because you don’t want to go outside during the day I think that’s where a lot of our weight issues come from because you don’t want to go for a walk or you can’t park your car up town and walk because it’s too damn hot. (MI08)

Additionally, some participants expressed concern for the health of shift workers, which was perceived as being particularly poor within the community. As one participant noted “...there’s shift work and my husband’s at the mines...it’s very difficult to...get out and exercise or to access healthy food and, and that kind of thing so you have to be really committed” (MI04).

Some participants reported the perception that the use of drugs and alcohol also negatively affects the physical health of residents. Participants reported that “...I’m still astonished about how much people can drink and how...they do drink and it is clearly a norm” (MI11), and that “...just all the drugs and alcohol at the moment” (MI17). Another participant noted that “...I think...alcohol is a big thing” (MI14).

Some participants reported a perception of high suicide rates within the community, particularly within the young people of the community. One participant stated that "...we have a, you know youth suicide and adult suicide but I mean we have a huge suicide problem here" (MI19). Another participant noted that:

...the suicide, like that, that did dampen our community pretty bad when all of that was happening and it still is just not as constant, but...if it keeps going on the way it is, there's not gonna be many young people left, because they are, you know they will, do something terrible. (MI18)

Participants viewed suicide as affecting the whole community due to its smaller population. One participant reported "...the suicide...especially being in such a small community, everyone's affected because everyone knows someone who's suffered from that or is going through it" (MI18). Another concern for some participants was the negative effect shift work can have on the mental health of the worker and their family. As one participant described:

...I didn't really know much about it because all I knew is that I saw my dad four days out of seven of the week cause he's on shift work, and I didn't like that at all because I never really saw my dad growing up. Because he was always working and I couldn't understand why my dad always had to go to work and you know why he had to work these hours and why I'd only see him on certain days so I couldn't really comprehend. (MI18)

Participants further noted disparity in health between the Indigenous and non-Indigenous residents within the community. One participant noted "...well I guess...in some aspects it's a bit split between the Indigenous population and the white population which is because there's a significant gap in all the areas of their life...to the white population" (MI12).

Some Emerald participants also reported that the physical health of the community was poor. One participant noted that "...physical health of the community I 'spose it's, not that fantastic" (EM06). One participant reported that due to the town's closeness to agriculture, there was concern about exposure to pesticides when stating that "...people

[are] concerned about...the cotton sprayers” (EM11). Additionally, one participant discussed concern regarding sun safety within the community when stating that:

...the other big thing I see is a lot of people have a lot of sun damage, and I guess that’s to be expected where we are, but you see especially a lot of the...farming people, they, you can see...their skin has really been battered over the years.  
(EM06)

Some participants reported a concern regarding the use of alcohol and drugs within the community. Participants reported that “...[people] get on the booze, and there’s drugs here” (EM04), and another participant stated that “...I was surprised when I first came here to find out like we have got...a drug problem in the town” (EM09). Some participants noted that the increased use of drugs within the community reduced their trust of others, which is highlighted in one participant’s report that “...I’m not so trusting this day and age with drugs and things like that” (EM08). Another participant perceived alcohol and drug use to occur as a result of not engaging with other within the community when stating that “...all the social issues that go with disengagement like alcohol and drug abuse” (EM06).

Some participants also reported obesity to be an issue within the community. For example, one participant noted that “I reckon there’s more obese people here...I would say that’s a problem...we’ve got big people here” (EM11). Some participants perceived a lack of exercise to contribute to residents being overweight. One participant reported that “I think probably there’s not enough people involved in exercise to be honest...you see a lot of...people that are either over, overweight or aren’t...in very good physical condition” (EM06). One participant discussed the difficulty of exercising due to the community being inland stating that:

...like as my husband always says... ‘oh it’d be so much nicer to go for a walk along the beach than just a walk through the gardens here or around the street’...but again, I guess those people that want to be active, are...I guess it’s more just...the scenery. It’s, lovely to go for a walk along the Strand...and people might do that, not purely to get out there and exercise but just because it’s nice. (EM11)

Additionally, one participant reported high amounts of take-away food as contributing to residents being overweight. The participant noted that:

I think at one point someone did a study about how many take-away or eating places there were per square kilometre and we had some phenomenal amount in Emerald. It was just ridiculous...I think obesity is a, a problem here. (EM11)

Some participants recognised that a lack of social interaction could result in poor mental health. One participant stated that “there are a few people around town who are just known for not being happy. No idea why. They don’t generally talk to anyone” (EM05). Another participant noted that individuals need to be able to seek help themselves when stating that:

...don’t sit there and go through depression and the rest of it that’s...what I try to tell a few people, don’t start worrying about...there’s people out there. Go over the road and ask, that’s all you do. And they’ll tell ya...but you gotta ask, don’t sit there and bottle it up otherwise that’s when your domestic violence starts and all the rest of it. (EM03)

Another participant reported concern regarding alcohol fuelled violence within the community when noting that “I think the, worst things I might have heard...some houses, they have their drinking party and someone’ll get violent” (EM05).

Most Moranbah participants reported problems affecting community residents’ health. One participant noted “well bloody overweight...there’s a lot of people here including myself” (MO03). The same participant explained that residents were overweight because “...they don’t get out and do things” (MO03). However, this participant further described that “...if you really want to be fit, [it is] too bloomin’ expensive. Isn’t it?” (MO03).

Some participants reported poor psychological health within the community. Participants stated that the community’s youth had poor psychological health as one participant noted that “...when it comes to children here in town...especially...from... primary school it starts right through to high school, big mental issues...cutting, self-harm,

is here above the national average and mental health issues” (MO04). Another participant reported that:

...here in Moranbah there has been over the last couple of years, I guess I could say quite a few if you like suicides of young people, which I think...well obviously that's not very healthy but I don't know that, there is a great deal of...I don't know what kind of services are really available for young people with that. But I think there is a problem probably in town for...mental health. (MO06)

Another participant reported that suicides have a large impact on the community due to its smaller population. This participant explained that:

We have had...two young men that have committed suicide that the kids at the high school have known...we have another young man that was older that had as well...I think that happens everywhere...that we have young people that take their lives, the difference in that is that it affects our young people in a different way because we are smaller...I didn't know him personally...but he was a really good friend of another friend of mine. So when you have a smaller population, it affects the whole population because you know somebody that knew somebody. (MO01)

The same participant explained that employment instability within the community was affecting residents' psychological wellbeing when stating that:

...as far as emotional...and psychological wellbeing as a person, I think...it's not community that's affected them, it's possibly a realignment with their job, they're now making less than they ever had...they still have the same financial obligations that they had prior but they're making less. (MO01)

Some participants reported the presence of drugs within the community. Participants noted that “...ice labs we've definitely had those here” (MO04), and another participant stated that:

...I don't know if it's the introduction of or, I know the drugs, were an issue here in Moranbah...I did go to a couple of community meetings also where they were

talking about...how bad drugs like ice are in this community in the young kind of population in Moranbah. (MO06)

**7.2.3 Population change.** Some participants discussed population changes within their communities. While some participants perceived population change to positively impact upon the community, most reports regarded population change negatively.

**7.2.3.1 Positive.** Some participants reported positive impacts regarding population change. Some Mount Isa participants reported positive impacts of a transient population, highlighting inclusivity when stating "...the community doesn't seem to be fatigued of people coming and leaving and coming and leaving" (MI12). Another participant noted that "...so I think just the general transient population actually makes it easier to get in here like in a friendship group" (MI14). Additionally, other participants noted that the "...transient population is dropping now" (MI03).

Some Emerald participants perceived population decreases to be positive as evidenced when one participant stated "...'bout five thousand of the population have left which is fine" (EM03). Another participant reported that a lack of population changes resulted in services and activities being able to remain in the community. The participant reported that "...the population base in Emerald is more stable, so stuff seems to survive" (EM07).

One Moranbah participant reported a positive perception of the transient population increasing acceptance within the community. This participant stated that:

Different rural communities in Queensland if you were to go to a general rural community, 40 years later you will not be a local if you were not born within that area...But...here because we've tracked over 30 languages that are in the community, we have a very transient community that are very multicultural community as well and with that there's a very strong understanding of it's ok to be different. (MO01)

**7.2.3.2 Negative.** Most participants reported negative perceptions of population changes. Many Mount Isa participants noted that population loss and transiency negatively influenced their enjoyment of the community. A participant stated when reflecting on

population loss “because if you don’t have the people, you don’t have the city” (MI01). Some participants perceived the transient population as not investing in the community. This was highlighted by a participant’s report that “...a lot of people come out here for a short time and then go again, so they’re not necessarily particularly invested in the community” (MI19). Establishing new friendships within the community was also viewed by the participants as tiring due to the perceived high turnover of residents. Participants stated that:

...I think for those who stay, it is actually exhausting...I’m sort of getting to the point now, it’s actually...in a work environment as well...when you’re trying to get to know new people, know their roles and...depending on the position in the company, if you’re vouching for them or trying to promote their services, it’s hard when...you know there’s probably a time, an expiration date on them being here. (MI14)

Another participant noted that:

I think I’m getting into the mindset of some of the older people here and I’m sad that I’m doing it but it’s you know, really how much do you want to invest in someone that’s...not gonna stick around...like why try? Friendship takes some effort, why try to be, make friends with someone...and they’re gone. They’re just gone. (MI09)

Furthermore, some participants reported that they preferred building friendships with permanent residents rather than more temporary residents. As one participant reported:

Teaching was my work and too many of the people that you get friendly with there, would up and leave so it was, it was easier and better to be a part of the community with people who were staying. (MI15)

Some Emerald participants also perceived population changes to have a negative impact on the community. One participant discussed the impact of friends leaving the community when stating that “...lots of our friends have left...you think, ‘oh I’m not going through that again’” (EM02). Another participant reported that there is less income and

therefore less spending in the community as a result of people leaving. The participant noted that "...with people leaving it's, there's less income, there's less, less of the...apple pie. There's certainly that." (EM03). Similarly, participants discussed the closure of businesses due to a decreased population base within the community. For example, one participant reported:

...within the 18 months that we've been here there have been a number of businesses close...Because there's...just not the...support there and...like I said, in our area, the suburb that I live in, there are probably...at least 10 houses for sale. (EM07)

Some Moranbah participants noted concern regarding population trends within the community. One participant noted the short length of residency within the community stating that "...there's not a lot of people that have been here for as long as what I've been here" (MO02). Another participant discussed the difficulty of continually meeting new people noting that:

...one of the challenges that we have is definitely...meeting and saying goodbye to people all the time...to meet people and to make them feel welcome, a lot of energy goes into that...a lot of time...and then before you know it you're...saying goodbye. (MO04)

This participant further explained that:

Here, in four years and...there's only one person in this [group] that is here when we first came up...and...we've had thousands...over two thousand people come through the [group] last year...that's the culture and you can't tell me that that's healthy...it's not. That's not what a community is. (MO04)

Another participant noted that "I notice there's a lot of houses up for rent here...and I've seen people moving out" (MO05). One participant also noted a high turnover of residents due to the requirements of certain professions stating that:

...we also have a very transient...teaching population that city schools don't because Education Queensland requires that teachers spend three years in

rural...education and a lot of them do that straight out of the gate to tick it and be done, then they get their placement where they want to go. (MO01)

Furthermore, one participant reported an increase in low socio-economic status families due to the high rates of housing availability stating that:

...there is a lot of welfare families being moved to Moranbah because there's housing available. Which I think can cause a problem for a community like this because there's not a great deal of work opportunity. So if you're moving people to a community purely because there's housing available, there needs to be a bit more thought put into moving them to a mining community like Moranbah where the only job opportunities really are mining and if you're not, if you don't intend to seek employment in that industry or, you know then it can be, I don't know that that's a great. (MO06)

**7.2.4 Safety.** Participants reported both positive and negative perceptions of their community's safety. Reports of safety were the result of perceived crime levels.

**7.2.4.1 Positive.** Some participants reported no or low levels of crime within their community. Some Mount Isa participants reported no concern about crime as one participant noted "...it is a safe place" (MI16). Furthermore, some participants perceived that the rates of crime were no different from other towns. One participants stated that "I would say per capita no. [The crime rate is] no different from anywhere else" (MI05). Additionally, some participants reported that they could perform behaviours to reduce the risk of being victim to crime. As one participant reported:

...I've been away for three and four weeks at a time and have come and my house, touch wood, has been ok...you don't leave your house looking like it's empty. I leave the car in the carport and leave a light on inside and, so it looks like there's someone home, but that's, you do that anywhere not just here. (MI15)

Emerald participants reported that residents were not concerned for their safety within the community when stating that "...[residents are] happy to walk around and say

‘hi’ to people without worrying about whether that person’s got anything lethal in their pockets” (EM05). Another participant also reported that:

We don’t sort of live our lives worried about people gonna break into our house. We pretty much, we don’t lock the house very much at all ever really...probably only if we leave town but other than that...we never lock the doors. (EM09)

Some Moranbah participants reported positive perceptions of the community’s safety as highlighted in one participant’s statement that “...I’m not as maybe paranoid as I would be in a city of...walking to school...and not just from people but with traffic...it makes a small community a little more comfortable with children” (MO06). Another participant noted that “...theft...things like that...those sort of things have been minimal” (MO04). Further, another participant reported that the perceived isolation of the community increased safety. This participant stated that:

...we’re a bit isolated so you don’t tend to get...there’s the same issues here that there is in every community but I guess it’s not...like crime’s not a rampant thing...it’s safe for the kids to jump on their bike and go and find their friends. (MO02)

**7.2.4.2 Negative.** Some participants reported negative perceptions regarding high levels of crime in their community. Some Mount Isa participants reported concern regarding safety within the community. Participant reported that “...they reckon the domestic violence is really high here” (MI06), and another participant stated that “...at the moment the breaking and enterings is just crazy, it is nuts” (MI18).

Some Emerald participants reported concern regarding their safety within the community when stating that “some streets have been known for do not walk across that street at the middle of the night.” (EM05). Another participant reported that:

...you hear...some horror stories about paedophiles and criminals in town...you have it in the back of your mind that you do need to be careful with your children and you do need...to be aware that there’s people like that in the community. (EM06)

One participant also stated that domestic violence is a concern within the community highlighted in their report that “the only thing I think may be a problem is domestic violence, which is a big thing at the moment anyway” (EM04).

Some Moranbah participants perceived a high prevalence of domestic violence in the community. One participant reported that “...I saw things that when I took that job on, that I’d never ever noticed was in my community so I didn’t realise the prevalence of domestic violence” (MO02). Another participant reported that “...[domestic violence is] an epidemic...it really is...a lot of it just is brushed under the carpet” (MO04). The same participant further explained the increased cost associated with domestic violence stating that:

...court for a long time was on one day a week...but what we saw happen was...they took court to two days a month...and the second court day...is mainly taken up with civil cases so you got criminal court and you got civil court so...the extension of the...time of the day...and the cost of the judge to come out here was because of the increase in domestic violence. (MO04)

**7.2.5 Education and skills.** Participants reported both positive and negative perceptions of the education opportunities available and the skill levels of residents within their communities.

**7.2.5.1 Positive.** Some participants reported positive perceptions of the education opportunities within their community. Many Mount Isa participants, particularly those who had children, perceived that the community had adequate educational opportunities. This is exemplified by participants who stated that “I think the schools and that are fairly good here” (MI08), and another participant who reported that:

...now I've got one [child] at school and even the opportunities that she’s getting at school. She’s got an Aboriginal support person that’s giving her extra support you know. She’s in a class where the teacher’s fantastic, the kids are great. (MI04)

Some Emerald participants also reported positive perceptions of the schools within the community. Participants reported that “Emerald’s got great schools, they’ve had some great teachers” (EM02), and another participant reported “...our little one goes to [one of

the schools] and it's...a great school and we, we find that it's, they care and...the care that she receives there is fantastic, we're really happy with it" (EM06). Additionally, another participant stated that the "...schools are going pretty good, I don't think anyone's had anything to complain about them yet" (EM05).

Some Moranbah participants reported positive perceptions of the skill and education level of residents as well as the quality of schools in the community. One participant reported a broad range of hobby/recreational related skills in the community stating that:

I think in Moranbah as well because it is a small town but with a lot of people...with so many broad interests I think there's just...so many people in this town that have so many talents and...things to offer. (MO06)

Another participant perceived the schools to be of good quality in the community as highlighted in their report that:

...there is a general, misconception is that, education here, especially living in rural communities...and this...is a representation of a lot of places...in Australia, is that once they get to the end of primary school or the year before the end of primary, they have to be on the coast to go to school...and that really is a misconception because our high school two years ago...the trainee centre was number one in Australia...last year in Queensland two of the apprentices that went up...for the awards were from here...we get OP students, we do well. (MO01)

**7.2.5.2 Negative.** Some participants reported negative perceptions of education and skill development opportunities. Mount Isa participants perceived the loss of skills when residents leave the community as negatively affecting the enjoyment of residents in the community. As one participant noted:

It gets frustrating at times but you know you sort of, and people come and go with their different talents and skills. So that's something that you've got here one year, won't be available the next sort of thing, 'cause I was going to do belly dancing this year but...the lady's left town. (MI03)

Some participants also noted a lack of skills and job training within the community as one participant stated "...but there just isn't enough job training or anything available" (MI18).

Some Emerald participants discussed poor education opportunities within the community. One participant noted that rural communities in general have less education opportunities when stating that "I just think...in education that...anyone that lives in the country is penalised" (EM01). One participant also noted less variety in courses available at the university within the community resulting in people relocating to a different community. The participant stated that "...well if you're trying to get into uni or something, [the] uni here doesn't have as many courses so you'd have to move to a bigger city or something like that" (EM05). Some participants also discussed the TAFE campus within the community as not being used by the community or as being closed. Participants reported that "the apprentices at the mine go [to TAFE], they either go to [other communities] now...Here we've got a TAFE sitting right in the centre of the coal mines and we're not using it" (EM02), and another participant stated "...our TAFE I think is closed here" (EM04).

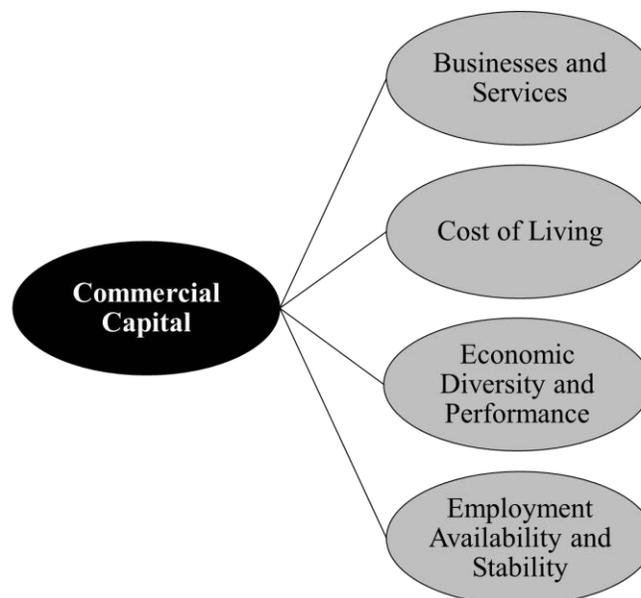
**7.2.6 Checkpoint.** Participants from all three communities perceived basic healthcare services to be available within their communities. Tertiary level healthcare was generally reported as lacking within the communities while increased use of technologies was perceived to increase access to healthcare services. Participants from all three communities perceived good health as resulting from residents being active. Perceptions of poor health referred to overweight residents, the use of drugs and alcohol, and poor mental health. Mount Isa and Moranbah participants also perceived suicide to be a problem in their communities.

Mount Isa and Moranbah participants reported their perception that a transient population resulted in the community being more accepting of new residents. However, participants from all three communities reported that transient populations increased the difficulty of maintaining social relationships. Participants from all three communities reported perceptions of high levels of general safety within their communities, however domestic violence was perceived to be a concern within each. Participants from all three communities perceived the education facilities within their schools to be of good quality. Moranbah participants also reported diversity within the community due to different

hobby/recreational related skills. However, Mount Isa and Emerald participants reported concerns regarding less variety of education opportunities within their communities ultimately meaning they would need to relocate if seeking such education. Additionally, the loss of skills from population loss was reported to decrease Mount Isa participants' enjoyment of their community.

### 7.3 Commercial Capital

Participants from all three communities reported the effect of economic factors on community wellbeing. Four factors were identified within participants' reports of the community's economic factors – businesses and services, cost of living, economy and employment availability and stability. The commercial capital factors are presented in Figure 14 below.



*Figure 14.* Commercial capital factors perceived to influence community wellbeing.

**7.3.1 Businesses and services.** Many participants discussed their community's businesses and services. Participants reported positive perceptions regarding the quality and availability of businesses and services and negative perceptions regarding a lack of variety and decreasing availability of businesses and services.

**7.3.1.1 Quality and availability.** Some Mount Isa participants reported that there were sufficient businesses and services available for what they need within the community. Participants reported “...there’s enough of everything that I need, sometimes I don’t have everything that I want” (MI14), and that the community has:

...got all the good things, good shops, big shops, not as many as you have on the coast but let’s face it, a lounge suite is a lounge suite is a lounge suite, whether you get it from this shop or that shop. (MI15)

Another participant suggested that the businesses within the community were of a high quality when they stated, “well the accommodation over the road is a five star hotel” (MI02).

Emerald participants discussed that the community was of a size that it contained all the businesses and services that they required. One participant reported that “...our little town’s got everything and I thought ‘well that’s good’” (EM04). This participant further stated that “...we get mail, I think it’s twice a week now, twice, two or three times a week” (EM04). Another participant noted that “...there’s always heaps of fresh fruit...and stuff getting around so...it’s a nice place to live” (EM06). Furthermore, another participant also stated that:

...we’ve got three shopping centres and...two little shops as well that sell everything, almost the same as Woolworths...and...each shopping centre’s, they’ve got covered with all commodities...like dress shops and book and newsagents and all that stuff...we’re covered with all that sort of thing. (EM04)

Additionally, one participant noted that the range of businesses and services available within the community allowed the community to remain stable. This participant reported that:

Well some...of the mining towns they just have the bare necessity shops...I think ‘cause Emerald has enough of the other shops, it also has enough people to man those shops meaning people don’t leave, meaning the shops don’t leave and round and round the circle goes until there’s nothing left. So I think there’s...enough of a balance to keep it fairly stable at the moment. (EM05)

One participant noted that services within the community were also of a good quality when stating that "...we've got some great places to eat out now" (EM11). Some participants discussed the positive impact of increased businesses and services within the community. One participant noted that "...there's probably us, who are long term here, that see more services now than we've ever had...but like [EM01] said, we want to keep those services...and maybe get a few more" (EM02). Participants also discussed that the increase in businesses and services available within the community decreased feelings of isolation, as highlighted when one participant stated that:

I don't think [we're isolated]...I mean probably in the last five years...there's now Big W and a second Woolworths and...we've got Harvey Norman here now so...in...terms of those...that's a bit more...in the shopping way. (EM09)

Some participants discussed that the community had enough basic businesses and services within the community to be comfortable. Participants reported that "...it's big enough in that we have a Woollies and a Coles and a Big W and...those sorts of things...all the...necessary...services we have...I don't need to travel away to get stuff" (EM11), and another participant noted that although:

...we don't have everything here, I can't sort of name anything that I particularly miss because...we don't sort of dwell on that. I think people come to Emerald and complain about what's not here...but...you can pretty much do that in any town. (EM09)

Additionally, one participant reported that some businesses closing within the community does not seem to affect the community when stating that "...some of [the businesses] I don't think they have a huge impact" (EM07).

Some Moranbah participants reported positive perceptions of the businesses and services available in the community. Participants stated that "...there's just enough of everything here to look after your needs and that's all I want" (MO05), and another participant noted "...Moranbah itself has more in the way of shops" (MO06). The same participant explained that "...there's a supermarket, there's...banks and...all that sort of

thing we kind of considered when we moved to Moranbah” (MO06). One participant noted that the businesses in the community were economically performing well stating that “...Coles is always full, it doesn’t matter what time of the day or night you go to Coles” (MO05), and:

...they just opened up a new servo I mean there’s one, two, three, four, five service stations here and they opened up another service station and this is only a small community and yet they opened up a new one...so to me that is a sign that there’s obviously...more growing that’s going to happen in the community because they wouldn’t have put that servo in if they weren’t able to staff it as well as...take over some of the businesses of the other service stations. (MO05)

The same participant noted that staff were friendlier due to the community’s small size stating that:

I find Moranbah very friendly and the staff in all the shops and that are a lot more, once you’ve been in a couple of times they remember you. Not like in the big cities they don’t, you’re just a passer-by, they don’t remember you or recall you. (MO05)

Some participants also reported being willing to pay more for goods to ensure businesses remain in the community. Participants stated that “...I would still rather pay the little bit more and have that business here to make sure that for the things that I need, they’re getting the business” (MO01), and another participant noted that:

...we’re pretty big with trying to support local, so as much as we like to do that and we do try and source everything from here and if there’s price differences...with...gifts and things like that...if we can source things from here that are a reasonable price and there’s not a great deal of difference between town, we will go ahead and purchase from here, just because it’s local...we’re willing to pay a little bit extra to support local business. (MO06)

**7.3.1.2 Lack of variety and decreasing availability.** Some Mount Isa participants reported that there seemed to be many businesses closing within the community. Businesses were reported to be closing as a result of perceived reduced spending within the

community. One participant reported that "...the small business owners really struggle because no one's spending money...and...I've seen a few of them go close down because there's no one there to support them" (MI08). Additionally, participants reported a lack or reduction of community owned businesses.

Some participants perceived a lack of access to shopping characterised by reports of limited variety in shops and goods available within the community, as well as limited trading hours. One participant reported that:

...seven day week shopping, things like that, nup there's none of that here you know...it's like going back in time living here you know like there's, there's not a lot of shops, I mean there's shops shutting down lately all the time...but yeah there's no Sunday shopping and there's not, not much shopping at all really. (MI16)

The perceived lack of access to shopping was reported to increase feelings of isolation within the community. One participant reported that "it does [feel isolated] at times...like I was saying about the shops" (MI18). Additionally, participants reported shopping online or shopping when they travel to other major cities as it may be cheaper, more convenient and have more variety than what is available within the community. Participants reported "I also buy things on the internet because it's so much cheaper" (MI07), and "...that's the reason why a lot of people on-line shop is because they have nothing here" (MI18).

Another participant stated:

Online shopping hasn't done any justice and knocking back Sunday trading kind of stuff is...no Sunday trading well you sit at home on the internet and you do online shopping and you get it all...the following week so. (MI08)

There was also a perception that the customer service within the community was poor which was reported to contribute to the difficulty involved with living in the community. A participant noted "...customer service is always a hard thing in a town like this" (MI05).

Many Emerald participants reported that "...there's a lot of shops that are closing down" (EM06) which some participants reported as "depressing" (EM08). Another participant stated that:

...you go to some of the people there and they'll say 'oh yeah, such and such shop shut, or this one had to move, or all these have shut and gone to different towns, or this one has been sold out'. (EM05)

One participant noted that the businesses closing in the community "...shocks people and they go 'oh, maybe I should have gone there and supported it instead of buying my stuff online'" (EM07).

However, one participant noted that the closing of businesses could be influenced by individuals who do not have the knowledge to run a business. This participant reported that "...businesses might shut down because of lack of skills of running a business. A lot of people go into business and have no idea how to run a business" (EM08). Another participant noted that the business closing could have been the result of "...outside people coming in and undercutting [local businesses], and that was a big problem and...they've just gone bust" (EM01). Alternatively, one participant noted that businesses closing does not have wide spread effect through the community when stating that "...it directly impacts the people that have lost their job and the owner of the building, he doesn't get rent anymore" (EM07).

One participant noted that it was difficult to support local businesses due to poor customer service. This participant reported that "probably one thing that really annoys me in our community is they're all encouraging us to shop locally and then people in our community don't have any idea how to give customer service" (EM08). Another participant noted a lack of shopping options due to the size of the community when stating that "...major shopping centres...you sacrifice those things when you do live in smaller communities" (EM06). Furthermore, some participants reported that there was a lack of variety and quality of fresh produce within the community given the amount of producers within the region. One participant noted that:

Here, we've got the biggest citrus orchard, you never see 2PH oranges, beautiful ones in our supermarket. You go down [to] Brisbane...and...there they are. Big juicy oranges, 2PH farms oh, never see them here. We get the dregs, our fruit and veg here...we really do, they don't care. Those big businesses, Woolworths and

Coles they give the best service to the south east corner, give 'em the best fruit, we'll get the second grade. (EM01)

Another participant reported the perception of reduced services within the community when stating that "...now we're getting flights cut" (EM10).

One Moranbah participant reported negative perceptions of the community's businesses and services. This participant noted that some businesses lack customer services stating that "...because they get so much business because they're the only ones out here, they don't really have to...put their customer service up in a high thing" (MO05). The same participant also reported that some businesses were not economically performing well stating that:

...a lot of the small businesses are struggling at the moment...with what's available and that 'cause people aren't spending money...at the present time...they're still doing their shopping...and doing their normal stuff but they're not...out laying money to do extra things...I suppose that is a little concerning. (MO05)

Another participant noted that the internet aided in allowing residents greater access to goods when stating that:

I think the world's a bit better now for these kinds of communities with the internet...you can order things on-line that you never could before so it makes it a bit easier than packing up your family and having to travel for two or three hours to get to town to buy a new shirt...that's, probably been...a great thing. (MO06)

**7.3.2 Cost of living.** Many participants reported on the perceived cost of living within the community. Participants reported both positive and negative perceptions of the influence of cost of living. Positive perceptions regarded a reported low, decreased or comparable cost of living to other communities. Negative perceptions regarded a high cost of living.

**7.3.2.1 Positive.** One Mount Isa participant reported that the perceived high housing prices and resultant low housing availability should be viewed positively when stating that "I see that as a positive thing, if you can't get a house it means the town is full. Means that

Mount Isa is thriving” (MI10). Another participant noted that financial stress is present in other communities as well when stating “...don’t think it would matter where I live really...normal stress of...money” (MI16).

Some Emerald participants reported that the cost of living within the community was ‘...fairly good really’ (EM06). One participant noted a low cost of living in small communities when stating that “...because we lived...in the small community...we saved” (EM11). Participants noted that there were enough businesses within the community to keep the cost of goods down. Participants reported that “...we’ve got all the majors, your Coles and Woolies and the, Big Ws and those sort of things so, I think that helps bring the costs down” (EM06), and another participant stated that “...there’s Coles and Woolworths and...IGA here...and that Foodworks so...the food’s generally pretty competitive” (EM09). Participants noted that, in particular, “...we have been getting pretty good airfares” (EM08), and another participant reported that:

...our fuel’s actually cheaper than Rocky I’ve noticed in the last couple of months...I, did a trip over there a month ago and, it was like \$1.25 in Rocky and \$1.17 here so...I was quite surprised with that...the fuel’s sort of reasonable.  
(EM09)

Additionally, participants noted a reduction in the cost of living when stating that “...the cost of living has come down quite a bit in the town” (EM09), and another participant noted that “Well, I think [the cost of living has] come down a lot...our fuel is dropped almost as good as Brisbane I think...it’s pretty moderate” (EM04). Furthermore, one participant reported that housing prices were reasonable within the community when stating that “...I think...if you were renting...it’d be pretty good at the moment, the rents are really quite reasonable” (EM06). Another participant also noted that the cost of living within the community was similar to other communities when stating that “...I think the cost of living is exactly the same...I mean when I go down to Brisbane and your meals and everything, it’s the same. The cost of going out to dinner, is pretty much the same” (EM11).

Some Moranbah participants reported that the cost of living had decreased in the community stating that “years ago when I was a teenager, it was an exorbitant amount of the price up market on goods out here to what they were in [town] but it, doesn’t seem to be

so much anymore” (MO05). The same participant noted that “...[the cost of living is] really not too bad...some of the prices in Coles...are up a little bit, not much” (MO05). Similarly, another participant reported that “...you’re not talking 20, 30 dollar difference, you’re talking a dollar or two” (MO01). The same participant also reported that “...one day I made a list when I was in town and I bought ten things at Coles in town and I came out here and I bought exactly the same ten things...Coles has the same cost” (MO01).

**7.3.2.2 Negative.** Most Mount Isa participants reported concern regarding the cost of living within the community. For example, a participant stated that “I was talking about it the other day at the pub with a friend of mine, talking about Mount Isa and...just how much extra it does cost you to live here” (MI07). Participants perceived the increased cost of living as the result of mining activity within the community. A participant stated “...the mining people...get so much money, then you’ve either got to be a partner of someone to live here...So it puts the price [up]” (MI07). The increased cost of living was also reported as the result of the community being geographically isolated as highlighted when a participant stated “...and then of course any delivery from anywhere it costs a fortune but...that’s just the way it is. It’s no use moaning about it because we are long way from anywhere so it does [cost more]” (MI05).

Participants reported higher costs and need for electricity as a participant noted “electricity’s very high here. And in the summer time you’ve got to have the air conditioners so...it’s much dearer to live here” (MI06). Participants reported fuel as being more expensive than in other communities as a participant reported “...the petrol is really expensive when it’s really, really cheap back on the coast and you’re like well, why?” (MI17). Many participant reported that flights to and from the community were expensive highlighted by a participant’s report that “...when you want to go somewhere it costs an arm and a leg to fly” (MI03). Some participants reported increased costs for activities within the community as a participant stated “...you’ve got to be able to afford it [activities] and things cost a lot more here” (MI03).

Participants also reported health care to be expensive due to a lack of bulk billing doctors as highlighted by a participant’s report that “...to see the GP it’s about two or three week wait and no one here bulk bills so it’s about 70 dollars to see a doctor” (MI17). Increased costs for water are highlighted by participant reports that “...I think our water

rates are the highest in the state apparently” (MI20), and “...that’s another expense. You’ve gotta buy bottled water” (MI17). Additionally, participants reported increased costs of goods and groceries as one participant noted:

...you go and buy fruit and veggies and what you pay for it here and what you pay for the same quality on the coast is sort of like. There’s, because there’s no...real competition, and they say it’s freight and stuff but mmm. (MI03)

Some participants reported the cost of housing as high for the quality of housing available as one participant noted “...like the rent prices, or buying a new house...you could live in a mud hut for like 500 bucks a week and you’re like, it’s ridiculous” (MI18). Participants also reported high property rates within the community highlighted by a participant’s report that “...it’s so expensive to live here. Our rates notices came in at just under \$4,000 for no footpath, kind of thing it’s like, you get two bin services a week, yippee” (MI08). Participants reported a negative perception of the local council, including agencies involved with the cost and supply of water. One participant reported that “...the local government as in, I’ve already said not such a fan of...especially when they put up rates and charge you extra for water, which is from the water board...costs, and you can’t use it” (MI14). One participant perceived the high cost of living within the community to result in homelessness. This was highlighted when stating “...when I talk about...workers being homeless that’s...about affordability” (MI09).

Some Emerald participants also reported that the cost of living within the community was “...sky high” (EM03). One participant reported that “...to me, there’s no logical reason to actually be paying what we pay for the services that we get, and the access to what we have access to” (EM10). Another participant reported that “...you cringe when the rates bill comes and you wonder what the electricity bill’s gonna be” (EM02). The same participant also described that “...you could run your...air-conditioning 24/7 in the summer...[but] you can’t afford to. Mate...I’m on a mine wage and we can’t afford to” (EM02). One participant reported that the cost of telecommunications was high when stating that “...well we still pay a high amount for like Telstra” (EM08). Another participant reported that “one thing that’s always been noticeable in Emerald is it’s...probably the dearest place in the Central Highlands to buy any alcohol” (EM09).

However, one participant noted that the cost of living is high in many communities when stating that:

...[cost of living] is dear. But then again you go to Mackay there, you see the prices up there, it's no cheaper. You go down...to South Australia, which I did...quite a few times, you find the Woollies prices are the same down there as they are here so it's all the same really. (EM03)

Some participants also reported that the cost of fuel and travel was expensive within the community. Participants noted that "...the cost of living in Emerald is high if you have to take into account...your travel...when the kids were little all...the orthodontist, you had to run into, Rocky there were none here" (EM01), and another participant noted that:

Fuel's ridiculously expensive...fuel here is probably, I don't know 15 cents a litre dearer than over in Moranbah. Which...I don't understand because...we're on a direct line from Rockhampton, so theoretically our fuel should be you know. But yeah fuel's really expensive so that does impact because...you have to fuel up your car so it...costs more to fuel up a vehicle here. (EM07)

Some participants also noted that the cost of flights were also expensive when stating that "...every where's a dear plane flight from here" (EM09).

Some participants also noted housing prices as impacting on the cost of living within the community. In particular, concern was noted for people with a mortgage due to the decrease in property prices. Participants stated that "...rents have gone down, investors are suffering...locals that...were happy, aren't quite happy with how it all panned out" (EM01), and another participant noted:

...people that...have a big mortgage...they'd be in a really, really bad situation where they wouldn't be able to afford to lose their job and if they did...it's not like they could just sell the house because for most people, the bank loan would be much greater than what...the house value is and so that'd...have to be really...playing on a lot of people's minds. (EM06)

Another participant also stated that:

...they're stuck with a house here that they can't sell, they have paid...over and above what...the value of the house was...they're still paying these exorbitant rates...and I think there seems to be a lot of fear that people can't get out of the town, those who are still stuck here, and that creates resentment and that, then leads to an unhealthy community. (EM10)

Some Moranbah participants reported that it is “very expensive” (MO03) to live in the community. One participant noted increased cost due to the decreased quality of produce available stating that:

...if you lived in a town like in the city...there's farmer's markets or there's things you can go to, to get your fresh fruit and veggies and I think here we do get quite ripped off with things like that like you pay a lot of money for fruit and vegetables that might last a day so then you're back buying more, it's, I think it is expensive to live here. (MO06)

Another participant reported increased cost due to a lack of competition noting that:

...let's say in town you could go to Bunnings...for a cost on this and you could go to Masters for that, you could go to Porters for that, you get the best cost. We don't have the option say if we were to go to Mitre10 and go 'oh that seems a bit expensive' well we only get it from Mitre10. If you need it...then you probably are gonna' pay a little bit more being rural. (MO01)

**7.3.3 Economic diversity and performance.** Many participants discussed the diversity of their community's economic base as well as the performance of the community's economy. Participants reported both positive and negative perceptions of the community's economy.

**7.3.3.1 Positive.** Some Mount Isa participants reported that the community provided goods and services to outlying properties and smaller communities. As one participant noted “...we are pretty much the support hub for the outlying communities from us” (MI10).

Many Emerald participants discussed the positive impact of diversity in the community's economy. Participants noted the economic diversity of the community when stating "...we're a big...growing area, very big growing area. We have grapes,...sunflower,...citrus...and we probably have a whole heap of other stuff" (EM04). Participants stated that the economic diversity aided the community in remaining economically viable when noting that:

So you'd have...the cattle,...they grew more peanuts here than Kingaroy, that was unknown...then the citrus industry started so, you got the gem fields, an industry in itself...You've got the cotton industry then, so there's a lot. No one is, not everything is down together...two sectors might take a hit but you've probably got six or seven sectors here that...help bubble along. (EM02)

Another participants also stated that:

...the big thing is that we are a very diverse community...we're not just mining, which has probably been a saviour for Emerald because our rural and cotton is really big, beef...and we have a big citrus plantation here as well so...from the air we look...like a beautiful garden. (EM08)

One participant discussed this economic diversity as an aspect they liked about the community when stating that:

...there's a lot of people that...have never been involved with the mines and...with the cropping and...the citrus and...the pastoral industry and everything going on...there's a lot more depth to the town, the money sort of doesn't come from just that one area. So like most of our friends in town aren't really involved with...the mining industry...we don't sort of find ourselves surrounded by coal miners...That's sort of one aspect of the town I guess that we've appreciated. (EM09)

The same participant further discussed the community's economic diversity as making the town resilient when they reported that:

...there's more in the town than just, it's not just about mining...there's...cropping and pastoral industry and...we've got citrus and table grapes and now there's a macadamia farm being set up at the moment, large scale. So...the town is resilient, there's still money coming through the town so...and...all those things that I just mentioned, they all employ people. (EM09)

One participant also stated that the agricultural industry had been performing well and needed to continue to do so for residents' wellbeing when stating that:

...you need basically just an upturn in agriculture, which we're having now, which has...lifted a lot spirits. Doesn't really look like...the money's been flowing for long enough to have...a really big effect...I think over the next maybe 12 months if cattle prices stay high and...we get some rain and...all of the things that you need to...make fat cattle and I think that'll start to lift the spirits around the place a bit. (EM06)

**7.3.3.2 Negative.** Some Mount Isa participants reported concerns about a perceived lack of economic diversity within the community. These concerns are highlighted by a participant's report that "...it's a shame that over the years there's never been another industry developed here" (MI06). Further diversification of the community's economy was perceived as benefitting the community. As one participant noted "...it's the people that work at the checkout that we need as a community to survive, they're the backbone of the place. The mine is great, but we need everything to create a community, not just the mine" (MI05). One participant suggested that other industries had not developed within the community due to perceived high costs. As one participant noted "...the costs out here are so enormous, wages are so high, [developing another industry is] just not possible at the moment" (MI06).

Some participants reported that changes in government policy could influence the investment that occurs within the community. One participant stated that "...whilst [business/industry] may have a good deposit, whilst [business/industry] may have good development, [business/industry] are concerned that a government could have adverse effects on their investment" (MI02). Concerns about the government's ban on mining

uranium are highlighted by participants who report that "...but yeah naah like I was hoping the uranium mining...would go ahead but the government's knocked that on the head because, bad for the environment and stuff" (MI20). Another participant highlighted this concern when stating "so what this [ban on uranium mining] is doing now is it's having a massive impact...on people's desire to invest in Queensland. And...that is not good, for the industry or for the state economy" (MI02).

Some participants suggested that further promotion of the tourism industry within the community and surrounding areas would assist in diversification of the economy. A participant reported that "I mean you're very vulnerable as a community, we've got all our eggs in one basket...we don't embrace tourism...which is a huge opportunity that we, we choose to not, not acknowledge" (MI19). However, other participants noted that the tourism industry would not be enough to sustain the community. For example, one participant stated:

And I don't know if...tourism, I [don't] know of the grey nomads and the backpackers who come through here, actually spend much money other than filling up you know, the vans at Coles and go to the petrol station...they go to the cheapest shop and load up and they don't really spend a huge amount of money. (MI07)

Additionally, providing goods and services to outlying properties and communities was perceived as not being enough to sustain the community as one participant noted:

...we have stations around us three, four, five hours away that rely on us for goods and services. That won't change...but those goods and services won't be as utilised. So how would they be able to sustain their own businesses for those? (MI05)

Some Emerald participants perceived the economy of the community to be performing poorly. One participant reported that "...economically it's...not doing all that well" (EM06). This participant went on to explain that:

...because of the economic situation...I think there's probably...a fair bit of stress amongst people in town, and concern...just due to the unknowns...how bad is it

gonna get and when will it stop and will it pick up and...will they recover with their house prices? (EM06)

Furthermore, the same participant explained that there were differences in the performance of different industries within the community. This participant explained that:

...sometimes there's...a bit of jealousy...between the farmers...and the miners as in...when mining's doing poorly and the like now and cattle prices are really, really good...a lot of people I 'spose they're wishing...they've got a few hundred head of cows in the backyard...when obviously...12 months ago or so, when the cattle prices were so low, and farmers were doing it so tough...they were probably envious of a lot of the miners. (EM06)

Some participants also reported that "...everyone's very cautious, they're not eating out, they're not spending their money like they used to" (EM01). Another participant noted that people who had previously not worked were now working indicating poor economic performance. This participant reported that "...I think there's been...more...mothers are back out working now too, so those people that have stayed...the...mothers are out working" (EM11).

One participant noted that the government could do more to help the community during downturns stating that "I just think that there's a lot more that could be done by state and federal governments to actually, stimulate the economy in towns like Emerald" (EM06). One participant also noted that problems within the economy were not isolated to Emerald when stating that "...I do think people are a bit scared at the moment of the economy and everything but that's probably Australia wide, that's probably not just Emerald" (EM08).

**7.3.4 Employment availability and stability.** Participants discussed the perceived employment stability and availability within the community. Though some participants reported positive perceptions regarding employment availability, most participants reported negative perceptions regarding a lack of employment availability and stability.

**7.3.4.1 Employment availability.** Some Mount Isa participants reported positive perceptions acknowledging that they would not have received the same employment or

earning opportunities in a different community. One participant reported “...I like the opportunities that have been given up here” (MI14).

Some Emerald participants also reported positive perceptions of employment within the community. One participant reported that “...there’s work here for people if they want it” (EM09). Participants reported that employment within the community contributed to individual wellbeing. One participant reported that “[residents are] happy because they have...the job they’ve always wanted, or they have the stepping stones to start getting towards that job” (EM05). Another participant stated that “I think people are happy...when they’re being paid, when they’re not in debt. I think money has a lot to do with people’s health” (EM02). The same participant also described that “...everyone had disposable income” (EM02) within the community.

**7.3.4.2 Lack of employment availability and stability.** Mount Isa participants reported concerns about a perceived lack of job opportunities available within the community. The perceived lack of job opportunities was reported to contribute to the experience of poor mental health as a participant noted:

...[poor job availability] contributes to [poor mental health] because you think like, you could apply for jobs and apply for jobs and then...you could get knocked back so many times and of course that’s gonna be...a character breaker for...you’re like ‘well what can I offer if I keep getting knocked back?’ (MI18)

Additionally, job loss was perceived to result in reduced morale and population loss within the community. One participant reported that “...our morale in town is really bad to do with people losing jobs like, I don’t think there’s any way of really coping in the town there’s, just people leave, and we just go ok” (MI20). Another participant echoed this issue when stating “...I know of a few friends that I’ve actually, they’ve gone from here because they’ve lost their jobs” (MI10). Additionally, some participants perceived a reliance on welfare within the community. One participant stated that “...there’s other people who just sort of...I call them freeloaders, because...it’s an easy place to live if you’re on welfare” (MI15). However, another participant reported that businesses struggle to find staff to employ as one participant noted when stating “...either no one wants to work or...they don’t necessarily need to” (MI05).

Some Emerald participants reported concern regarding job loss within the community. For example, one participant reported “I am worried about our community as far as like people losing their jobs” (EM08). Additionally, some participants reported that there was a lack of job security within the community. One participant noted that “there’s no job security in any job, it doesn’t matter if you are full time or whatever” (EM01). One participant noted that due to the economic diversity within the community, there was more unemployment. This participant stated that “...because it’s not just a mining town...the unemployment’s a real problem at the moment” (EM06). Another participant also noted that residents move to other communities due to job loss within the community stating that “...people lost...their jobs and have moved to different towns to get...work so, one of the effects is people have moved” (EM08). However, one participant reported that some businesses had difficulty in finding employees when stating that “I mean everyone was struggling to find...people to...work in those sorts of...menial tasks” (EM11).

Some Moranbah participants reported negative perceptions regarding a lack of employment stability within the community. Participants stated that “...the smaller businesses...have also put off people...I know [a]...company that...had five staff...now they run only on three staff so they put off two people and they’re only a small business” (MO05), and another participant noted that:

...[company] went through and laid a few hundred people off...They had a different shirt on, went to work for somebody else but they stayed...you saw a segment of that population want to stay. And that...proves to you that the community is what drew them there it wasn’t the job, it wasn’t. (MO01)

**7.3.5 Checkpoint.** Participants from all three communities reported the perception that their communities contained the businesses and services necessary for their needs and that these businesses and services were of a good quality as employees were friendly. Having available businesses and services was perceived to decrease participants’ feelings of isolation. However, participants perceived a lack of variety in shopping as barrier to accessing items they wanted. Participants reported that online shopping was able to meet this lack of variety therefore improving participants’ enjoyment of the community. Participants from all three communities reported similar perceptions of the cost of living

within their communities. While some participants perceived a similar cost for goods and services in their community compared to other communities, many participants perceived prices to be inflated due to the remoteness or rurality of the communities as well as the dominant industry (i.e. mining). However, participants reported a willingness to support local businesses and services to ensure that the businesses remained within the community. Incidental costs were also noted to increase cost of living, such as travel for healthcare, and cost of fuel and flights.

Mount Isa and Emerald participants discussed the importance of economic diversity for community wellbeing as it facilitated economic resilience. Specifically, Mount Isa participants were concerned about the community's lack of economic diversity and the need for further investment in other industries such as tourism. Emerald participants noted the importance of economic diversity due to the cycles within their main industries, mining and agriculture. Moranbah participants' perceptions of the economy are reported in the following chapter as they only discussed economic diversity in relation to the mining industry and not community wellbeing more generally. Participants from all three communities also reported that a lack of employment availability and stability has flow-on effects to the wider community. These flow-on effects were reported to be population loss and mental health issues.

## **7.4 Environmental Capital**

Participants reported the perceived effect the quality of the community's ecosystems have on living within the community. Three factors were identified within participants' reports of the community's ecosystems – climate and weather, isolation and landscape. The environmental capital factors are presented in Figure 15 below.

**7.4.1 Climate and weather.** Many participants noted that climate and weather influenced their enjoyment of the community. Participants reported both positive and negative perceptions of the climate and weather's influence upon living in the community.

**7.4.1.1 Positive.** Some Mount Isa participants reported that they enjoyed the community's weather. One participant noted "...climate is something that I love about the place" (MI05). Another participant reported that they "...prefer this climate than Townsville sweatiness...like [MI06] says, in winter it's really nice" (MI07). One

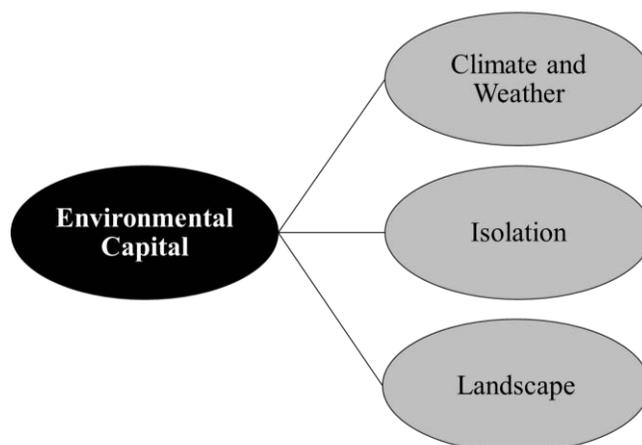


Figure 15. Environmental capital factors perceived to influence community wellbeing.

participant noted that they experienced less allergy symptoms as a result of the dry climate, stating:

...I personally enjoy it, my allergies are actually way better so...didn't know that until I got here that I was actually allergic to pollens not dust. So...every time on the coast I'd wake up in the morning, I'd feel stuffy and sneeze a bit in the morning, then I'd get out of it and get going, but you still feel a bit lethargic. Whereas here I don't have that issue at all so...like that small bit is better. (MI14)

Additionally, some participants reported that after a while, the residents acclimatise to the heat or that the climate "...toughens you" (MI01). One participant highlighted their resilience as "...there's satisfaction in beating the heat" (MI11).

Some Emerald participants reported positive perceptions of the weather and climate that the community experiences. Participants reported that "...I like the climate here" (EM11), and another participant noted that "...I love this weather, the winter is lovely" (EM08). Another participant noted that the consistent weather of the community allowed for greater ease in participating in activities when stating that:

Yeah the climate's really nice...coming from New South Wales, where I used to live...growing up...there's only about three months of the year down there that you sort of don't need to consider what the weather's gonna be like when you want to do something. Whereas up here...you, organise to play tennis with someone on Friday,

you don't have to look at the weather report you generally just turn up and...everything's fine. (EM06)

One participant noted that the floods experienced in the community resulted in the community feeling more connected when stating that "...the two floods actually did a lot to bring the community back together" (EM02).

Moranbah participants reported that "...I love the...climate in Moranbah" (MO05), and "...I love [the weather]...I'm not terribly bothered by the heat" (MO06). One participant noted that "I always thought that I wanted to move to a colder climate, but the older I get the more that I go you get a little bit a nip of winter and it's like 'woo.'" (MO02). The same participant further explained that it was easier to socialise in warmer weather when stating that:

...it's, extremely hot and uncomfortable some days but for the most part, you don't have that...cold climate people tend to stay inside and don't socialise so much 'cause it's cold...whereas...you have a very...social kind of life in...a warmer climate I think. (MO02)

Another participant noted that some seasons are enjoyable within the community stating that "...the end of April, it's beautiful. Like this, if it could be this way all year...it's actually feeling cool now" (MO01). One participant noted they experienced less health problems as a result of the community's weather stating that "well [the weather] suits me, I'm an asthmatic...and I found living out here...the two winters that I've been here for, I haven't had an asthma attack...which is very unusual because I normally do" (MO05).

**7.4.1.2 Negative.** For most Mount Isa participants, the hot and dry climate of the community was perceived as reducing their enjoyment of the community. One participant reported that "...day to day stressors are...just the heat is the worst of it I think, if it was a far cooler climate I think everyone would be a lot happier. It does wear you down and the lack of rain, which we have absolutely no control over" (MI08).

Some of the reported impacts of a hot and dry climate included reduced exercise and recreational activities such as one participant's report that "...we can't get outside and do all the activities that we really want to because it's so hot" (MI20). Another participant

reported physical illness as a result of the heat when stating that “when we first moved here...I just vomited for like the first two months we were here, it was so hot” (MI17). Decreased tourism during summer months was reported by a participant when they noted that “...tourism out here is good for six months of the year but who’d want to come out here on a day like today? 44 degrees” (MI06). A participant also reported the decreased ability of the town to attract businesses due to the uncertainty of water availability. This was reflected in a participant’s statement that “...you can tick all the boxes for potential investors but the one...we can’t tick at this point is water” (MI02). Additionally, participants reported a lack of grass and plants to impact upon community wellbeing. This was highlighted by a participant who reported that “because when I was growing up here you didn’t have grass”, and another participant who reported:

I’ve got old friends who’ve had their rose garden die and so it’s at the moment, but this isn’t always the case, at the moment the drought and the lack of water is making people very...I’ve never seen people so despondent. (MI06)

A perceived lack of appropriate infrastructure and activities to cope with the heat were reported to compounding the experience of the hot and dry climate. Participants stated, “...I struggle with the fact that Mount Isa is so hot and there is so little undercover anything” (MI08), and “...I think some indoor activities would be good because it’s hot here” (MI20). Concerns were also raised regarding the drought that the community had been experiencing. Participants reported that the drought “...depressed me and just seeing the flowers and everything dying around you and the grass” (MI05), and that “...the lack of a decent wet season is, gets really depressing” (MI19).

Some Emerald participants also reported negative perceptions of the weather that the community experiences. Participants reported that “...the climate’s not nice” (EM01), and another participant stated that “...during summer it’s hot. Very hot.” (EM05). Additionally, another participant noted that “...in our heat it gets pretty oppressive” (EM08).

Some participants also discussed the impact of the floods that had been previously experienced within the community. One participant noted that “...after flooding, when people mentioned the flood...the whole of the room just went dead silent. Because it

psychologically it just knocked people for sixes” (EM08). Preventing future impacts from flooding was also mentioned as a major concern for residents. One participant noted that:

...we’ve got a debate going on about whether we should be building levy banks or not, for the next flood which may come in the next 10 years or the next 30 or next year so...that’s probably...the biggest concern of people. (EM09)

Additionally, some participants discussed a plant disease that had gone through the community having a negative impact on residents. One participant reported that:

...the town really suffered when the citrus canker came...there was a lot of flow on effect of that, to everyone...we had a lemon tree and an orange tree, they cut them out. They came around and cut every fruit tree out of Emerald for two years. Two years you couldn’t have a citrus plant here. (EM02)

Some Moranbah participants reported the hot weather to be a concern in the community. One participant noted that “...I, as a kid, didn’t really notice [the heat]...I’m noticing it more the last, probably 10, 15 years that oh boy it’s really, really hot when it’s hot” (MO02). Another participant reported concern for people who work outside when stating that:

I feel for the guys that work out in site that aren’t in a truck and that are actually facing those things because it might be 42, 44 degrees standing outside but if you’re standing out in the sun you’re hitting the 50 plus mark and that is hot. (MO01)

Additionally, another participant noted that though the heat was not a problem for themselves:

I know a lot of people...that [the heat] probably is an issue for...I have heard people talk about ‘yeah no I can’t handle it, I’d rather live somewhere cooler but...we have to live here blah, blah.’ But, I mean it gets pretty freezing in the winter time...I think that some people...exaggerate it a little bit. (MO06)

**7.4.2 Isolation.** Participants reported positive and negative perceptions towards the geographical isolation of their community. Positive perceptions referred to the community

not being isolated or isolation being overcome easily, and negative perceptions referred to the community being isolated.

**7.4.2.1 Not isolated.** One Mount Isa participant who reported that they enjoyed travel did not mind the long driving distances when stating "...no not for us because we like to travel and we get away so we go over [to the coast] two or three times a year" (MI05). Some participants reported that being involved with the community buffered feelings of isolation. For example, a participant stated "...we've, become part of the...community in a small way so for my part, it doesn't allow me to feel isolated" (MI11).

Some Emerald participants noted that for people who live in rural areas, the distance to the next major city was not far. One participant stated that "...it's three hours from Rockhampton which I think for people in a rural area that's really not very far to drive" (EM08). Similarly, participants noted the ease of travelling outside of the community resulted in not feeling isolated. One participant noted that "...you got planes out, you can drive to Rocky. Get a bus, get a train you're not isolated" (EM01). Additionally, increased access to businesses and services was also noted as decreasing isolation as one participant reported that:

there's now Big W and a second Woolworths and...we've got Harvey Norman here now so...that's a bit more...in the shopping way and...if people have to travel for medical purposes there is quite a good scheme for people to get on planes and go on to Brisbane if they have to or...drive over to Rocky so, I don't think we're particularly isolated. (EM09)

Some Moranbah participants reported that "I don't believe [the community's isolated]. I don't feel it" (MO03), and another participant noted that "I don't [feel isolated] because we go away" (MO01). Another participant also reported that "...I think generally...we're not that isolated and I don't think people really feel like that" (MO06). The same participant further explained that "...Moranbah's a very accessible town to...the closest city I guess it's not like we're...on a dirt road a million miles from anywhere, that's kind of what I would imagine to be isolation" (MO06). Similarly, another participant stated that:

...because you've got a bus that goes...either way every day, the only day it doesn't run is on...Christmas day, so it runs every day of the year so you've got available transport like for me, I don't have a car...to get around, so...I wouldn't see...Moranbah as being isolated. No. (MO05)

**7.4.2.2 Isolated.** Many Mount Isa participants reported the geographical isolation of the community as a concern. One participant stated "I can honestly say I hate Mount Isa, because of where it is, not for the actual town itself. The town itself is a great little town it's just where it is" (MI10). Difficulties in being able to leave the community were reported by participants to compound the experience of the geographical isolation. These difficulties included the long distances and dangers when driving the nearest coastal city, as well as expensive flights to and from the community. Participants reported that "the distance...you can't drive too far and you can't afford to fly" (MI19), and:

...if we want to go to the coast...if we drive it's nine hours, it's a really long drive especially when you've got three screaming kids in the back seat, not to mention the cost of doing it...and then if you fly it's even worse because it costs so much. (MI16)

One participant described their partner's experience of isolation "...my husband always describes this place as like living on an island. You've gotta make a big effort to go anywhere and if you don't, then you're just stuck on an island" (MI05). A participant noted that "I get a bit stir crazy. You think, yeah I've got to get out of town" (MI05). Additionally, some participants perceived that they missed out on resources and opportunities due to the community being isolated from metropolitan areas. This was highlighted when one participant noted "...the isolation. So being away from the, the resources and the, the benefits of big metropolitan areas" (MI12).

Many participants reported that the isolation of the community decreased residents' ability to access family and friends outside of the community. Participants reported "...the distance from family is a pressure" (MI04), and "...being away from family and friends, yep so I'd say they're stressors as well" (MI12). Another participant stated that "...the hardest part for me moving was just my family not being here and there's a lot of people

here that would be in the same boat you know their mum or dads or whatever are wherever” (MI16).

Some Emerald participants reported that the community could feel isolated. Participants stated that “I think absolutely there’s a lot of isolation” (EM10), and another participant noted that “I daresay there are some people that think they are isolated” (EM11). Another participant noted that when the community flooded it felt isolated when stating that:

...we occasionally feel isolated but we’re fairly well used to it so we only really feel isolated if there’s like a big storm or something and all the roads are cut off and then you’re like well I mean you can’t go anywhere. (EM05)

Some Moranbah participants reported the community as feeling isolated stating that “...I take for example the south east corner...or just closer to the coast...being able to just jump in the car and go to the beach...being half an hour away from something rather than two hours” (MO02). Other participants noted that “...at times it can feel isolated” (MO06). This participant further explained that “...I think people do feel it when...it, if I’m talking about...the literal meaning of isolation when there’s...bad weather...and the roads do cut quite often” (MO06). Similarly, another participant reported:

I ‘spose the only time we really get isolated is when it floods out here and we just recently not long had floods and we were cut off from...[other communities] ‘cause the Isaac went over, when the Isaac goes over, it’s a very rare occasion...but when the Isaac went over...they were all stuck in town. (MO05)

Another participant noted that new residents are the most affected during these times when the roads are cut stating that:

...so then people that...might be new to town or not used to...that sort of isolation do get panicked or really concerned that...‘oh my god I can’t believe I’m living in a town that’s totally cut off from anywhere.’ I mean it never lasts very long but that can probably be a little bit...scary for people...that have always had access to everything because you’re living in a town that then yes...if roads are cut then yes you’re cut off from fresh food or you’re cut off from medical help. (MO06)

**7.4.3 Landscape.** Some participants reported that the community's surrounding natural landscape influenced their enjoyment of the community. Participants reported both positive and negative perceptions of the community's surrounding environment.

**7.4.3.1 Positive.** Some Mount Isa participants reported that they "...really enjoy the west, I like the outback" (MI09), and "... love the landscape" (MI11). The use of the surrounding environment for recreational use was viewed as a positive aspect of the community and was perceived as facilitating relationships with other residents, and thus community wellbeing. A participant reported:

...we take people out camping with us and so we have the esky and you know the spare swag, or a spare tent or something like that so then they can camp with us and then it sort of like helps them join in with like the community here and a friendship group and everything like that. (MI14)

One Moranbah participant reported enjoyment of and an attachment to the community's surrounding environment. The participant stated that "...I like the sticks" (MO03). This participant further explained that:

...we used to do a lot of hunting...we loved it...we know where all the water holes are, all the wild fruit and...what to eat, what not to eat...we never bought fruit from the shops or anything used to go out in the trees and everything. (MO03)

**7.4.3.2 Negative.** One Mount Isa participant reported the land in the community as being poor when they stated:

...you really wouldn't want [the land] 'cause you're gonna get a patch of dirt with rocks and some grass. You're not gonna get most of the time, a creek or a dam or anything like that because it just won't survive. (MI14)

Moranbah participants noted that there was no access to water for recreational purposes near the community. Participants reported that "...one thing that would be really good in Moranbah is having a big body of water somewhere by just for recreational purposes like somewhere to just go and sit and have a picnic" (MO02), and another

participant stated that “...we really enjoy fishing...and the beach and...being out in a rural area like this...you’ve got to travel to find those things but I think everybody travels for the things that they enjoy” (MO06).

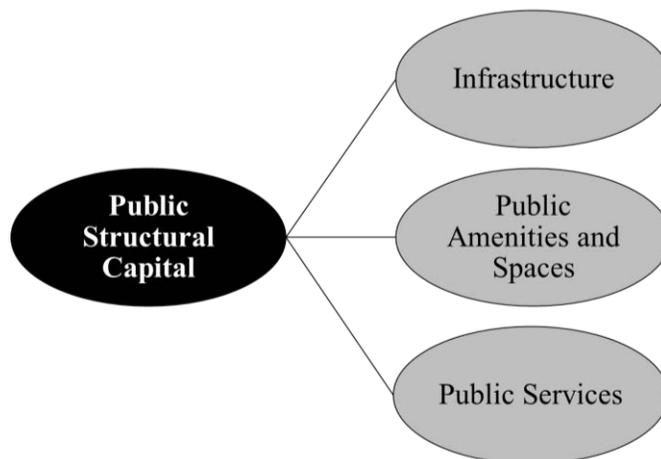
**7.4.4 Checkpoint.** Participants from all three communities perceived the lack of humidity and moderate winters to be positive aspects of their communities’ climate and weather as it made living in the communities more enjoyable. However, the heat during summer and lack of rain were reported to be negative aspects of their communities’ climate and weather. The heat was reported to decrease residents’ ability to engage in outdoors activities. The lack of rain was a concern to residents’ as their surrounding natural environment died, or because it prompted residents to contemplate running out of water. Participants reported not feeling isolated if they perceived there to be easy access to other communities. Conversely, participants reported communities to be isolated if they perceived difficulty accessing other communities or family in other communities. Distance, cost and the weather (e.g., flooding) were perceived to influence difficulty in accessing other communities and as such increase feelings of isolation. Some Mount Isa and Moranbah participants also reported enjoying the natural environment of the outback as it provided recreational activities for them such as camping. However, of concern for some Moranbah participants was a reported lack of access to a major body of water for recreational use therefore decreasing the perceived livability of the community.

## **7.5 Public Structural Capital**

Participants reported the effect of community public spaces and services on the community. Three factors were identified within participants’ reports of the community’s public spaces and services – infrastructure, public amenities and spaces and public services. The public structural capital factors are presented in Figure 16 below.

**7.5.1 Infrastructure.** Participants reflected on the infrastructure available within their community. Participants reported both positive and negative perceptions of their community’s infrastructure.

**7.5.1.1 Positive.** One Mount Isa participant noted improvement in the community’s infrastructure when stating that “...I think the road between here and Townsville is remarkably good compared with what it was” (MI15). Additionally, the lake created by the



*Figure 16.* Public structural capital factors perceived to influence community wellbeing.

dam was reported as a centre for recreational activities as one participant noted “...the lake is sort of a real hub of activity now that we’ve got water” (MI09).

Some Emerald participants reported that the public spaces available were a positive aspect of the community. In particular, many participants discussed the dam in the community as a positive aspect of the community. One participant noted that “...there’s a lot of positivity around...we’ve got some...nice things around town, nice lake” (EM06). Another participant noted that the dam provides recreational activities when stating that “...we’ve got the dam out here so there’s a lot of people that go skiing and wakeboarding and fishing” (EM11). Participants reported the dam as contributing to residents being able to remain in the community when stating that “...you’ve got the dam here though. See you got water. Where there’s water there’s life” (EM01). One participant also noted the dam as part of what influenced their decision to move to the community. This participant stated that “...the lake’s nice and close...it sounds funny but the lake was an attraction as well for us to Emerald because...it’s not far out of town” (EM06).

One participant also noted that the introduction of traffic lights into the community made it safer when stating that:

[traffic lights are] just the safer way of...letting people...get around, yeah. It was bedlam at Woolworths here because that was the only Woolworths and then Coles started...but to get out of that Woolworths you could never turn right, you could only ever turn left...Accidents galore on the corner. (EM02)

**7.5.1.2 Negative.** Some Mount Isa participants reported water infrastructure as a major concern. Poor water infrastructure was perceived as the reason for the experience of poor water quality. One participant reported “being frustrated that we’ve got a full lake and we can’t use the water....and the water’s safe to drink but the kids bath in a brown bath every night” (MI05). Additionally, increased water restrictions were perceived as an attempt by the local council to reduce the demand on the water infrastructure. This issue was highlighted by a participant’s report that “...we’re back to level four water restrictions because the filtration system can’t handle, the level three restrictions. They’ve gone and hired this massive thing that can’t handle our water usage” (MI10). The water restrictions were reported as particularly frustrating for most participants as the community had recently received rain which had increased the water in the dam. Thus participants perceived that there was water available however the poor functioning of the infrastructure prevented it from being used. Some participants noted that residents, and particularly new residents, would buy bottled water as a result of poor water quality. This issue was highlighted by a participant’s report that:

...most of the town buys [water] except for the people who have lived here their whole lives. But they say it’s safe to drink and you pour it and it’s got like, it’s brown. I mean, come on, you know it’s not clean. (MI17)

Some participants perceived the clustering of housing commission homes within the community, the result of poor town planning, fosters anti-social behaviours. One participant reported “...the fact that they’ve made a ghetto, they’ve made a mistake back in the 50s or 60s whenever these houses were built...and clustered them all together” (MI09).

Some Emerald participants reported negative perceptions of the roads within the community. One participant stated that “I think generally the roads and travelling to here...could be a bit better than they are, after the big volumes of traffic that we get” (EM09). In particular, participants noted negative perceptions regarding the introduction of traffic lights into the community. Participants reported that “...there was a, ‘if Emerald gets [traffic] lights, we’re going to live at Capella.’...for some there’s a mentality that we’ve gone too far, we’ve got [traffic] lights” (EM02), and another participant stated that:

...three years ago and it kind of went from no traffic lights to one, two, three, four, five, six, in a very short time...we used to be like five minutes to get anywhere pretty much and now it can be like ten...that's not huge but...I guess everything's in everyone's experience isn't it? (EM09)

Additionally, a participant noted poor town planning as a concern when stating that:

I just find it very interesting the fact that...the council allowed the shopping centres to be built when we had...these other ones that were vacant premises. They, allowed different houses to be built, built in areas that...were on flood plains, then we had the floods come and then all of that...There's just some decisions that if you go back you're like 'but why?' (EM10)

One Moranbah participant highlighted that new residents can pose a road safety risk as they are unfamiliar with the roads. This participant stated that:

...it's a one way street all the way around, it's not very well signed either and so is...town square, it's a one way street and you see people come down the wrong way, and...the locals all know that that's a new person in town and they obviously, it's wide enough for two cars to go down, but it's quite funny when you see it...I saw it...probably about two weeks ago, and I just laughed and I thought now I wasn't that bad, I was lucky, I was only on a push bike...when I got lost. (MO05)

**7.5.2 Public amenities and spaces.** Most participants discussed public recreational amenities and spaces within their community. Participants reported both positive and negative perceptions of the community's amenities and services.

**7.5.2.1 Positive.** Some Mount Isa participants reported that there were adequate publicly available spaces for people to use. Participants reported that they "...love the parks, lots of open space..." (MI20), and "...we've got the one water park here now which was really good" (MI16). Additionally, some participants reported that the use of public spaces could facilitate social relationships aiding with living in the community. As a participant stated:

...we've got the good facilities like the pool and the fun park and the lake, there's lots of things to do with the family anyway. So that, sort of, is a support in itself. Because we're, when you make those...connections with people, there's your counsellor...there's that person you need to talk to about something and there's that combating that isolation. (MI05)

Some Emerald participants stated that "...[Emerald] has some great areas like this park here" (EM05), and another participant reported that "...the upgraded pool, even though it's money but...it's an incentive if people want to live here really in the big picture. Lots of walking paths with the...gardens are beautiful" (EM01).

One Moranbah participant reported well-maintained community amenities and spaces stating that:

Well when you see a community of good wellbeing, you just have to have a look around the place at...the sports ovals...the way they look after it...Moranbah's got a combination of soccer, scouts, tennis, rugby league, netball, basketball all in the one area, and if you ever walk down there...I walk down there every now and again and take my dog for a walk down there and let her off and she just follows me around, it's always in a great state, so I've found that if it's a great, good community, they look after their facilities, very well. Same with...town's square park, that's always well maintained, the gardens are always well maintained here. (MO05)

The same participant further explained that "...the facilities around are well looked after and are more encouraging for people to use them" (MO05). Another participant noted that the community's walking paths encourage residents to be active stating that "...lots of people walk...we have walking paths that go all the way around town...there's no reason to not be physical" (MO02).

**7.5.2.2 Negative.** One Mount Isa participant reported negative perceptions of the appearance of public amenities and spaces. This participant noted that "...there's certainly stuff that can be improved in that way as far as aesthetics go for the city" (MI05).

Some Moranbah participants also reported negative perceptions of the community's public amenities and spaces. One participant stated that:

... 'cause it's a small town I mean you can walk from place to place, if things were accessible like if the footpaths kind of met up around town... people might be more inclined to walk instead of driving everywhere... and then that can only be good for your health. (MO06)

The same participant further explained that the council acknowledged that the public amenities and spaces in the community needed improvement. This participant stated that:

... playgrounds and things do get kind of... run down pretty quickly and I think if there was, nice playgrounds, nice parks, that would improve wellbeing because families would want to kind of use them... but... I think that is something that Moranbah has acknowledged and they're kind of... working on. (MO06)

Another participant reported that some community spaces were not well maintained stating that "... well 'round here, the only place I know of that isn't well maintained, and I only know that from talking to [someone]... and she goes out to the... graveyard, she said that's not very well maintained" (MO05).

**7.5.3 Public services.** Some participants discussed the influence of their communities' publicly available services on community wellbeing. Participants reported both positive and negative perceptions of their communities' services. Positive perceptions referred to availability and quality of services whereas negative perceptions referred to a lack of funding for services.

**7.5.3.1 Positive.** Some Mount Isa participants reported that they were satisfied with the community's council as highlighted in one participant's report that "... I think the council provide a good service" (MI05).

One Moranbah participant also stated that the community had "... more accessible facilities... there's a police station here that's open every day of the week" (MO06). The same participant reported a positive perception of the services and facilities available within the community stating that "... Moranbah is actually one of the bigger and sort of more

facilitated I suppose mining communities, so coming to Moranbah was...pretty much for us was moving to the city” (MO06).

**7.5.3.2 Negative.** Some Emerald participants reported a lack of community funding from government as a concern for not just their community, but for other rural communities as well. One participant stated that “not supported by government though. It’s a battle for everyone in the country. Always a battle, they’re always fighting something. The south east corner just, ‘oh yeah we’ll give it to you’” (EM01). Another participant also reported negative perceptions of both state and federal level government due to a lack of funding for services noting that “we certainly lack from funding for...health and, lots of other things...like government wise we’re probably isolated because we’re out in the bush, they forget about us” (EM07). One participant also described the difficulty they have experienced with the local council stating that “one thing I find is with these councils, if I go and ask a question, I go through...that many tiers of departments, by the time it comes out the other end I go ‘oh bugger it’” (EM03).

**7.5.4 Checkpoint.** Mount Isa and Emerald participants perceived the dams near the communities as a major positive aspect for recreational purposes which were reported to increase enjoyment of the community. However, Mount Isa participants perceived the associated water infrastructure as inadequate due to the water infrastructure not being able to meet demand. Participants from all three communities noted parks and walking paths as positively influencing enjoyment of the community as it encouraged residents to be active. Mount Isa and Moranbah participants reported that the general aesthetics and maintenance of public spaces as needing improvement to encourage residents’ engagement with these spaces. Mount Isa and Moranbah participants also reported that the council and emergency services were satisfactory. Emerald participants perceived a lack of funding for services in their community from all three levels of government.

## **7.6 Cultural Capital**

Participants reported the effect a community sense of identity has on the community. Two factors were identified within participants’ reports of the community’s identity – relaxed lifestyle and sense of community. Participants’ reports of a sense of

community were based upon three shared identities – family identity, isolated identity and diverse identity. The cultural capital factors are presented in Figure 17 below.

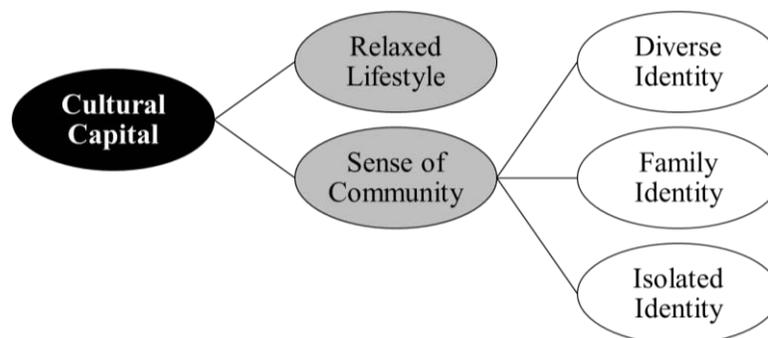


Figure 17. Cultural capital factors perceived to influence community wellbeing.

**7.6.1 Relaxed lifestyle.** Many participants discussed their community having a relaxed lifestyle. Most perceptions were positive relating to the calming effect of this lifestyle.

**7.6.1.1 Positive.** Many Mount Isa participants reported positive perceptions of the relaxed lifestyle within the community when stating that “the lifestyle is good” (MI04), and “...everything’s so close and everything just seems a bit more relaxed. Everyone’s just a bit more...calm and taking their time not in a...big old rush” (MI17). Participants often discussed how close places were in the community or the short commute to places in the community. This easy living lifestyle was highlighted by participants’ reports that “...it’s got so many benefits, you’re five minutes to anywhere, you’ve got no excuse to be late” (MI08), and “...it’s quiet and easy to get around so, I don’t have to wait for busy traffic, slow paced, so that’s good” (MI20).

Some Emerald participants also reported positive perceptions of the relaxed lifestyle within the community. One participant reported that the size of the community contributed positively to their lifestyle when stating that “I love it here...it’s small enough but it’s big enough” (EM11), and also that “...one thing I like is that like it literally takes me five minutes to get anywhere” (EM11).

**7.6.1.2 Negative.** One Mount Isa participant noted that the relaxed way of life in the community was perceived to result in a lack of pride in the appearance of the town. This

participant reported that “[upkeep of the community] doesn’t tend to happen here, people just go ‘oh well it works so that’ll do’” (MI14).

**7.6.2 Sense of community.** Participants reported perceptions of a sense of community based upon multiple shared identities within the community. Three shared identities were discussed – family identity, isolated identity and diverse identity. This sense of community was perceived to be present even through other changes within the community. One Mount Isa participant stated that “...there's been changes in the town but there still seems to be like that...sort of community spirit that exists” (MI04). One Moranbah participant also reported that “...the sense of community I think [makes it enjoyable]” (MO02).

**7.6.2.1 Diverse identity.** Participants often discussed the diversity within their community. This diversity was often reported as improving the inclusivity within the community. In other words, residents had in common that they were different.

**7.6.2.1.1 Positive.** Some Mount Isa participants reported the community’s cultural diversity as being positive. One participant noted that “...there’s a strong African community here as well as the Aboriginal population...” (MI09). Another participant reported that the cultural diversity within the community positively influenced community wellbeing when stating that:

The other point which...should be realised is that a large percentage of the population here, and even still today, are migrants....particularly after the second world war, we had this massive influx of people from...war torn Europe...who came here. So the city, I like to say that we have, well we did have at one stage, representatives from some 52 nationalities...all of them living and working in total harmony. (MI02)

One Emerald participant described inclusivity within the community regarding the cultural diversity when stating that “so Emerald is, because we’re such a change of...all different cultures and that here...they’re just not plain Australian, years ago it was just Aussies...But now...everyone’s very friendly” (EM01). Another participant stated that “...it’s a lovely place to live because it’s diverse” (EM08).

When discussing diversity regarding employment, one participant noted that "...this is my fourth mining town so and out of all the ones that I've lived in, this is the one that is the most...there's not so much bias against what job you have" (EM07). This participant further explained that this inclusivity was "...because Emerald's a country town and it's more than, mining's only a small part, of the people that live in Emerald" (EM07). Furthermore, one participant reported that the main industries within the community encouraged teamwork therefore contributing to the community spirit. This participant reported that:

...if they are...mining or they're ag, all those people come from those different streams are renowned for working together I'd say because...miners, they work in crews and things like that...and...I just think Emerald has a great community spirit. (EM08)

These reports of inclusivity stem from the presence of different industries within the community. Participants reported that "so it's not just a mining town there's a lot of...farm people in town" (EM06), and another participant noted that "...it's a lovely place to live in that it's not all mining, it's not all agriculture, there's a lovely mix of people" (EM11). Another participant also reported the community was not purely a mining community when stating that:

...when the mining boom was on...people started to identify it...as a mining town but, the reason that we came here and...one of the reason that...we were happy to move to Emerald was because...there's so much more depth in the town. (EM09)

**7.6.2.1.2 Negative.** One Mount Isa participant reported a negative perception of cultural diversity in the community when stating that "...there's always been the cultural...diversity of the town which has always had a negative connotation to the town" (MI05).

**7.6.2.2 Family identity.** Participants positively discussed the perception of their community having a family identity or being a family community. Some Mount Isa participants viewed a shared community identity centring on being a "family community" (MI19). This was due to the perception of many young families living within the

community. This was particularly so for those participants who had young families and would socialise with other families. One participant reported that:

...then I had my babies so then I was in a different environment again. And again it's the same thing where...it was the, the child health that sort of brought mums that had babies of a similar age together. And from that it's really developed into a support network. (MI04)

The sense of being a family community was also highlighted by another participant who reported that the community was a good place to raise children because "...[daughter] gets the chance to be a kid" (MI08).

Some Emerald participants also discussed the community as "...quite a family town in a way" (EM04). Participants reported that the community was a good place to raise children when stating that "...for us it's been a safe community, it's been a good community to bring the kids up in" (EM09) and another participant noted that "...I like that my kids have grown up here. I really do, I just...think it's good" (EM11).

Some Moranbah participants also reported a shared community identity resulting from the community being "...a family orientated town" (MO04). Participants noted that "...it's been a great community to grow up in...I've raised my children here as well" (MO02), and another participant stated that:

...here...[the kids] bicycle everywhere, scooter and they go to their friend's houses and...you're not scheduling everything it's not a playdate schedule of...'ok what do we have?' It's, they come home and you will have several children...and I think that's fabulous I think it's a really great opportunity for children to...be kids. (MO01)

Participants further noted that the community was a family community due to it being small. One participant reported that "...I think small communities be they mining...or anything are, a good place...for kids to grow up" (MO02), and another participant stated that:

...when we moved to Moranbah we didn't have any children...and, because my husband and I both grew up in small mining communities and had such positive

experiences as kids in such small community life as we were, this is a place that we chose to start our family...because...we knew that it would be...a positive environment...for them being a little bit smaller. (MO06)

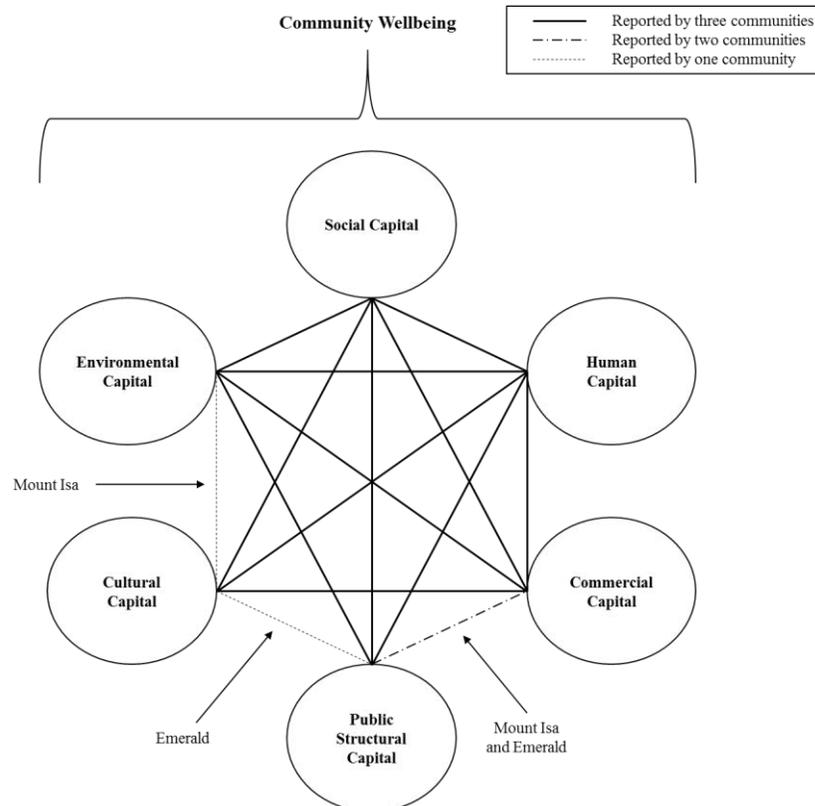
**7.6.2.3 Isolated identity.** Factors reported by Mount Isa participants as forming a common identity amongst residents included isolation, being a non-local, and being away from family. This identity as ‘people from an isolated community’ was characterised by participants’ reports of “...everyone’s in it together” (MI04), “...everyone’s alone together” (MI14), and “...we’ve got to rely on each other because that’s who we’ve got” (MI05). Another participant reported “...I think everyone has it in common that they’re generally not born and bred here so they have to go out of their way to be happy and friendly and that to meet other people” (MI08).

**7.6.3 Checkpoint.** Participants from Mount Isa and Emerald reported that the community’s perceived relaxed lifestyle improved their enjoyment of living within the community. Participants from Mount Isa and Emerald also reported their communities as having a diverse identity. This diverse identity, based on culture and industry, was perceived to decrease bias and improve inclusivity within the community. Moranbah participants did not report diversity as forming the community’s identity. Moranbah participants reported a mining identity, which is explored in the following chapter. Participants from all three communities reported the perception of their community having a family identity that was facilitated by the communities being perceived as rural or small. Mount Isa participants also perceived an isolated identity that was facilitated by the community’s remoteness that aided residents in helping each other and therefore increased their resilience.

## 7.7 Integrative Summary

From the previous participants’ reports about community wellbeing, relationships between and within each type of community capital can be identified. Figure 18 below provides the combination of each of the communities’ reported relationships between each form of community capital. As indicated in the figure, there was an identified relationship between each form of community capital. However, for Mount Isa, no relationship was

identified between cultural and public structural capital. For Emerald, no relationship was identified between cultural and environmental capital. For Moranbah, no relationship was identified between cultural and environmental capital, cultural and public structural capital, and public structural and commercial capital. The following provides an overview of the relationships between the perceived factors influencing community wellbeing that form the forms of community capital.



*Figure 18.* Combined map of relationships between the forms of community capital influencing community wellbeing perceptions.

**7.7.1 Social capital.** Reports of social capital factors were identified as having relationships with commercial, human, environmental and public structural capital factors. Emerald participants noted employment (commercial capital) as increasing the amount of networks, specifically weak ties, an individual holds within the community. Furthermore, Mount Isa participants reported employment to provide an opportunity to establish strong ties between residents. Social networks were also reported as providing further employment

opportunities. Mount Isa participants noted that residential and commute workers working together (commercial capital) bridges divides within the community. However, commute workforces and long shifts (commercial capital) reportedly decreased the employees' ability to connect with the community. These reports highlight the relationship between commercial and social capital as employment can help establish formal networks within the workplace while certain workforce practices can decrease networks outside the workplace. Social capital (networks) can increase employment prospects while employment can connect those who may not interact outside of the workplace.

Moranbah participants noted networks between neighbours to offer assistance to each other through providing goods for those who may not be able to afford them (commercial capital). Mount Isa participants reported that the perceived norm of reciprocity within the community prevented the increased use of commute workforces (commercial capital). However, this norm of reciprocity was reported to create feelings of guilt when shopping online to source cheaper goods rather than shopping in the community. Even though the norm of reciprocity was noted as causing guilt, it also reportedly assisted in receiving discounts through local businesses. From Moranbah participants, transient populations were perceived to decrease reciprocity within the community resulting in residents not attaching to the community and therefore not financially contributing to community organisations (commercial capital). These reports indicate that reciprocity between residents provides avenues for residents to access commercial capital (goods and discounts). However, reciprocity through shopping locally was reported to decrease residents' willingness to source cheaper goods (commercial capital). A lack of reciprocity was also noted as decreasing the commercial capital of community organisations. These reports further indicate the close relationship between commercial and social capital.

Mount Isa and Emerald participants reported the ability to monitor others' behaviour through social networks within the community as aiding rearing children by ensuring children abide by family and community behavioural norms. Specifically, monitoring seemed to increase perceptions of safety (human capital). Additionally, monitoring others' behaviour was noted to improve perceptions of safety through watching each other's properties. These reports indicate that closure in networks, indicated by the ability to monitor behaviour, was perceived as improving community safety.

Participants from all three communities perceived the events held by local councils (public structural capital) to improve the friendliness of the communities through providing opportunities for residents to interact with each other. Emerald participants noted that being involved in social activities such as sporting groups or other recreational groups, allowed for the development of skills (human capital). However, money (commercial capital) was noted as a barrier to being able to participate within such groups. Mount Isa participants also noted differences in income (commercial capital) as the basis of social division within the community. Community human capital (skill building) can be improved through participating in formal networks (sporting or recreational groups).

In Emerald, major weather events, such as floods (environmental capital), were reported to bring people with weak ties closer together and perform tasks for each other. Mount Isa and Moranbah participants reported being geographically isolated (environmental capital) from family as increasing residents' ability or need to establish close ties with community residents to receive support. Furthermore, the smaller population size (human capital) of the community, particularly for Moranbah, was reported to facilitate building relationships with neighbours. These reports indicate that a community's size and location (human and environmental capital) can influence the extent and nature of social networks.

**7.7.2 Human capital.** Reports of human capital factors were identified as having relationships with commercial, social and environmental capital factors. Alcohol and drug use (human capital) within the community was reported to decrease residents' trust in others as well as contribute to individuals not engaging with the community (social capital). Moranbah participants noted suicide to have a large impact on community residents due to the proliferation of weak ties within the community (social capital, everyone knowing each other) because of the community's smaller population (human capital). These reports highlight that community health or lack thereof (alcohol and drug use) can decrease trust (health) but social capital can also exacerbate the community's experience of community health (suicide). Furthermore, a perceived need for some people to access medical facilities in other communities was reported to remove people from their support networks (social capital). However, participants reported social networks to inhibit accessing services, such as counselling, as they did not want others knowing they were using such services. A lack

of healthcare services can decrease access to social networks while social networks can decrease individual perceptions of their ability to access healthcare services. These reports highlight the reciprocal relationship between human and social capital.

The perceived poor health of residents within the community was viewed as resulting from the poor quality of fresh produce due to geographical isolation (environmental capital), and high availability of fast food (commercial capital). These perceived reasons for poor health indicate how other forms of community capital (environmental and commercial capital) can decrease health. The geographical isolation of the community (environmental capital) was also perceived to reduce health through limiting resident access to healthcare services. Emerald participants noted that the public hospital system provides residents with low incomes the opportunity to receive healthcare. Participants also raised concerns for the health of people engaged in FIFO and shift work structures indicating the impact commercial capital can have on health within a community.

Emerald residents' perceptions of safety (human capital) reflected reported trust (social capital) in each other. Emerald and Moranbah participants reported population loss (human capital) as decreasing social networks (social capital) through losing friendships. This loss of friendships was reported as decreasing residents' desire to establish further networks. Population loss was also reported to decrease the amount of income (commercial capital) being spent in the community. Industries, such as education, were perceived to increase transient populations. For example, teachers move to and work in rural or remote locations for a specified period of time. Participants perceived the transient populations as not investing within the community both economically and socially. These findings highlight that the type of residents (temporary versus permanent) within a community can influence both the commercial and social capital of a community.

Emerald participants reported the community's surrounding environment as improving physical activity. Specifically, pleasant scenery (environmental capital) was reported as making exercise more enjoyable. Moranbah participants reported that the community's perceived safety was facilitated by the community's isolation (environmental capital) and small population size. These findings demonstrate that, the community's environment (scenery and isolation) can influence human capital (exercise and safety).

**7.7.3 Commercial capital.** Reports of commercial capital factors were identified as having relationships with environmental, human and social capital factors. Participants reported concern regarding the perceived high cost of living within the community. One reported reason for the perceived increased cost of living was the community's geographical isolation. Thus the geographical isolation of a community (environmental capital) can influence the community's commercial capital. Participants also reported that the perceived lack of access to shopping influences their experience of geographical isolation (environmental capital) within the community, specifically it increases feelings of isolation. For Emerald participants, perceiving an adequate number of businesses in the community was reported to decrease feelings of isolation.

Mount Isa participants reported the increased cost for many basic human needs (such as food and water) can result in residents' inability to obtain these items. Emerald participants noted that travelling to healthcare services outside of the community increased the perceived costs associated with living in the community. Additionally, Mount Isa and Moranbah participants perceived a lack of local markets to decrease residents' health maintenance due to decreased ability to buy fresh fruit and vegetables. These examples highlight the impact commercial and human capital can have on each other.

Human and commercial capital were seen as having a symbiotic relationship as having a necessary number of businesses in the community is achieved through having a large enough population which helps maintain the perceived necessary amount of businesses. Employment, or more specifically receiving an income was reported as improving mental health. Furthermore, Mount Isa participants reported a lack of job opportunities decreased community morale and contributed to the experience of poor mental health (human capital). Emerald participants also reported businesses closing created a somber mood within the community and decreased residents' mental health. A perceived lack of business skills (human capital) within the community was reported as contributing to the closure of businesses. Additionally, consideration of the businesses and services within the community was factored into residents' decision to move to the community. Therefore, a community's commercial capital (business and services) can influence population attraction (human capital).

The symbiotic relationship between commercial and human capital is also identified within participants' reports regarding commute workforces and skill levels. Participants reported concern regarding the work structures within the community, particularly the use of commute work structures. However, some participants acknowledged the need for commute work structures when a certain skill level (human capital) is required for a job and that skill is not available within the community. In this way, workforce structures (commercial capital) and community skill levels (human capital) influence each other.

Moranbah participants' reports of supporting local businesses indicate the norm of reciprocity (social capital) within the community. Additionally, weak ties (social capital) with business owners or employees were reported to make shopping in smaller communities more enjoyable. Emerald participants noted job loss within the community reportedly resulting in population loss. Moranbah participants reported that even in the face of job loss, social relationships (social capital) in the community were perceived to influence people to remain in the community rather than finding another job elsewhere (human capital). Residential workforces were reported as improving residents' connections with each other and involvement with the community (social capital).

**7.7.4 Environmental capital.** Reports of environmental capital factors were identified as having relationships with human, public structural, commercial and social capital factors. Mount Isa and Moranbah participants reported the experience of reduced allergy and asthma symptoms highlighting the impact of climate on health (human capital). Reports of reduced exercise and physical illness highlight the impact of climate on health (human capital). Emerald and Moranbah participants perceived the community's mild weather as facilitating exercise (human capital) and social activities (social capital). Mount Isa participants reported the experience of drought as inducing decreased mood, indicating the impact that climate can have on psychological wellbeing (human capital). Previous major weather events in Emerald, such as floods, were reported to bring people with weak ties closer together (social capital). Additionally, previous floods were reported to influence mental health (human capital). Moranbah participants reported flooding as impacting roads (public structural capital) and the ability to access food and healthcare (human capital).

Mount Isa participants discussed a perceived lack of undercover structures increasing the experience of the heat, highlighting that a community's infrastructure (public

structural capital) can influence the experience of the climate. Furthermore, Emerald participants reported discussions within the community being held regarding the building of infrastructure to decrease the impact of future floods. Moranbah participants reported the road quality (public structural capital) in and out of the community was also noted to decrease perceived isolation. Mount Isa participants specifically reported distance from family and friends outside of the community as being a stressor, highlighting how social capital (lack of access to networks) can influence the experience of isolation. Mount Isa participants also discussed enjoyment of the landscape due to the ability to partake in activities with other residents. Thus indicating the impact the landscape of a community can have on social capital.

Mount Isa participants' reports of decreased tourism and businesses (commercial capital) due to the heat highlight the impact of climate on commercial capital. Transit services (commercial capital) were reported as decreasing the perception of isolation.

**7.7.5 Public structural capital.** Reports of public structural capital factors were identified as having relationships with human, commercial and social capital factors. Mount Isa participants reported poor water quality as a result of inadequate water infrastructure to decrease health. Therefore, the adequacy or inadequacy of infrastructure within a community can influence individual perceptions of physical health (human capital). Participants reported buying bottled water due to the perception of inadequate water infrastructure in the community. Buying bottled water was noted as increasing the cost of living (commercial capital) within Mount Isa.

Government was perceived as not doing enough to improve the community's economy (commercial capital). Additionally, Mount Isa participants reported government decisions can decrease community investment (commercial capital). Emerald participants reported infrastructure such as the pool, walking paths and gardens as contributing to attracting residents to the community (human capital). Adequate walking paths, parks and open spaces were noted as improving health through encouraging exercise (human capital) as well as improving social connections with other residents (social capital) within all three communities. Additionally, the improvement of roads through the introduction of traffic lights was perceived to improve the community's safety (human capital).

**7.7.6 Cultural capital.** Reports of cultural capital factors were identified as having relationships with environmental, social, human, commercial and public structural capital factors. The geographical isolation of the community (environmental capital) was reported to provide a common ground for residents which facilitates the development of social capital within the community. Mount Isa and Emerald participants reported cultural diversity as a community identity demonstrating how the migration of people (human capital) influences the cultural capital of a community. Emerald participants also reported the type of industries in the community (commercial capital), such as agriculture, perpetuate the norm of reciprocity (social capital) within the wider community. The diversity of industry in the community was also reported to decrease bias towards different industries.

Common identities within the community were perceived as facilitating relationships (social capital) and buffering feelings of loneliness (human capital). The sense of community achieved through social relationships (social capital) within the community was reported as increasing enjoyment. The small physical size of the communities (human and public structural capital) was reported to improve the perception of an easy lifestyle in the community. Similarly the perception of the community being small and yet big enough to have what residents require in terms of medical (human capital), and business needs (commercial capital) contributed to the perception of a relaxed lifestyle. The perception of the communities being family communities was also facilitated by the small size of the communities. This perception of a family community was perceived to improve rearing children (human capital).

## **7.8 Conclusion**

There were many factors participants perceived to influence their experience of living in their community. This chapter provided an in-depth exploration of these factors in terms of community capital as well as the relationships between the forms of community capital in terms of community wellbeing. Given the interconnectedness highlighted in this chapter between the forms of community capital, it is expected that mining activity will influence many aspects of the community. The next chapter explores participants'

perceptions of the mining industry and the perceived impacts mining activity has on the community.

## Chapter 8: Results – Perceptions of the Mining Industry and Impacts

In this chapter, the research question ‘what impact do mining community residents perceive mining activity to have upon the community?’ was explored. Participant perceptions of the mining industry are reported followed by an exploration of the perceived positive and negative impacts from mining activity in terms of community capital. At the end of each section, a checkpoint is provided of the main points discussed. An integrative summary of the relationships identified between the forms of community capital for all three communities is provided at the end of the chapter.

### 8.1 Mining Industry Perceptions

Participants were asked, “What do you think about the mining industry?” Participants’ perceptions are presented in the following sections for each of the communities.

**8.1.1 Mount Isa.** While some participants reported negative and ambivalent perceptions, most participants reported positive perceptions of the mining industry. Participants’ perceptions of the mining industry are presented in Figure 19 below.

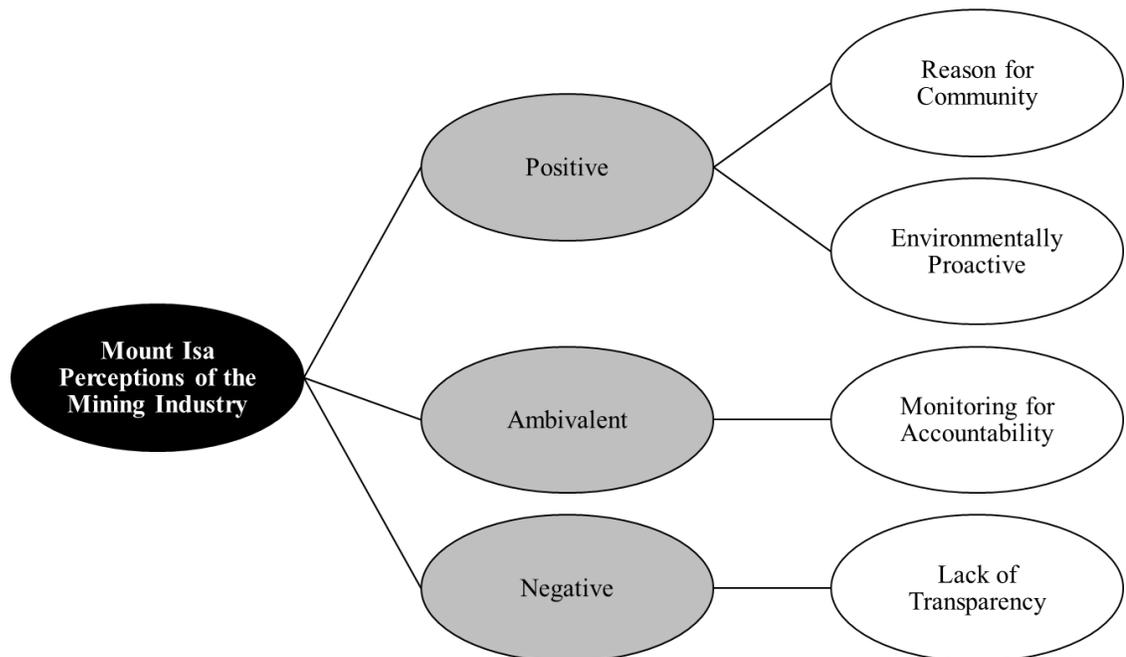


Figure 19. Mount Isa participants’ perceptions of the mining industry.

**8.1.1.1 Positive.** Most participants reported positive perceptions of the mining industry. Two themes were identified as positive perceptions of the mining industry – *reason for community* and *environmentally proactive*.

*8.1.1.1.1 Reason for community.* Many participants perceived the mine as the reason for the community being built. Participants stated that “well if it wasn’t for the mining industry there wouldn’t be a community here” (MI02), and “...I think [mining activity is] one of the most important things in town...if we didn’t have the mines we wouldn’t be a town” (MI20).

*8.1.1.1.2 Environmentally proactive.* Some participants perceived that the mining company was environmentally proactive. Participants reported that the mining company’s transparency with the community facilitated the perception of environmental proactivity of mining activity. For example, one participant reported that:

...I still think the mine is very, open with their...the pollution and stuff like that. I see that they are very proactive in reducing lead and making everyone aware and they’ve got the “squeaky clean” campaign and all those sorts of things so I think it’s, I think that’s good. (MI05)

**8.1.1.2 Ambivalent.** One theme was identified as ambivalent perceptions of the mining industry – *monitoring for accountability*.

*8.1.1.2.1 Monitoring for accountability.* Some participants perceived that the mining industry was not inherently negative but that it needs to be better managed or monitored to ensure positive outcomes for communities. This need for monitoring seems to stem from a lack of trust in the mining industry. For example, participants reported that “I’m not against [mining], but I think they need...it’s like everything, you need to be, have checks and balances so that someone just can’t or an organisation can’t just go in and do what they want to do” (MI03), and:

I think the mining industry does need to be monitored and to make sure that it does the right thing. I think there is, there is a high degree of tick and flick, with as long as this piece of paper is in the filing cabinet, it’s ok, and I don’t believe it is always ok. (MI11)

**8.1.1.3 Negative.** One theme was identified as negative perceptions of the mining industry – *lack of transparency*.

**8.1.1.3.1 Lack of transparency.** Some participants held negative perceptions of the mining industry. Participants perceived that the mining company in the community was not transparent in their operations and that this resulted in uncertainty about the impact the mine has on the community. One participant reported that “...I have no idea what’s going on at the mine. All I know is it blasts twice a day. That’s about it” (MI17). Another participant reported, “I don’t have a problem with the mines themselves, but... I’m not sure that they’re as environmentally responsible as they would like us to think” (MI09). Some participants also reported the perceived lack of transparency to facilitate a lack of trust between the residents and the mining company. For example, a participant stated that:

I think there’s still a feel that the mines don’t give, they give enough information to make it look like they’re keeping us posted, but the miners always think that they always leave something, that there’s something that they’re not telling them. (MI13)

Another participant reported that:

...I think that there needs to be a way, perhaps just being less us and them with the mine and the town. But then that said, anything, any effort that they make to become more transparent or integrate themselves in the community more I would take with a great deal of scepticism because I’d know their motivations weren’t the right ones they’re just trying to make themselves look better. (MI19)

**8.1.2 Emerald.** While some participants reported negative and ambivalent perceptions, most participants reported positive perceptions of the mining industry. Participant perceptions of the mining industry are presented in Figure 20 below.

**8.1.2.1 Positive.** Only those participants who were involved with the mining industry reported positive perceptions of the mining industry. One theme was identified as positive perceptions of the mining industry – *personal involvement*.

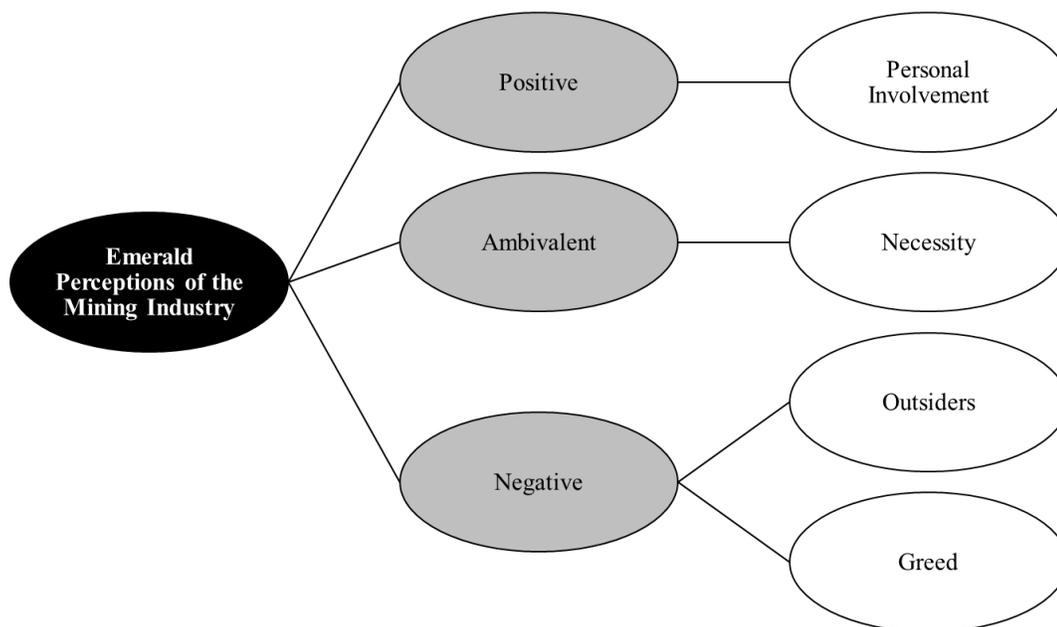


Figure 20. Emerald participants' perceptions of the mining industry.

*8.1.2.1.1 Personal involvement.* Some participants perceived the mining industry to be "...a great industry" (EM02). One participant explained that "...[the mining industry is] a great industry to be involved in...it's fun at the end of the day" (EM06). This participant further described their enjoyment in working for a mining company within the community as they perceived the company to hold similar values to them. The participant stated:

...I find them to be fantastic. I'm really fiercely, fiercely proud of the [mining] company that I work for and...love their culture and their beliefs...their values and...I consider a lot of my own values to resemble the publicly stated values they have. (EM06)

*8.1.2.2 Ambivalent.* One theme was identified as ambivalent perceptions of the mining industry – *necessity*.

*8.1.2.2.1 Necessity.* One participant reported an ambivalent perception of the mining industry due to the necessity of coal particularly in regards to making steel. The participant noted that they held neither positive nor negative perceptions when stating that:

...I think [the mining industry has] been given a hard...The media have really given it a hard time because I think we would definitely need to keep coal...especially to make steel...I know we need to look at environmentally...protecting...our environment with regards to emissions and things like that...I don't know, I think the media has a lot to do with [the mining industry's bad reputation] and just listening to the Greens on the election day...I don't know. There's no right and there's no wrong...[the mining industry is] bad in some areas but it's good in others. (EM08)

**8.1.2.3 Negative.** Some participants reported negative perceptions of the mining industry and the mining operations near their community. Two themes were identified as negative perceptions of the mining industry – *outsiders* and *greed*.

**8.1.2.3.1 Outsiders.** One participant noted that long term residents of the community may negatively perceive the start of mining operations in the community due to the introduction of another group. The participant stated that "...well for the original locals...it's like an invasion. They probably think they're indigenous and here come the dirty rich miners" (EM02).

**8.1.2.3.2 Greed.** Some participants perceived the mining industry or those involved to be greedy. One participant noted dislike for the "flamboyant attitude" (EM04) of the mining industry when stating that "...when they say... 'oh we've got enough iron, steel here', I said 'but why? Why sell it to someone else when we're gonna need it in future?' 'Oh we, can go onto something better by then.' It's...crazy" (EM04). Furthermore, another participant noted that "...for being great managers of the resource I'd say probably not...there's a lot to be desired, but it's the...greasy spoon, isn't it?" (EM02). However, one participant recognised that the mining industry may have received a greedy reputation due to the behaviour of only some individuals. The participant stated that "...one thing that does concern me too are probably there are shonky people in the industry and maybe they've spoilt it for the good people...because they're all trying to make a quick buck" (EM08).

**8.1.3 Moranbah.** Participants reported both positive and negative perceptions of the mining industry. Participant perceptions of the mining industry are presented in Figure 21 below.

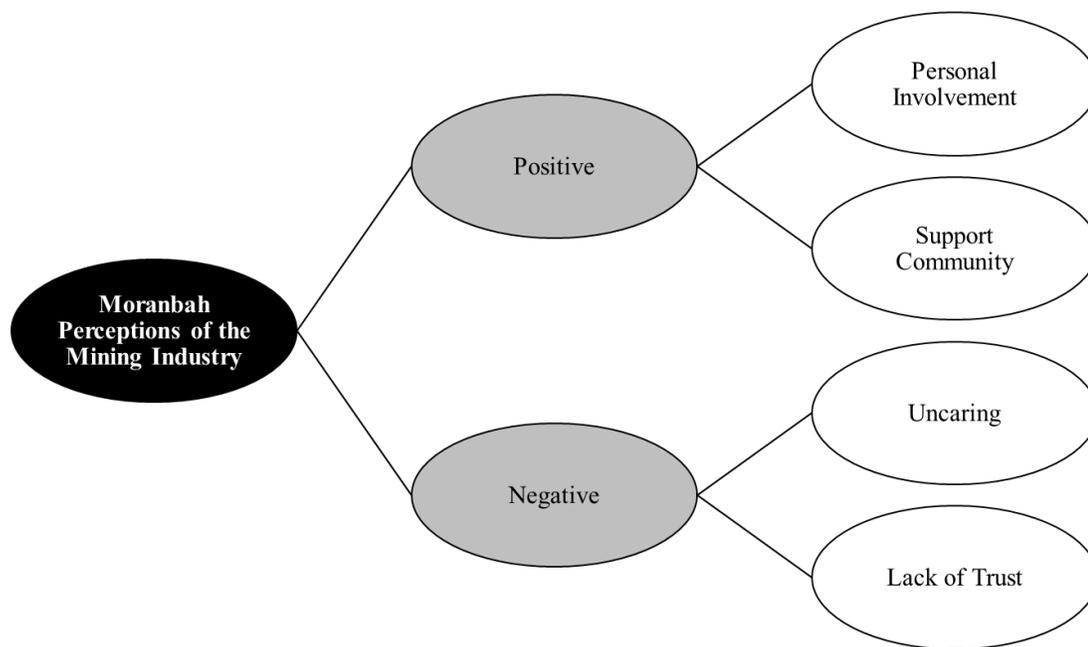


Figure 21. Moranbah participants' perceptions of the mining industry.

**8.1.3.1 Positive.** Some participants reported positive perceptions of the mining industry. Two themes were identified as positive perceptions of the mining industry – *personal involvement* and *support community*.

**8.1.3.1.1 Personal involvement.** One participant reported a strong attachment to the mining industry when stating that "...people like me, who love the mining [industry] community" (MO06). The participant's attachment to the mining industry stemmed from a family history of working within the mining industry. This participant further explained that

I think the mining industry has been...so good to, my family...I've grown up in a mining community where my father was a miner, my mum was...a nurse in the mines, then I've now married a miner whose family has a mining history as well. (MO06)

*8.1.3.1.2 Support community.* Only one participant reported positive perceptions of the mining industry because "...the mines do support the community in a lot of different ways" (MO05).

*8.1.3.2 Negative.* Some participants reported negative perceptions of the mining industry and the mining operations near their community. Two themes were identified as negative perceptions of the mining industry – *uncaring* and *lack of trust*.

*8.1.3.2.1 Uncaring.* Some participants reported that the mining industry did not care about the community or people. One participant noted that "they sack you...unfair[ly]...they don't care...they don't even care about...their own invest[ment] in the community business people" (MO03). Another participant stated that "...that's the culture of mining 'cause it's...career driven and money driven...it's not about the people anymore" (MO04). However, one participant perceived that there would be the same lack of care in any big company when stating that:

...but generally speaking I think that's probably the same with any big company, the bigger it gets the less people become people and become numbers and it's like...what's the bottom dollar for our cost factor or our...restructuring or whatever they do it's, you lose the human factor in that and it's...a case of the rich getting richer and the poor getting poorer. (MO02)

*8.1.3.2.2 Lack of trust.* One participant reported a lack of trust in mining companies due to the perception of empty promises. This participant reported that:

...in 30 years here, they promise you everything and they just give you nothing...people don't want nothing to do with [mining companies], they don't trust them. And I know since I've been here 30, 40 years here, do not trust them, they say one thing and we've seen it, all the time, they say things and you cannot trust what they say. (MO03)

**8.1.4 Checkpoint.** Most Mount Isa participants reported a positive perception of the mining industry due to the perception that the industry was the reason that the community exists. Ambivalent and negative perceptions of the mining industry were based on a lack of

trust between the residents and the mining industry. Due to this lack of trust, participants reported not believing information disseminated from the mining industry.

For Emerald participants, only those who were involved with the mining industry reported positive perceptions based on their enjoyment of working within the industry. The other Emerald participants reported ambivalent perceptions of the mining industry based on the juxtaposition between its necessity and its impact upon the environment. Negative perceptions of the mining industry related to the introduction of mining activity and greed. These themes, particularly greed, were based on a perception of a lack of foresight on the part of the mining industry to plan for downturns.

Moranbah participants perceived the mining industry positively due to their personal involvement with the industry and the industry supporting the community. Negative perceptions were based on a lack of trust between the residents and the mining industry. This lack of trust resulted from perceptions of a lack of reciprocal actions on the part of the mining industry not supporting the community.

## **8.2 Perceived Impacts of Mining Activity upon Community Capital**

Participants from all three communities perceived that mining activity has both positive and negative impacts on the community. However, the negative impacts of mining activity were more salient for most participants. Participant perceptions of the impact of mining activity upon community capital are presented in Figure 22 below. Mining activity was perceived by participants to positively and negatively influence all six forms of community capital by at least one of the communities.

Mount Isa participants perceived three forms of community capital (commercial, cultural and human capital) to be positively affected and four forms of community capital (commercial, human, social and environmental capital) to be negatively affected by mining activity. Emerald participants perceived five types of community capital (commercial, social, public structural, environmental and human capital) to be affected both positively and negatively. Moranbah participants perceived all six forms of community capital (commercial, social, cultural, human, environmental and public structural capital) to be negatively affected by mining activity, however just three (commercial, social and cultural

capital) were perceived to be enhanced. The following sections explore the perceived impacts from mining activity.

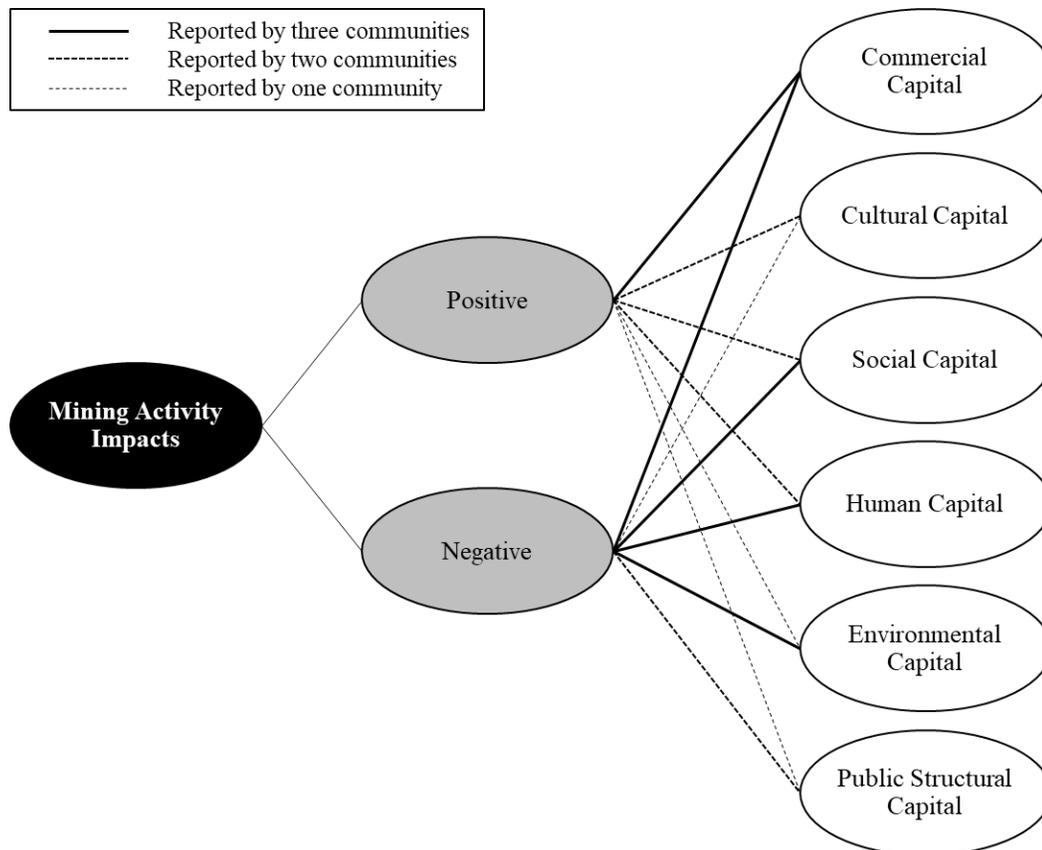


Figure 22. Mining activity impacts on community capital.

**8.2.1 Positive impacts.** Some participants reported mining activity to have positive impacts on community wellbeing. The reported positive impacts related to the contributions mining activity made towards all forms of community capital.

**8.2.1.1 Commercial capital.** Five themes were identified as positive commercial capital impacts from mining activity – *workforce structures, economic stimulus, upside of a downturn, increased employment and importance of union presence*. The commercial capital impacts are presented in Figure 23 below.

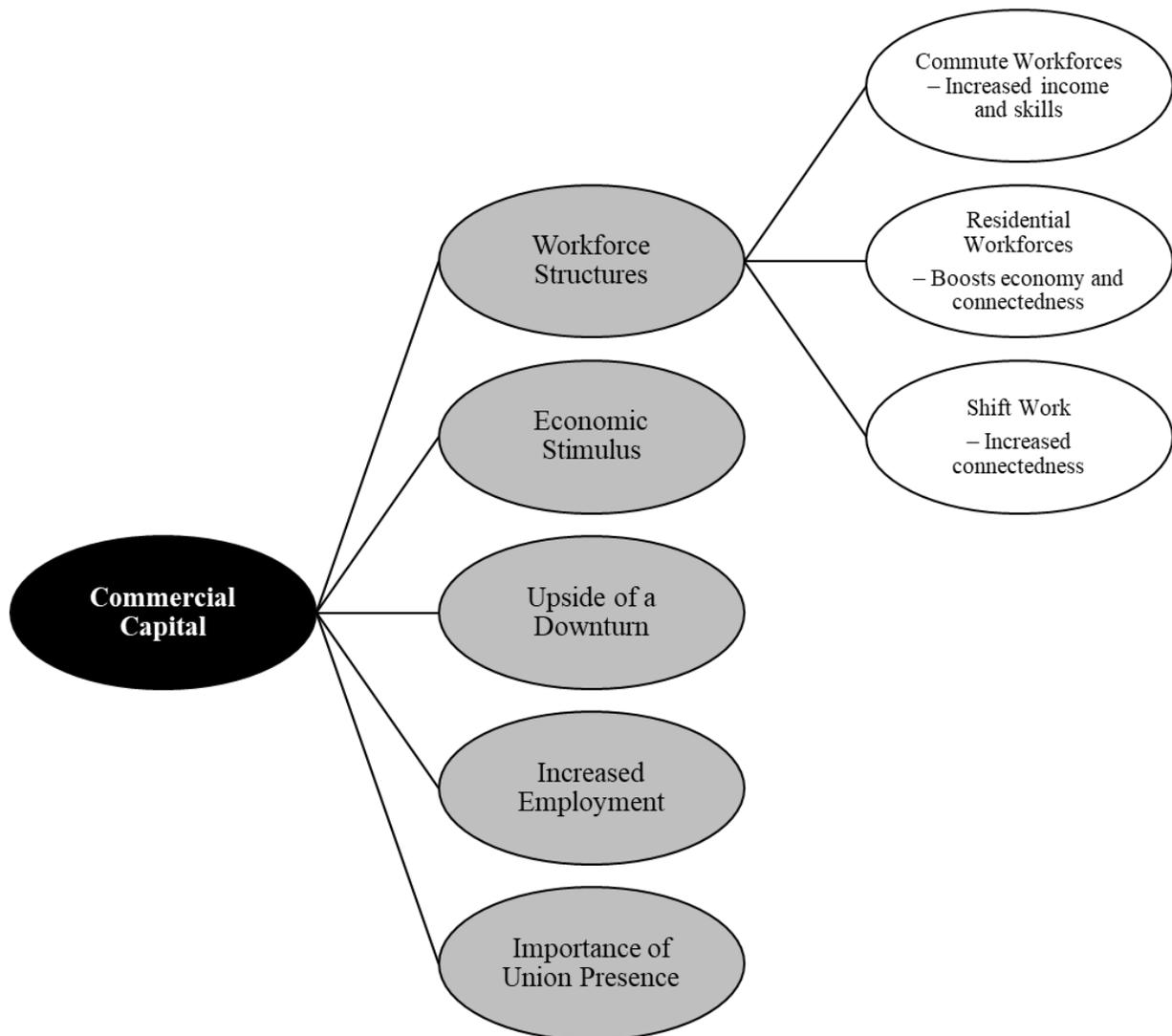


Figure 23. Positive mining activity impacts on commercial capital.

8.2.1.1.1 *Workforce structures*. Participants reported positive perceptions of the mining industry’s use of certain workforce structures in terms of *commute workforces*, *residential workforces* and *shift work*.

8.2.1.1.1.1 *Commute workforces*. Some Mount Isa participants reported a level of necessity for commute workforces and that they provide income for accommodation services within the community. A participant reported “...I guess some money comes in from them being accommodated during their shifts” (MI09). The need for commute workforces was particularly recognised when a certain skill level was not available within

the community, and therefore people from outside the community are needed to fill these roles. One participant reported:

...I do think that [the mining companies] do try and keep [commute workforces] to people who are essential. So if they can't employ them in the community or they've got some specialist skills that there aren't many people who do what they do, then flying them in and out is probably the fair enough option. (MI14)

Some Moranbah participants also reported that the use of commute workforce structures in the mining industry had benefits for community wellbeing. One participant noted that commute workforce structures allow people more choice when stating that "...I think it's fantastic that if you don't want to live in the community like this that you still can live away, if that's what you want" (MO06). Another participant stated that "...[a commute workforce structure] can serve a purpose short term and it might be...a great thing for, money wise short term...I know of a few people that have come...and had a specific goal" (MO02).

8.2.1.1.1.2 Residential workforces. Some Emerald participants reported positive perceptions of residential workforces within the community. One participant reported that "...the residential workforce is greater in numbers than what the non-resident workforce is...it's pretty much always been like that in Emerald...as far as I can tell, so...most people in Emerald...are residential" (EM06). This participant further described that a residential workforce allows for greater connectedness stating that "...some of the older guys when it was only residential housing...they spoke about some of the happiest days of their lives...everybody was involved and everybody was...connected in, with the community" (EM06). The same participant also noted that working residentially allows for a healthier lifestyle stating that "...if you get a mining job...you will live in a mining community basically...and...some people mightn't like the idea of it but...to me it's...a healthier way of existence" (EM06). Additionally, another participant noted that a residential workforce boosts the economy of the community. This participant stated that:

...it means that all the other shops are boosted 'cause all of a sudden you not only have the miner but his wife and kids, so they'll want to go to the toy stores, they'll

want to go to the pharmacy for makeup, they'll want to go to all the clothes stores, grocery stores. (EM05)

8.2.1.1.1.3 Shift work. One Moranbah participant noted that shift work allowed for employees to be more involved in the community stating that:

But I think being out here, and maybe that's...a direct correlation to having some shift work...that if you're out here and you're on a lifestyle roster and you have half of it off, you have more time to chat with your neighbour, you're not rolling on Friday night and going 'ok I only have two days off and I have to do 30 things, I'm trying to catch up from the week that was and I'm preparing for the week that is, then the kids have to go here, here, here.' You actually get some time to chill out...You have a cul-de-sac party, you invite your friends over after work. (MO01)

8.2.1.1.2 *Economic stimulus*. Participants positively perceived mining activity to generate wealth within the community. Mount Isa participants reported that the mining industry provided support for the community because "they back the community" (MI18). Participants reported that "I think it's done, a lot for the community. I think...the fact that it's...funded different...charities, projects" (MI13), and "I think the mining industry here does a lot of work for the community, they support lots and lots of things, they support the schools and so on...I don't have any complaints" (MI15). Another participant stated "...we're in the process at the moment of applying for funding for community events and stuff like that" (MI05).

Participants described the economic benefits of the mining industry for the community when stating "it does support a lot of business and jobs, so the positive is it's a very, very good money earner and it does...put money into the town" (MI06). One participant also noted that "...there might be more agencies here because of the mine" (MI11). Participants also described that the mining industry provides economic benefits for the state when stating:

But what they don't understand is that somebody, somewhere, has to create the wealth and my claim is that the wealth producers of this state is the mining industry.

Because every tonne of copper that comes out of the ground, is new wealth for the state. (MI02)

Additionally, participants described that the mining industry provides economic benefits for the nation. As one participant stated “so from a business perspective I see it as something good for our Australian economy...keep the wheels turning I ‘spose” (MI14).

Some Emerald participants reported that “[the mining industry has] certainly made [the community] a lot wealthier. Yeah especially bloody restaurants. The pubs...did a roaring trade as usual” (EM03), and another participant stated that “...it did bring some good wages into the town” (EM09). One participant also noted that “I think it gave a lot of great wealth...it’s created a huge amount of development” (EM08). Additionally, some participants discussed the flow-on effect of increased wealth within the community. A participant stated that “...basically when the miners have got more money, everyone’s got more money because the mines spend more money. So the taxi driver gets more money, he’s able to provide for his family with more” (EM02). Another participant reiterated that:

...miners often come here to move, bring their families and that sort of stuff, which of course boosts everything. It means, people can raise the rent ‘cause they can afford it. It means that all the other shops are boosted ‘cause all of a sudden, you’re [don’t] only have the miner but his wife and kids, so they’ll want to go to the toy stores, they’ll want to go to the pharmacy for makeup, they’ll want to go to all the clothes stores, grocery stores. It boosts everything up. (EM05)

Another participant stated “in the boom time it was just amazing. As I said, you couldn’t get a tradie. There were shops opening up, there was you know everything was, the shopping centres were full...everyone was spending” (EM11). The same participant further noted that the mining boom had “made people millionaires...because...there’s businesses that have opened up and...ridden that boom time” (EM11).

Moranbah participants reported that mining industry employees directly benefit from its wealth as highlighted in one participant’s statement that “...well, [the mining industry] benefits me financially because it’s a main source of income” (MO02). Other participants stated that “...I know the wages are very good and I think it’s fantastic that

people can, use that...to better their lives” (MO06), and that “...the young ones here that are sensible with their money. [The mining industry] gives them a start because there’s no way in the world you can go...and earn about 2000 a week in your hand...with no...skills” (MO03). One participant also noted that community businesses and organisations benefit from increased wealth as a result of mining activity. This participant stated “I know...the mines have given [the radio station] money...for different things...the taxi drivers do really well...out here” (MO05). Another participant reported that businesses have opened to service the mining industry. The participant noted “...there’s new businesses in town...that can supply the mining industry with different, with whatever products” (MO06).

*8.2.1.1.3 Upside of a downturn.* Participants reported the positive effects of the experience of economic downturns within the mining industry. Mount Isa participants noted that there was population loss during downturns that was perceived to result in decreased housing prices. Decreased housing prices were perceived to benefit renters and people looking to buy a house. One participant stated:

...there was an upside to [a downturn], there’s a lot of people, I mean a lot of people left town and sold their houses which drove housing prices down which drove rent down a little bit as well, so that and the low interest rates, so housing actually in the short term, it became a little bit more affordable...when a heap of people left.  
(MI09)

Some participants perceived the lack of coal mining within the community to buffer the effects of the downturn. As one participant noted, “...[noticeable effects of the downturn were] not so much here I don’t think because we’re not a coal mining place” (MI15). Furthermore, a participant reported that the longevity of the mine and community also buffered the effects of downturns:

This isn’t a mining camp where a mine pops up and shuts down in ten years’ time. This town and the mine’s been here for 100 years so, so maybe the impact is a little bit less because of the longevity of this particular location and mine...but sure it definitely has an impact. (MI12)

Furthermore, some participants did not perceive the cycles of the mining industry as a major problem. For example, participants reported that “you just ride it out because you know that in a while it’ll swing back up again it always does” (MI03), and that “...we might go through a tight session for a good six to 12 months, wait for something to happen and then...it all comes back again” (MI08).

Emerald participants also reported positive effects of downturns. While some participants recognised difficulty in hiring tradespeople as a positive indicator of growth within the community, some participants also recognised the positives of the decreased difficulty during downturns. A participant noted “you can get people to come that day, whereas before you’d have to wait a week, a month” (EM11). Some participants also noted decreases in the cost of living during downturns as highlighted in one participants report that “[cost of living is] definitely lowering since the mines have been closing down” (EM05). Furthermore, increased customer service was noted when one participant stated that “now that...people have to work in the hospitality industry, we certainly get much better service than what we used to” (EM11).

Some participants perceived that the downturn that was occurring within the mining industry did not have a major impact on the community. One participant noted that the community had experienced worse downturns when stating that “I’ve seen about seven downs...in the 30 years I’ve been here, ‘98 to 2003 was the worst and what we’re in now may, mirror ‘98 to 2003...it’s not bad yet compared to ‘98 to 2003” (EM02).

One Moranbah participant also reported the benefits of the community experiencing a downturn. This participant stated that:

So now that the costing has gone down, you’re seeing the return of families that...were specifically those that were driving in, driving out, because it’s cheaper to live here...you can look at the schools and you can look at...the education numbers that are in the schools and they haven’t dwindled...they’ve slightly varied but we’re not like all of a sudden there was huge exodus. (MO01)

*8.2.1.1.4 Increased employment.* Participants reported increased employment opportunities and availability within the community resulting from mining activity. Mount Isa participants perceived mining activity to create jobs or because the participants

themselves, or their families worked in the mining industry. This is highlighted by a participant's report that "well, it's been our bread and butter. My husband's been in the mining industry since he left his trade so he's been in there for like 15 years now" (MI04). Furthermore, some participants perceived the mining company makes an effort to hire residential employees. This was highlighted by a participant when stating:

...but I think they do a lot of the advertising is, must be resident in Mount Isa. And I think that's a good thing and I think that does make the locals feel a little bit better that it isn't just [inaudible] fly-in fly-out, we don't care about the town. There is this perceived, yeah ok, at least they're trying to employ local people and if you're not local then rent an establishment here, and the mine in the past has gone to great lengths to, for some people, make accommodation available. (MI11)

Additionally, the mining industry was perceived by participants as helping create other industries, specifically tourism. The proximity of the mine to the town was also viewed as a positive aspect for tourism as one participant described "...[the mining industry is] the reason again for my work that makes tourism something, another come to think...the fact that [the mine is] right in town blows peoples' mind sometimes...so to me it's...all positive" (MI05).

Emerald participants discussed the employment mining activity provided for themselves and other employees of the industry. In terms of employment, one participant reported that "[the mining industry's] done [its] good. It's given people jobs" (EM04). Additionally, one participant noted that employment in the mining industry also provides an opportunity for individuals to increase their training when stating that "before you can go on a mine site you've gotta have this piece of paper to say that you've trained for safety and all that stuff. It's taught them that" (EM04). Participants described the benefits of the economic stimulus provided by the industry when stating that "...well I think it's given a lot of people a great head start in life. Certainly for us, I mean we were very fortunate to be involved in it and...was able to save a lot of money" (EM11), and another participant stated that "...the mining industry has given so many people so much...you can still have a good time...it allows you to do things that other families can't do" (EM02). This participant further explained how the mining industry has provided for them:

...the mining industry has given us, what we live in...good cars, holidays...we're now able to...educate our children in the local private schools, in the catholic system, they've all got degrees and we've been sponsored, their degrees...it's given us so much...on the way through. It's given us...a lifestyle. (EM02)

One Moranbah participant noted that the community benefits from the number of employees required by the mining industry stating that:

...the mining town and the mining, the mines themselves, they still need a lot of workers and that so, I find it, good that...that industry is growing...if [the mining industry] weren't around, where would people get their jobs? This town...the small businesses that are here, probably only support, maybe 750 people whereas the rest of them all work at the mines. (MO05)

This participant also reported that without the employment provided by the mining industry, the town would close. The participant stated that "...the thing is you still need...some sort of business to have available employment to keep the towns going. So without the mines out here, these towns wouldn't survive, they wouldn't" (MO05). Another participant noted that employment in the mining industry was open to many people when stating:

...I think it's fantastic that the mining industry has opened up so much...to people that didn't necessarily grow up in a mining community...it was kind of like fathers that, the kids and then their kids went into the mines. (MO06)

*8.2.1.1.5 Importance of union presence.* Moranbah participants reported the importance of the presence of unions within mining communities. Participants reported that "...everybody paint the union as bad guys...and I said 'they're the only thing that you got there...if you are a contractor, you got nothing'" (MO03), and another participant stated that "...I really believe that the union is a really imperative part of living with a big company, in any industry...if you've got a big company you need unions to fight for the little people" (MO02).

**8.2.1.2 Social capital.** Three themes were identified as positive social capital impacts from mining activity – *increased networks*, *increased support* and *increased trust*. The social capital impacts are presented in Figure 24 below.

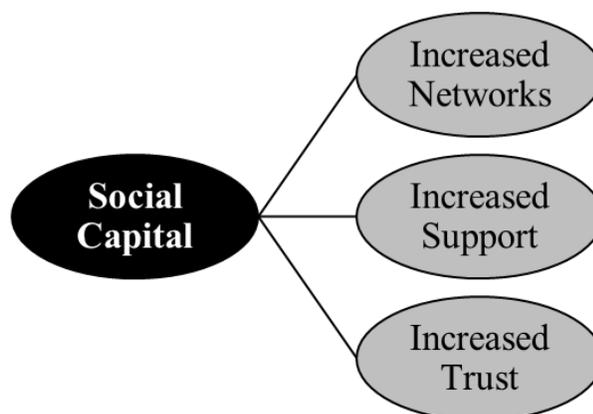


Figure 24. Positive mining activity impacts on social capital.

**8.2.1.2.1 Increased networks.** Participants reported mining activity to increase social networks within their communities. One Emerald participant reported that the unions affiliated with mining employees provided opportunities for residents to interact with one another. This is highlighted in the participant’s report that “...a lot of the community activities are organised by the unions” (EM06).

One Moranbah participant reported the increased ability to establish networks as a result of mining activity. This participant stated that:

...because it’s a mining community it is quite unique I guess with...people that work together on their crew at work usually go out then and...socialise but then when they’re, because...they’re so close with particularly in an underground situation...they have quite a close bond so then when they go out socialising, they’re socialising with their workmates families as well, so the families all kind of become quite...you’ve got kids of similar ages...so then they all begin to play together...so it’s, I think everyone...is generally pretty happy. (MO06)

The same participant also noted that residents are inclusive of those employed in a commute workforce structure if they are willing to establish networks within the community. This participant stated that:

...people in Moranbah are happy to include camp workers...as part of our community because...it helps...if you can get different people involved in sporting clubs, it just makes your club stronger...so I think people that are FIFO workers that are willing to be involved in that sort of thing and there is workers that are willing to be involved in that sort of stuff, it's great. (MO06)

*8.2.1.2.2 Increased support.* One Moranbah participant reported residents and community organisations working together resulting from a downturn. This participant stated that residents are better able to provide support for each other because mining affects the whole community. The participant noted that:

There's not anyone in the community that hasn't been affected, they see their friends leave because they've lost their jobs....People understand because...in mining communities when it happens, it affects the entire community. No one's unaffected. Their effect might be different but...the community all feels that. (MO01)

This participant also noted that community organisations work together resulting from a downturn stating that:

...you're finding clubs and groups and companies that are starting to find their synergy between them, and working more as partners rather than...it's this club and it's that club it's like 'ok...we really all need this money there's this grant, let's find how it will benefit both of us.' So, I think...during this time you get that, that volunteering, people can see that there's gaps 'oh I can help out with that'...and I think...that's the good that's come out of now. (MO01)

*8.2.1.2.3 Increased trust.* One Emerald participant perceived increased trust within the community resulting from reduced commute workforces and therefore a return to the core community. One participant stated that they “[trust people in the community]...probably more so now that...a lot of the drive-in, drive-outers have left” (EM11).

**8.2.1.3 Human capital.** One theme was identified as positive human capital impacts from mining activity – *population change benefits*. The human capital impacts are presented in Figure 25 below.

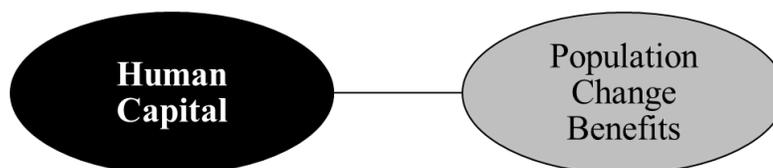


Figure 25. Positive mining activity impacts on human capital.

**8.2.1.3.1 Population change benefits.** Participants reported positive perceptions of increases and decreases in population. Mount Isa participants reported that the downturn was perceived to result in population change that positively influenced the community. Participants reported the positives of population loss as those who left were perceived as not being committed to the community. Therefore, population loss was perceived as a return to the core community. This was highlighted when one participant stated:

...with the downturn [the mining company have] probably done a lot more of their cull than what they would have normally done but I don't think the town's suffered, in itself...I quite honestly think it's done a little bit of good for the town because any one who didn't like being here had the opportunity to get out. (MI10)

Emerald participants reported the positive effects of increased population within the community resulting from the mining boom. One participant noted that "I think there's...some quality people that come...and...with the people, there's been the demand for services which has arrived" (EM02).

**8.2.1.4 Cultural capital.** One theme was identified as positive cultural capital impacts from mining activity – *mining identity*. The cultural capital impacts are presented in Figure 26 below.

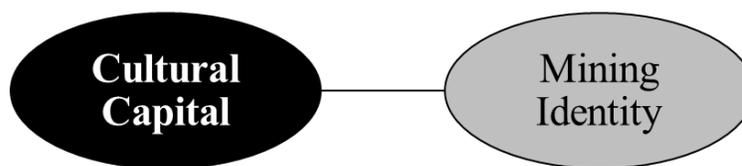


Figure 26. Positive mining activity impacts on cultural capital.

*8.2.1.4.1 Mining identity.* Participants reported that mining activity and the mining industry formed part of the community's identity. Mount Isa participants stated that "...we are a mining town" (MI18), and another participant noted that "...it's not, there's a community and there's a mine, it's there's a mining community" (MI12). One participant reported the mine as providing a sense of community when stating that:

...because of the mine I believe, it gives a sense of community. Everybody's attached to the mine in one way, or another. And I think that's a positive experience...[it is] like a football team mentality where you all know, you're connected in one way. (MI11)

One Moranbah participant reported a strong sense of community surrounding mining. This participant reported that "I am very passionate about mining communities and...I do, I have a great love for them and...I don't like them getting bad wraps" (MO06). Another participant reported that due to the reduced transient population and increased presence of families, "I think as a community...you're finding that community sense again" (MO01).

*8.2.1.5 Public structural capital.* One theme was identified as positive public structural capital impacts from mining activity – *improved infrastructure*. The public structural capital impacts are presented in Figure 27 below.

*8.2.1.5.1 Improved infrastructure.* Some participants reported improved or increased infrastructure resulting from mining activity. One Mount Isa participant stated, "...I mean [the mining company] built the dam" (MI13).

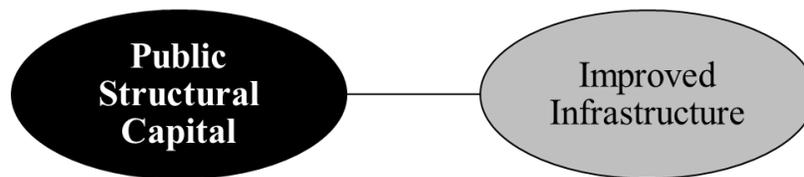


Figure 27. Positive mining activity impacts on public structural capital.

Some Emerald participants noted improvements to the community's airport. Participants highlighted that the mining industry was "...probably one of the reasons why Emerald's one of the few towns with the airport in it" (EM05), and another participant stated:

...our airport has had about, I think we're on about our fourth or fifth terminal building...or iteration of it because it's just been...replaced and expanded and expanded and expanded. So I guess, in terms of infrastructure, yeah that's a great...thing. (EM09)

**8.2.1.6 Environmental capital.** One theme was identified as positive environmental capital impacts from mining activity – *mine location*. The environmental capital impacts are presented in Figure 28 below.

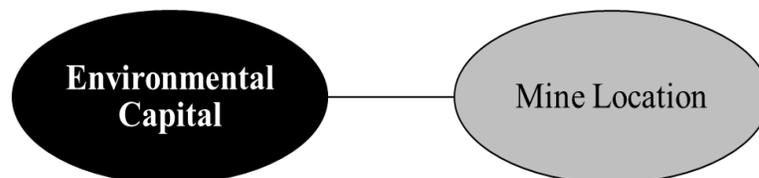


Figure 28. Positive mining activity impacts on environmental capital.

**8.2.1.6.1 Mine location.** Emerald participants reported that the location of the mines away from the community was a positive aspect. Participants perceived that the impact of mining activity on the community was reduced because the mines were not physically close to the community. Participants noted that "...the mines are 40k away" (EM11), and another participant stated "...there hasn't been a visual impact on the town...it's not like...we're

surrounded by dust or...we've got dusty coal trains blowing dust all over the town all the time" (EM09).

**8.2.1.7 Checkpoint.** Mount Isa and Moranbah participants noted positive impacts from commute workforces such as providing income for the hospitality industry, providing extra skills within the community, and providing individuals with choice of where to live. Emerald participants reported the benefits of residential workforces such as boosting the local economy and connectedness within the community. A Moranbah participant also noted that shift work increased connectedness by providing individuals with blocks of time to participate within the community. Participants from all three communities perceived mining activity to provide economic stimulus to the community. Additionally, participants perceived there to be an upside to the experience of an economic downturn which included decreased housing prices and increased availability of services due to fewer demands within a decreased population. Participants also reported increased employment opportunities due to mining activity. Only Moranbah participants reported the importance of a union presence within their community as an advocate for employees and the community.

Emerald and Moranbah participants noted that mining activity increased social networks either through the workplace or through the unions. Moranbah participants perceived there to be increased social support within the community as everyone is involved with mining resulting in better understanding of each other. Emerald participants also reported increased trust in the community as a result of mining activity changes, specifically decreased commute workforces.

Mount Isa participants noted population loss as a positive impact due a perceived return to the core community. Emerald participants noted population gain as a positive impact due to increased services. Mount Isa and Moranbah participants reported a shared mining identity within the community as a result of mining activity. Mount Isa and Emerald participants also noted improved infrastructure as a result of mining activity. Emerald participants also reported that the location of the surrounding mine sites away from the community improved the quality of their natural environment.

**8.2.2 Negative impacts.** Many participants reported mining activity to have negative impacts on community wellbeing. The reported negative impacts related to the contributions mining activity made towards all forms of community capital.

**8.2.2.1 Commercial capital.** Eight themes were identified as negative commercial capital impacts from mining activity – *workforce structure, employment, reliance, downturn, housing, increased cost of living, boom and decreased union presence*. The commercial capital impacts are presented in Figure 29 below.

**8.2.2.1.1 Workforce structure.** Participants reported the negative impact the mining industry's use of certain workforce structures had on their communities which included *commute workforces, increased casualisation and rosters*.

**8.2.2.1.1.1 Commute workforces.** Mount Isa participants raised concerns about the perception of commute workers taking the available jobs within the community from residents. One participant reported that "...well [commute workers are] taking jobs they could be giving to community, people who live in the community" (MI20). Reducing the amount of commute workforce positions available within the community was perceived as being able to benefit the community. A participant stated that "...we'd like to see FIFO almost stopped...it would be great for Mount Isa...And I never realised it was an issue until actually living here" (MI08). Additionally, participants reported concern about the money made with commute workforces not staying within the community. For example, participants reported "...[commute workers are] earning good money and then it's going straight out" (MI11), and "...but people come in, they earn their income, and then they take that money out of the town" (MI15). Another participant reported:

...you get whole companies that come in who really aren't invested in...our region or our town at all but they know there's money to be made, they come in, they fly their workforce in...they make as much money as they can and they leave again.  
(MI19)

Some Emerald participants also reported concern regarding the use of commute workforces within the community. To rectify this problem, one participant suggested:

I would like to see...rather than having these dormitory towns I think is the...term that they use for...where they go and build all the houses, I'd rather see money

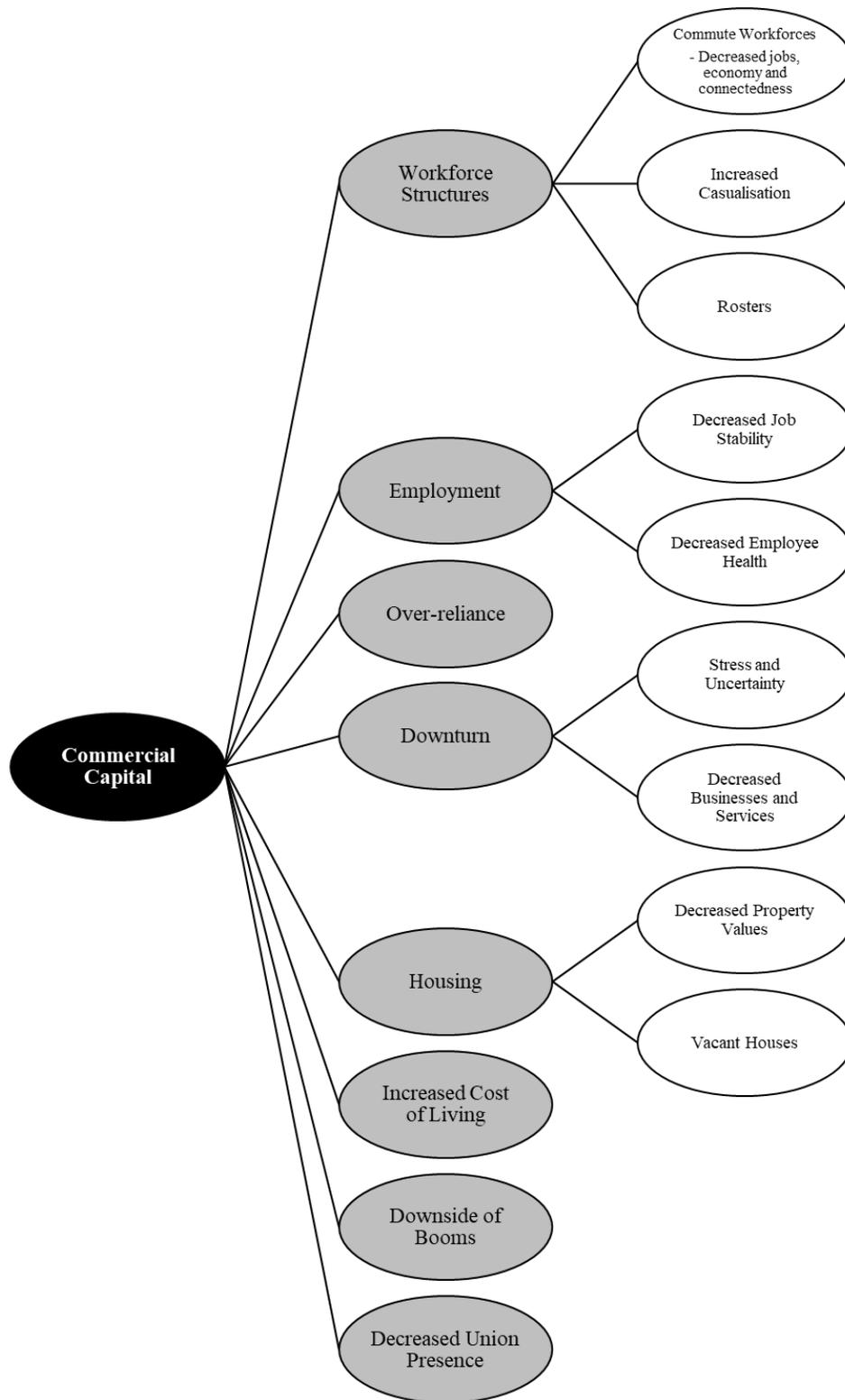


Figure 29. Negative mining activity impacts on commercial capital.

spent in the towns...so rather than make people live here...just create a situation...where people want to live here and...the rest can...fly in and out or drive in and out...that's better value for everyone. (EM09)

Participants reported concern for the increased stress placed on family resulting from commute work structures. One participant stated that "quite a few marriages were actually disrupted" (EM03). This participant went on to describe a sense of wrongdoing on the part of those who partake in commute work structures when stating that:

...if guys were to chase a lifestyle on the coast there's a price to be paid and I've got no sympathy for them. We're all living out here paying the rates...I'm doing the right thing, I'm...not a seagull. (EM03)

Another participant reported that:

...well most of the time...when your husband or partner's away, 'cause my husband was working away, that was one of the biggest things...having to deal with everything on your own...that also limits your ability to be able to do stuff, in the community because by the time you work and then your kids' stuff, you're too tired to do anything else. (EM07)

Another participant also reported that commute workforce structures decrease community participation when stating that "...there are obviously those...drive-in, drive-out fellas that...are not community orientated" (EM11). However, some participants noted that commute work structures were not just used in the mining industry when stating that "they fly in and out for everything" (EM01).

Moranbah participants also reported concern regarding the mining industry's use of commute workforce structures. Participants noted that "...I'm so against fly-in, fly-out...in a hundred percent thing" (MO02), and another participant stated that:

...I don't think [commute workforces are] a good thing at all for community...I just think it would be hard to...find...your place like, 'am I a part of this community or am I part of the community where my house is? Like when I'm here...yes I have...this kind of life but then when I'm there I have a totally different life.' But I

think that would be very difficult...to fix...I think it would be a struggle to know...where you fit...or...where to put all your, effort and energy into. (MO06)

One participant reported that the economy of the town suffered as a result of commute workforces when stating that:

...the fly-in, fly-out...you come here you work, you take it back to wherever you come in, it's not a good thing. Everything suffers...the community, everything 'cause you're not spending the money here see...they don't allow them to come into town some mines. (MO03)

Other participants reported the strain commute workforce structures place on community services when they stated that:

...such a transient community can put a great stress on our...local services as well. Because...the population of the transient community isn't included in the census...the government likes to turn a bit of a blind eye to the facilities that are needed to include that population. So, yes just because they live in a camp a lot of times they do still access facilities from Moranbah like if they need the hospital...and with...Police and Ambulance, I think everything gets a lot of strain put on it without being acknowledged...I have previously been involved in...community groups to try and get the government to recognise that...but...the facilities don't get upgraded I guess or as much money put into that they should...because it's not acknowledged that...the transient population is part of the population...because the people that live...in the camps as well can't access...doctors at certain hours because of shift work so they rely on the hospital...and I mean there's a lot of people in the camps now so that pressure is then put onto the hospital and...with no recognition from anyone outside the community. (MO06)

Similarly, another participant noted that:

...what happens is because of the census with the medical...and where that funding's directed it goes back to for example the south east, ok and the medical

services and that's...social work, that's counsellors, the psychologists...all of these medical services are lacking here...simply because the census says the people live there...on the south east coast. But the reality is...they don't leave their problems there, they don't just get sick there, they actually come up here and they bring their problems here...they come here and they get sick here and...so that is exhausting on the medical system. (MO04)

The same participant also noted that residents were discouraged from working at the mine stating that:

...I don't know if you know what a hundred percent fly-in, fly-out is...they're in a camp just out there only a couple of kilometres away and they can't come into town. In fact security around there makes sure that they can't...now they go from [the camp], they fly to Brisbane, they pay for their own ticket back, to come and live with family here and they can't see their family and they're just only just out of town. You know how wrong is that? There was no need, absolutely no need for the legislation to be passed for us to have a hundred percent fly-in, fly-out here in Moranbah, no way. I...agree in a remote area maybe in what, Western Australia? Or where it...all started, on an oil platform in the middle of the Pacific, absolutely, that's where fly-in, fly-out is...but not in a town that...is...a functioning community...[Moranbah is] a functioning community, it has...the potential to be quite healthy. So fly-in, fly-out should definitely not be here. (MO04)

Further, this participant noted that "...it comes back to the mines see they want to control their workers, that's...the whole thing about the fly-in, fly-out, it's not because of anything else but control of their workers" (MO04). Additionally, this participant stated that working in a commute workforce structure:

...should even come back to the choice of the individual...there's no reason why a family can't be here so let them choose for that to happen...I think that it needs to come back to them. The company, when it comes down to it, they just want to employ someone to do a job...with whatever qualifications it is so let them do the job but let their family live as a family. (MO04)

Similarly, another participant stated that:

...if you get the opportunity to live in a community like this, if you don't have the opportunity and you're forced to live here I think that can just make, a lot of unrest...if you want to live somewhere else that's fine but if you want to live here and you don't have access to living here that's also terrible. (MO06)

8.2.2.1.1.2 Increased casualisation. One Emerald participant noted the negative impacts of increased casualisation within the mining industry when stating that:

My daughter's partner just left his first full time job in eight years...only because he could see they didn't have the work, they're gonna put him off anyway. He's only there a month and he's gone back on casual, at a mine site...but...it's more long term...Who leaves a permanent job for a casual job?...that's the reverse of what someone on the coast would do. (EM02)

Moranbah participants also reported concern for the increased use of contractors in the mining industry. Participants reported that "I know [increased casualisation] is an issue that...we talk about with our friends and I know that people are...concerned about" (MO06), and another participant stated that "...[mining companies] bring you in as a contractor, don't pay you sickie, don't pay you holiday pay, nothing...you blow a shift there, they can get somebody else there...that is wrong" (MO03). One participant noted that concern regarding the increased casualisation within the mining industry was the result of the community having no other major industry. This participant noted that "...casualisation of the workforce is something that...probably weighs heavily on people in Moranbah...because there's no other industry here really" (MO06). Another participant noted that the "...[increasing casualisation is] just a part of...the powers that be trying to deunionise the...community" (MO02).

8.2.2.1.1.3 Rosters. Some Emerald participants reported concern regarding the impact on the community from the rosters worked by employees of the mining industry. During a focus group, participants discussed this issue:

...going on to 12 hour shifts...that's a big impact on the community. Just huge. (EM02)

Our son in law to be, he plays [rugby] union but it's dependent on his work, training and all that sort of stuff, he can't get there. That even filters back down to the young kids sport...it's very hard to get someone to coach them. You've got to have a backup because you know they're on shifts, they're not there constantly. It's not a normal eight to five job. (EM01)

...the community was a much better community when we worked eight to five...or...Sunday night to Saturday morning...where you had the weekends. (EM02)

They're not friendly shifts. (EM01)

One Moranbah participant also reported concern over the use of rosters inhibiting community participation. This concern is highlighted in their statement that:

...‘cause all the sporting clubs...all the...social side of things...revolved around that five day thing and then all of a sudden half the people that are involved are on night shift or can't make it...or they're on five days off and they're gonna get the hell out of here so that they can go and have a bit of play time with their family. (MO02)

8.2.2.1.2 *Employment*. Participants reported perceived, *decreased job security* and *decreased employee health* within their communities resulting from mining activity.

8.2.2.1.2.1 *Decreased job security*. Another participant noted that "...it's the job security in general in town because most of the town relies on the mines for work, so once they start cutting back that's everybody's life, livelihood" (MI04). Another participant highlighted the negative impact of decreased job security due to the lifespan of particular mine sites when stating that:

I feel they've also shafted some of the workers that worked there. In particular, my husband works in the copper smelter, where it's getting shut down next year, and...they just recently were told, that...they were promised, and now this is...my husband's understanding and so...I took it from his interpretation, that...they were promised that they could move, that...[the mining company] was gonna help them

find another job in another area of [the mining company's activities]...but now they've said that's not the case, they're not going to. (MI13)

However, some participants viewed the impact of job losses as only affecting those who worked within the mining industry or were looking to be employed in the mining industry. As one participant noted:

...unless you're an individual that's lost their job and then needs to do something, in terms of the, other people that have been here a long time, it's just, ok, no big deal. It's just part of the ups and downs of living in a mining town and it's just a bit of you know some newspaper articles, it's commentary down at the shop, it's taxi driver conversation, it's, unless you're the individual, then I don't think it's having that big of an impact. (MI12)

One Emerald participant also stated that within the mining industry, "there's no stability, it used to be a stable job and now it's not" (EM07). The same participant went on to describe that the lack of stability within the mining industry was minimised due to employees being able to find other work. This participant stated that:

But most of the people that I know that work in the industry...[job loss] affected them...they got a different job...that might not have been a full time job, it might have been a contract position but, they all seem to find something. (EM07)

Moranbah participants also reported concern regarding the impact of employment insecurity within the mining industry. One participant noted that:

...there's for a long time, guys have been on...a crew so it could be A, B, C or D crew, so for a long time here...they've got some good mates...they've done some great things but now the culture in mining is such that they don't even know if they've got a job...the next time they have a shift or the next time after that, or the next time after that. So there's instability that's been created within the mining culture now. (MO04)

Another participant noted that “well you think...you’re set and they’re a big mining company, you save and then all of a sudden downturn strikes” (MO03).

8.2.2.1.2.2 Decreased employee wellbeing. One Mount Isa participant noted concern for female mining industry employees due to a male-centric culture when stating that:

...it can be a bit of a man’s town, yeah it can be a bit like that but I’m pretty hardy so...I, handle it alright...I’d say it’d be tough going to work in the mines if you were a woman, it could be a bit rough. (MI16)

Some Emerald participants also reported concern for the wellbeing of employees within the mining industry due to money management difficulties. A participant reported that:

Well [the mining industry] sort of brought with it people who were, had access to great incomes and they...were earning them, but I don’t feel and from what I could see...there was a group of them who did not have the knowledge of how to, look after the money or invest or to use it...and who through their high levels of spending, perhaps, created problems. (EM10)

One Moranbah participant reported concern regarding pay as a primary motivator for seeking employment in the mining industry stating that:

I think it might limit people’s aspirations...it’s such a great opportunity to make a lot of money so ‘yes I’ll do that instead of...oh well I really wanted to go on a different career path but mining offers so much money like I’ll go there.’...which I think is a little bit sad. But you can’t begrudge anyone for wanting to make money so, good on them. (MO06)

Another participant perceived that mining industry employees do not prepare for future downturns when stating that:

...during the boom when they were making that large money...there was no plan...no future proofing of ‘gee I’m making really good money or making double or triple what a normal Australian would make I should be putting this money

aside.’ So again, you got to take that back to an individual choice. But when you have large money flowing and you see something and you see...as a community that other people are making some money and they’re buying boats and things, I think that that becomes a precipitator...of material possession and they want to compete at that level. You know unconsciously I think in some regard. ‘Oh gee he has [that] I’m gonna go buy it.’ But what they didn’t realise is that they were borrowing against an income that wasn’t sustainable. (MO01)

*8.2.2.1.3 Over-reliance.* Participants reported a perceived individual and community reliance on mining companies and the mining industry. This concern is highlighted by one Mount Isa participant’s report that “...this town is so reliant on mining...we ourselves are looking at, we’ll be four weeks without work which is significant...and we’ve looked, there’s no work here” (MI04). Another participant noted a lack of employment opportunities outside of the mining industry when stating that “...there isn’t a lot of other opportunities if there’s no work at the mine, there’s not a lot of other opportunities to have work” (MI04).

Some participants reported that investment within the community depends on a volatile mining industry. Such dependence on an unstable industry puts the community at risk of experiencing downturns. The volatility of the mining industry was perceived negatively due to the community’s reliance on the mining industry, and this was highlighted by a participant’s report that:

...in terms of people being willing to invest in our community is all depending on what, how the mining industry is going....that said I don’t know what other industry we could have that would support that so it’s not so volatile. (MI14)

Another participant stated that “it’s been very stressful...‘cause with the talk of the copper smelter gonna shut, a lot of people really freaking out...how’s it gonna affect everyone here?” (MI16).

One Emerald participant reported that there was a perceived expectation of the mining companies to provide donations to the community. This participant reported that:

...people just expect donation after donation after donation and...that can't go on forever. So...that was one of the first things that people whinged about was how [the mining company] cut out the dinners and...all those little extra things...but, I mean...they're a business too. (EM11)

Another participant stated “[the community is] reliant, because we've got so big now...it just can't work on the citrus, the grain, the cattle, the cotton” (EM01). Another participant noted concern for the nation's reliance on the mining industry when stating that “...Australia relies too much on...mining 'cause all of a sudden, when the mines flop, we go 'ahh tunk', and we're like 'ah great, depression here we come'” (EM05). One participant suggested that alternatives to mining need to be sought for the future when suggesting that “I think they have to find an alternative, and that's what they should be doing” (EM04).

Additionally, a participant noted that the community's over-reliance on the mining industry means that the whole of the community is affected by changes in the mining industry. This participant stated that “...everyone does get affected...everything, everyone scales back, people lose jobs.” (EM01). Another participant noted that businesses that are not diverse are particularly impacted by changes when stating that “people who rely on one resource, they're the ones that cop it, they're the ones that are hurting...services companies, relying on one mine or...one product, they get creamed big time” (EM03).

One participant attributed the town's economic diversity as buffering the impacts of changes in the mining industry when noting that “...things have slowed down a little...as I said, because enough things are staying up it hasn't slowed down completely” (EM05). The same participant noted that the community benefited from the mining industry being introduced rather than the town being built for the purpose of mining when stating that:

Emerald's, as far as I remember, was...an actual town before the mines started but basically [was] boosted from the mines not formed from the mines...the towns that were formed purely after the mine was started just collapse out of nowhere... 'cause all of a sudden the mine shuts, there's no more purpose for the town. (EM05)

Similarly, another participant stated that:

[people are able to stay positive because]...it goes back to the fact that...not everything here is dependent on mining...Like the majority of people that live here...they come off the land or they come off other industries, it's not coal, it's not solely dependent on the mines, I mean the mines have a big impact on it but it's not, dependent on the mines. (EM07)

Moranbah participants also reported the negative impact of individual and community economic reliance on the mining industry. This concern was highlighted in one participant's responses that "...the mines have...a big role to play in this town, whether they're putting off people or...whatever" (MO05). Other participants noted that "...with the mining industry people seem to rely on it a little too much" (MO06), and another participant stated that "...[the mining industry] goes up it goes down. Supply and demand, politics got a lot to do with it there" (MO03). One participant stated that reliance on one industry made the community unhealthy. This participant reported that:

...commercialism...makes [the community] very unhealthy you know? Especially when it's relying on a particular industry...other communities where it has a healthy balance of you know rural and industrial and...commercial and...a whole lot of other sectors...it doesn't affect those communities as much. (MO04)

Participants reported volatility or uncertainty as a result of relying on the mining industry. One participant stated that "...we're affected by a global coal price...and you're not getting notice on that" (MO01). Similarly, another participant stated that:

...because mining is unstable...a few years it's kind of dead it's not so good, then it's good again...I think...it's good for Moranbah because it's what Moranbah has, there's not really anything else, that it has really to offer...what I worry for is...uncertainty. I think the uncertainty puts such a high stress [on] people that then...uncertainty with work will flow down to your family, from your family it flows to the community, so...I think uncertainty in mining at the moment is a big thing. (MO06)

The same participant also noted that employment opportunities were reduced due to the community's over-reliance on the mining industry when stating, "...if you're not employed in the mine then...there's not...a great deal of opportunities out for employment so it's hard" (MO06). Another participant also noted concern regarding a lack or loss of other industries which contribute to instability and uncertainty in the region when stating that:

This is a really rich area for...fattening beef cattle...but that's doesn't pay as much as what mining does so most of the graziers [are]...losing their land or...getting on the band wagon to make a quick dollar...and sub dividing their block and or giving part of that to...the mining companies or selling it to the mining companies.  
(MO02)

Participants also noted that due to the over-reliance on mining, residents tend to leave the community if they lose their job. One participant reported that:

...if you live here and you've made your life here and then your job gets taken away or your hours get cut and your conditions are cut then people are scared...and then people get scared because if they're forced to move away, a lot of people don't know any other sort of life...they don't have any other skills I guess or any other, they've never worked in any other industry so then...it's scary for people to have to move away so then they're anxious and...I think that weighs a lot on people in Moranbah, or in any mining community. (MO06)

The same participant further explained that:

It's especially hard for young people...if they don't get a job...close [by]...in mining...the closest...places for them to go and search for work are a long way away from their family so that...is a little bit sad. (MO06)

8.2.2.1.4 *Downturn*. Some participants reported the negative impact of experiencing a downturn such as *stress and uncertainty* and *decreased businesses and services*.

8.2.2.1.4.1 *Stress and uncertainty*. Mount Isa participants noted concerns about the downturn that the mining industry and community had been experiencing which is

highlighted in participants' reports that "[the downturn has] been very stressful" (MI16), and that "...there are a lot of people like particularly single income families that...find [the downturn] very, quite stressful, worrying about what's happening over there" (MI08). Participants reported uncertainty to result from the downturn impacting community wellbeing. One participant noted, "...I think those are the things that have a negative impact on the wellbeing of the community. The uncertainty" (MI12). Participants reported changes in the community as the community readjusting or downsizing after a boom period. One participant noted "...well the boom that has been mining, even 12 months ago is not there...it's downsizing" (MI04). Another participant recognised that downturns within the mining industry can also affect people living outside of mining communities when stating that "...the fluctuations anywhere make people nervous with the Australian dollar and house prices and all that. I guess we've got more to risk...but it's a big industry, it's the biggest" (MI05).

Emerald participants also reported concern regarding the downturn which was highlighted by a participant's report that "I am concerned about [the downturn]... 'cause [mining is] our livelihood" (EM08). Participants stated that "...when times are bad, the money naturally dries up, and makes life...a lot harder" (EM06). Participants noted that residents in the community were "depressed" (EM01) during the downturn. One participant noted "...I think everybody's a little bit fearful about...what may continue to happen with the mining downturn" (EM06). Another participant reported "...a little bit of fear...I think when it hits, a lot of people drop their...spirits completely. End of the world. May as well drop a bomb on the town" (EM04).

8.2.2.1.4.2 Decreased businesses and services. Concerns about businesses closing and reduced spending within the community as a result of downturns are highlighted by a participant's report that "...the small businesses really struggle, the small business owners really struggle because no one's spending money...I've seen a few of them go, close down because there's no one there to support them" (MI08). Additionally, decreases in services and agencies during downturns were also noted by a participant who stated that "...if the mine closed completely a lot of those agencies would go" (MI11).

Another participant stated "...if it continues any longer...we're gonna lose services" (EM01). Another participant stated "...I think people are a bit disheartened 'cause

businesses are slow and...it's still on a bit of a down here" (EM07). Another participant reported that other members of families have to seek work to help financially during downturns. This participant reported that:

...women have gone back to work. So in my case for instance...I used to go lunching with my friends...once or twice a week...and now obviously I'm back working full time so I don't and can't do that. (EM11)

Moranbah participants also noted the impact of experiencing a downturn. Participants noted that "well, some businesses have closed" (MO02), and that "...small businesses are struggling at the moment, because there's been so many people...leave Moranbah probably in the last two years because of the offload of the mining industry" (MO05).

*8.2.2.1.5 Housing.* Some participants reported mining activity negatively influenced housing in the community through *decreased property values* and *vacant houses*.

*8.2.2.1.5.1 Decreased property values.* Some Mount Isa participants perceived population loss during downturns to result in decreased housing prices. Decreased housing costs were perceived as negatively affecting homeowners looking to sell. A participant reported that:

...just people's morale I guess especially with the housing market...I mean the real estate agent said they had...houses on their books that had been there for two years trying to sell...the fact like I said before, my husband's friends at work, they're selling at a loss. (MI13)

Furthermore, some participants reported uncertainty in the housing market due to the community's reliance on the volatile mining industry. As one participant noted:

...it would make more sense for me to own a house, but when I know that the value of my house is directly linked to whether the mine's operating or not or how well it's operating or whether there's an announcement that it's going to be closing down in ten years or something, the value of my house will then go down and actually ruin my financial future. So it is hard to part or sign up for 300 thousand dollar loan

or whatever it works out to be, when you know that one decision could actually change everything, so I think that's our main big thing for this town. (MI14)

8.2.2.1.5.2 Vacant houses. Some Emerald participants reported concern regarding the amount of empty houses within the community. One participant noted the oversupply of housing when stating that "...the bad thing with housing is a lot of people just went and built up a heap of quick houses to accommodate people. So now they're all left empty and they weren't even nice houses" (EM08), and another participant reported:

...now there's such an oversupply that rents have gone down, investors are suffering...locals that...were happy, aren't quite happy with how it all panned out. But you know, people wanting to leave town now and sell up, it's destroyed their lives 'cause their older, like us and...this boom...pushed everything up. Everyone came in, all the builders, developments and there's a massive oversupply. (EM01)

Moranbah participants also noted an increase in vacant housing in the community as well as increased rental prices. Participants reported that "...companies can't, couldn't afford to have family units because when you're looking at \$3000 a week for a rental, you can't sustain that for a family" (MO01). Another participant stated that the increased rental prices resulted in the increased vacant houses in town when reporting that:

...quite a few years ago, the house rent went up ok...sure there were contracts happening at the time...there were a few things like that...that was happening, there was a good dollar...for the coal but all of that was...I don't think properly managed, it was very irresponsible in lots of different ways...but I think that the underlying thing was it was driven to get a hundred percent fly-in, fly-out ok. So they've created this artificial environment...now, you drive around town, there's empty blocks of land...there are hundreds of empty houses here now...and a lot of people who were invested in that...private people who bought houses to rent have gone bankrupt...so it's caused a lot of problems. (MO04)

Additionally, another participant also noted that “I think also that...with, Moranbah at the moment because it’s not the boom, there is a lot of vacant houses and I think that...there is, quite a lot of welfare housing” (MO06).

8.2.2.1.6 *Increased cost of living.* Some participants reported that mining activity increased the perceived cost to live in their community. For Mount Isa participants, this concern was particularly for residents not employed in the mining industry. A participant stated that:

...the mining tax is what my dad calls it, if you live anywhere near a mine you pay a tax but it’s not a real one it’s just ‘oh well everyone earns more money supposedly so or everyone works at the mines so we’ll just bump prices up and get more of a profit.’ (MI14)

Yet another participant reported that:

The ones that I really feel sorry for are the ones that don’t have the direct connection to the mine and with respect, the boys, and girls, and ladies that work at Woolworths and, and these shopping environments, who don’t have the big money, just a general job but they still have to pay \$25 for a pizza, their water rates are just [as] high, and they have...to carry the burden of the prosperity of Mount Isa and they’re not making the money. (MI11)

Additionally, participants reported that the costs of flights in and out of the community also increased as a result of mining activity. One participant stated:

...I don’t know why it’s [flights] so expensive but. I think [airline companies] know that...the plane’s always full, so they don’t care I guess because companies are paying mining execs back and forth all the time but it’s the little old me that wants to go visit me mum because she’s sick, can’t get on the plane because I can’t afford it. (MI05)

Some Emerald participants also reported increased costs as a result of mining activity. One participant reported that pay rises as a result of mining activity was negative when stating that “[mining] boosts everything up, of course with that comes pay rises

which sucks for everyone else” (EM05). One participant noted the increased cost to residents as a result of increased infrastructure within the community. The participant noted that:

I just don't like the sense of betrayal...they put all this infrastructure in and the locals are now left to pay the bill, so the rates have gone up. So we're left here and where are the mining companies now? Nowhere to be found. (EM03)

One Moranbah participant reported that businesses increase their prices due to the presence of the mining industry in the community. This participant noted that “...some businesses in Moranbah think...that we're all working with the mines and they're overpriced charging, especially...the mechanics side of things...I think...they're quite...high priced” (MO05).

*8.2.2.1.7 Downside of booms.* Emerald participants reported the perceived negative impacts the boom within the mining industry had on the community. Some participants recognised the cyclical nature of the mining industry when stating that “...they know [the boom is] not going to last but you keep that in mind but they all think it's gonna last forever and then they complain when it doesn't” (EM04), and another participant reported that “...it fluctuates so much” (EM11). One participant noted that there was a decreased availability of services during the boom when stating that “...in the peak, you couldn't get a dentist, you just couldn't get one here” (EM02). Another participant stated:

...during the boom...you couldn't get a tradesperson around to fix something at your house, 'cause they're all just too busy, prefer to work for the mines...Or there was a lot of houses being built at the time when there was the boom. (EM08)

Participants also reported the negative impact of increased prices during the boom. Participants noted “[the cost of living] was...a bit higher...when the boom was on” (EM06), and another participant stated “...in the boom time though...yes I would probably say tradies were more expensive...you couldn't get anyone...because they...all wanted to be out in the mines” (EM11). Another participant reported “...the negative impact was probably more on...the...forcing up of the prices and so on...and probably then the

ultimate oversupply of overpriced...rental properties” (EM09). The same participant also noted that:

...when the mining boom was on, if you go back three or four years...there was an aspect of people...who were on lower incomes and that and they were trying to live in the town suffered a little bit. During that time...rents were high...and prices were high and for a lot of services even. (EM09)

*8.2.2.1.8 Decreased union presence.* Participants reported a perceived decreased union presence within the mining industry and community. One Emerald participant noted that:

...the [mining] companies...for whatever...reasons, depends who you talk to, like [Mining Company 1] do not have unions, [Mining Company 2] have unions. [Mining Company 2] will tell you they’ll deal with the unions every day of the week but you can really see what they’re doing. They don’t want to deal with unions at all. (EM02)

Another participant perceived the decreased presence of unions to be the result of the decreased residential workforce when stating that:

I see that as a really big problem and...to me...I think a way...that some mining companies...have attempted to break up the unions is to stop supplying residential housing. So...the employees get in that...battle culture I think where, we basically do what we have to at work here and then we get to go home and enjoy it somewhere else...there’s a massive difference between residential workforce, the unity and...the interaction that they have as opposed to people that just turn up for work and then fly back. (EM06)

One Moranbah participant also reported negative impacts from a decreasing union presence within the mining industry. This participant stated that:

For the last...40 years, [mining has] been a big pay packet for the people that have been there but this de-unionising of the mining...industry is forcing that down. So

it's not going to be any better to, work here than it is to work...in the middle of Sydney. (MO02)

**8.2.2.2 Social capital.** Four themes were identified as negative social capital impacts from mining activity –*decreased connectedness, decreased networks, lack of reciprocity* and *decreased trust*. The social capital impacts are presented in Figure 30 below.

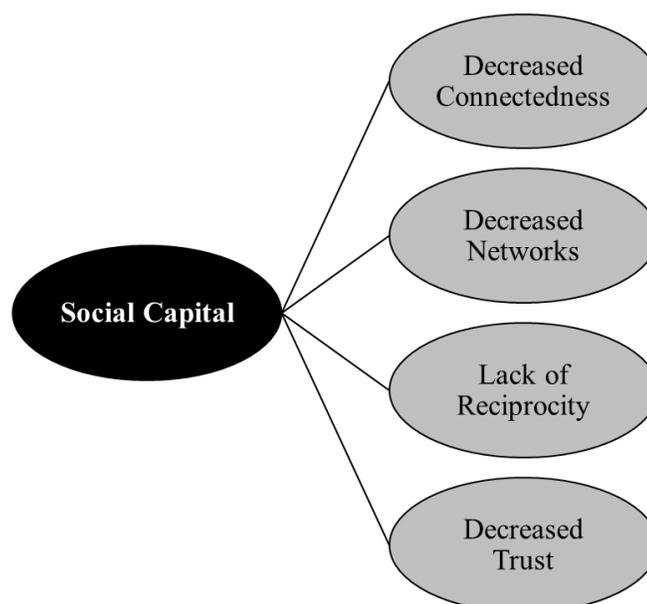


Figure 30. Negative mining activity impacts on social capital.

**8.2.2.2.1 Decreased connectedness.** Participants perceived division within their community as a result of mining activity. Some Emerald participants reported that the community "...became segregated" (EM10) after mining activity began in the community. Some participants reported a divide within the community between people who work in the mining industry and people who do not. Participants stated that "...a lot of people hated mining people that weren't in mining" (EM08), and another participant stated "...there's a certain attitude amongst...people who often work in mines, especially...at lower levels, there's an entitlement attitude" (EM07). Some participants also noted a divide within the community between particular mining companies due the work culture within the companies. During a focus group, participants discussed this issue:

...they told [employees] when they arrived here, ‘you are the best people in the mining industry’ and [the kids] just came in to school like. Yeah so they were up themselves. (EM02)

And then they had the big Christmas’ and they had rides and oh it was such a fanfare. ‘Cause we were, there was only little old [Mining Company 1] and our kids thought, if you had a little merry-go-round, a pony ride and Santa came on the back of the truck and gave presents and lollies and, but this year, they had this, oh my god it was like going to the circus...they were very divided those [Mining Company 2] people, very. But they were brought in but then that fell apart very quickly. (EM01)

Yeah that was the culture, they were brought in...it wasn’t really their fault. (EM02)

The boom was noted as increasing the divide within the community between miners and non-miners, highlighted in one participant’s report that “I think the attitude towards mining people in the boom, in these towns, even in Emerald here...it was just an us and them thing” (EM08). Another participant noted that “...there was...‘oh you’re one of those rich miners’...there was a lot of that and probably still is some of that with some of the real old folk” (EM02). Furthermore, some participants noted decreased friendliness within the community during the boom which is highlighted in one participant’s report that:

...we were losing that friendliness when the boom was here...and I must say we did come over here just on the cusp of the boom but we did know the town before that as [husband’s] family were here but I think, ‘cause it was just too much money and too many transient people then and I think...there were people being attacked and things like that in the boom. (EM08)

One Moranbah participant also noted that there was division between those who were and were not union members within the mining industry that affected the community. This participant reported that:

Years ago...there was a big strike...[it] ended up with picket lines and stuff out at the...mine and I saw people who had been mates for years and years...one was probably a foreman and then the other one was...a worker off the workshop

floor...and all of a sudden that divide came and...[the company] said...‘you staff members must attend work, there’s no way that you cannot...if you don’t turn up you get the sack’ basically and the unions were fighting together for their rights so the...blue collar workers I guess had...their clan...and that caused a great divide...I had some really close friends who we would have barbeques with but they wouldn’t come if they were coming or...all of a sudden ‘no I can’t talk to him because he’s a staffy, I can’t be seen talking to him up town when I’m doing my groceries because he’s on the other side.’ So it created that divide, which was really, really sad...that was...a big disappointment...a big, pivotal moment I guess in the community.  
(MO02)

The same participant further explained that:

...there’s definitely people that work in the mining industry in positions of power that have...the greatest of intentions...but...I’ve seen a lot of people become company people and sacrifice their own morals without even realising that...they’re doing it and then 10 years down the track they go ‘oh, was that a good idea or I don’t have the friends that I used to have’ (MO02)

However, this participant noted that more recently, there was division in the community based on the contract type of mining industry employees. This participant reported that “...these days the divide’s more probably between contract labour and...permanent employees” (MO02). Another participant reported a divide based on where people lived in the community stating that:

...where we live, our estate is, I mean its purpose built for...one of the mines so, our estate is only employees of [mining company] live in it...so that, yes that’s quite a divide...and I guess yeah the placement of people in town is, something that you can, tell who’s mining and who’s not. (MO06)

The same participant discussed that connectedness between the residents was decreasing due to the mining industry boom. This participant stated that:

...everybody lived in the community and...it was very, very close communities when we were kids and now because [the mining industry] has been opened up that people can...come and live, you don't necessarily have to live in a house with your family so I think that probably has taken away a lot of the closeness of communities. (MO06)

This participant further explained that:

...these people were probably like my parents' age but...they, were saying even about how different [the community] is now...40 years ago how they all did know each other they were all really close...you had to be very self-sufficient with...entertainment I guess so...people would organise games or events, weekends and things like that and everybody would be involved whereas now...people will go away into Mackay or people don't like here so, there's...not that real tightness of community, as much as it used to be. I think there still is, but not kind of as much as it used to be. (MO06)

8.2.2.2.2 *Decreased networks.* Participants reported that mining activity negatively impacted residents' ability to engage with social activities within the community. For example, one Mount Isa participant stated “[the mining industry is] a very good money maker but it does interfere with the social life of the town. It detracts from the social activities because of the working hours and conditions” (MI06). Some participants reported that the use of shift work in the community decreases the ability of workers to participate within the community. A participant who works in shift work stated:

...it's a bit hard because...I'm in shift work so I only see certain people at certain times or unless it's a weekend that I'm off and then that's what makes it a bit harder playing sport these days because I'm...on shift work. (MI18)

Another participant stated:

...so it's really hard for people to, especially in the mine...to be involved you know even to join a sporting club and play a sport every week, the shifts usually don't really allow that so it's, it gets a bit hard for them to meet other people and...to do any good in the community. (MI09)

Additionally, some participants reported that individuals who work in a commute workforce structure are unable to participate within or contribute to the community. Participants stated "...[FIFO workers] don't really get involved in the community at all...they're a part of the community but they're not" (MI06), and:

...if you asked the locals what agitates them the most, I would suspect it would be the fly-in fly-out, not the people coming here for 12, 18 months and going, 'thanks very much, I'm out of here.' Because you've been a part of the community...you go to the local pub, you go to the local shop and...you play footy, you become a part of it, be it for a short period of time. The fly-in fly-out guys...just do that. (MI11)

Uncertainty surrounding the economic position of the community was perceived to result in residents reducing their spending which led to a reduction in community participation. For example, a participant stated that "whereas once upon a time you could sell those little tickets on the street corner. But now people are looking at every five dollars they've got, because...they just don't know whether their job's there next week" (MI06). Population loss as a result of downturns was viewed negatively by participants who noted perceived social network loss and therefore opportunities for community engagement. For example, one participant stated that:

...there was some really good groups around town...and like personally, like friends of mine left town...and...it's really hard...from the point of view of that community connection and having...those good folks that...were running different things. (MI09)

Some Emerald participants noted decreased activities within the community as a result of job loss during downturns. One participant noted that:

...the guy that used to run the [sport business], he basically lost his job...due to the mining downturn and needed to go elsewhere for work. So...that stopped there...and the same thing...some of the people that were doing yoga, their partners moved on so they moved on with them. (EM06)

Additionally, some participants discussed the negative social impact of the increased casualisation of the workforce within the mining industry. One participant reported that:

...often...the labour hire people don't actually even live in the communities, they all go back to the coast...it affects everything...you're more inclined to associate with people at work that you know, that you actually live near or...have those things in common. (EM06)

The same participant went on to describe that:

...a lot of the workforce now is all labour hire and...[mining companies] won't employ full time workers anymore. So...a lot of the labour hire people won't speak up on issues and...won't rock the boat because they know that they can get a phone call tomorrow to say 'don't come in'....It's not fair when...there's an issue and one person has to keep raising it because the other people don't want to raise it because...they're not full time so...that's a massive issue...in mining communities these days...due to...the use of...casual workforce...That is really going back to the community, it's really affecting the way that the community comes together...and interacts. (EM06)

Moranbah participants reported concerns that the mining industry limited resident opportunities to connect with one another. One participant noted that shift work decreased resident ability to participate in the community when stating that "...I used to coach footy see, and then [when shift work started] you couldn't get the team together" (MO03). The same participant further explained that "...shift work sorta put the dampener on it...you go sun up, sun down you're too bloomin tired to...do anything" (MO03). One participant perceived mining camps to inhibit employee social networks. This participant stated that:

...when you come home from work, it's nice to be away from work, perhaps and when you're in a camp environment then you're...never away from it, you still have just your same familiar faces from your crews, from your work and then...you're back in the camp of...a pretty tiny room where if you would like to socialise you're socialising with the same people that you've just been to work for 12 hours with...I think in a camp environment you don't have anyone, I don't know, I think it would be difficult to come home then and talk about your day with people you've just been to work with, it'd just be the same kind of thing, you worked with them all day, no one's kind of listening to you venting...which...would be difficult mentally. (MO06)

Another participant noted that due to the transient nature of the mining industry, people stop trying to build networks. This participant stated that "...a lot of people that have been in the mining culture for so long, they've actually given up making friends...because it's just heart breaking to see people come and go and come and go and come and go" (MO04). One participant also noted the loss of residents who participate in social activities through population loss when stating that "...so we might have lost a coach from football or we might have lost another teacher because her husband lost his job and they couldn't afford to stay. So those...are just impacts...of again business" (MO01).

*8.2.2.2.3 Lack of reciprocity.* Moranbah participants reported the perception that they did not receive what they are owed from the mining industry or the government in terms of policy regarding the mining industry. One participant noted a lack of genuine contribution to the community when stating that "...[mining companies] all do their little token bits, that get them the notoriety that they need to tick their little box to say 'we're doing enough'" (MO02). The same participant also noted differences in acts of reciprocity between mining companies within the community when stating that:

...in days gone by...in the [mining company 1] days...[they were] a really great company that...if [the community] needed a sporting complex built well hey a couple of dozers'd turn up in town and...they would supply the equipment...and make it...an enjoyable place for people...to live I guess. They were supportive of their employees wanting to create a community...it's changed a little bit with

[mining company 2]...it's yeah more about...the dollars that they get out of the community rather than what they can put into it. (MO02)

Similarly, one participant noted concern regarding the mining industry not providing local businesses with opportunities when stating that "...[the mining industry] get contractors out, they don't even give it to people around here or...give them the chance to quote, they give it to outside" (MO03).

**8.2.2.2.4 Decreased trust.** One Moranbah participant reported the decreased perceived trustworthiness of others in the community due to the mining industry boom. This participant stated that:

...maybe a little bit more so these days where this is a lot of...I don't want to use the word outside people but people that...don't live in the community and have...families or whatever that are fly-in, fly-out or drive-in, drive-out...there is a lot more people in town that, I don't know, if you don't know them and they're not familiar anything can seem a little bit untrustworthy I guess but and I'm sure...that's probably very general. (MO06)

This participant further explained that they perceived the decreased trust was due to commute workers not being involved in the community. The participant stated that:

...if you don't know them or you don't have interaction with them...through the school or through clubs or if...they're not a familiar face or familiar part of your community then yes...I'd be a little untrustworthy I guess. (MO06)

**8.2.2.3 Human capital.** Four themes were identified as negative human capital impacts from mining activity – *decreased health, poor employee health, population change* and *decreased health services*. The human capital impacts are presented in Figure 31 below.

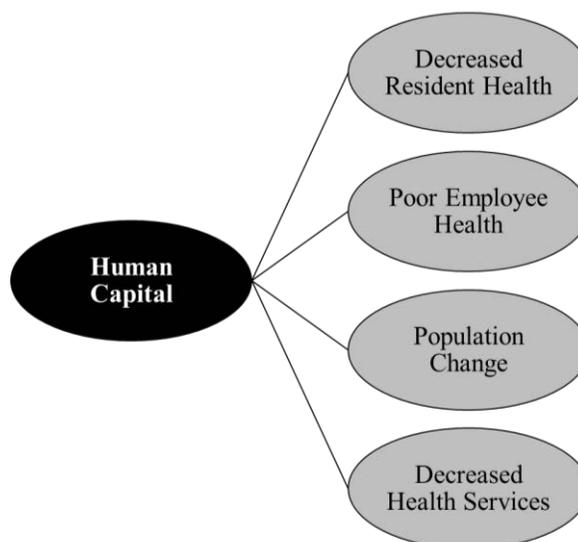


Figure 31. Negative mining activity impacts on human capital.

8.2.2.3.1 *Decreased resident health.* Participants perceived mining activity to decrease residents' health. Mount Isa participants specifically reported concern regarding the negative impacts of lead particularly for the development of children. A participant noted "...I 'spose lead is a worry, especially with a small child because you think, is its learning ability going to be impaired?" (MI06). However, some participants reported that individual hygiene behaviours reduce individual risk of lead exposure. Participants reported "...there's reasons why some people have a problem with lead and there's reasons that you can...stop having that problem, it's cleanliness and things like that so...that's why" (MI05), and that "if you have...regular, good hygiene and...you feed your kids well, and they wash their hands before they eat and wash their faces, no I don't have a problem" (MI15). Participants also reported increased resident awareness of preventative behaviours to reduce individual risk of lead exposure. As one participant noted "...no [lead is not an issue], we're just aware of it and wash your hands" (MI16). Another participant stated:

There's been a lot of work done with the [community group] and that working here, there's a lot of advice and help, there's free blood tests, you can...get your kids tested as many times as you like, so I think all that can be done is being done.  
(MI06)

Evidence that exposure to lead was normalised is evident in participant reports that the town is situated in a mineral rich region and therefore exposure to lead and other minerals was natural and not the fault of the mine. A participant noted “I honestly think if the mines right there, obviously there’s going to be more minerals in the, you know, in the area that aren’t being mined” (MI01). Furthermore, some participants perceived their risk of exposure to lead to be no different than if they were in another community. For example, one participant stated “...the children in Sydney had as high a lead content as the children in Mount Isa. That’s from the cars going past” (MI06).

The type of mineral being mined was also reported by participants as impacting upon community wellbeing. Participants reported concern over the proposed mining of uranium as highlighted by a participant’s report that “oh I think there’s some issues with...uranium mining, whether or not that’s going to go ahead...because that would be an impact on the community as well” (MI03).

Additionally, a male-centric culture was reported as a result of mining activity which was perceived to facilitate poor health behaviours within young males. One participant noted that:

...there’s a big...binge drinking, drug using culture in the 20 somethings, especially the young males...we call them hard core...they drive around in their Landcruisers or Hiluxes or whatever and...it’s that whole culture, not particularly a health culture I don’t think. (MI19)

One Moranbah participant also reported that psychological health problems resulted from the community being purpose built. This participant noted that:

Now Moranbah’s a purpose built mining town, so it’s sort...with all sorts of problems...why do these...young kids and teenagers...primary school kids and teenagers at high school...why have they got a problem with mental health and self-harm and cutting? Because they’re not loved...because there’s no stability there...in the family home...because of what...is being cultivated. (MO04)

*8.2.2.3.2 Poor employee health.* Participants reported concern regarding the working conditions of the mining industry. One Emerald participant reported concern for

the health of mining industry employees. However, the responsibility of ensuring employee health was ultimately placed with the employee. The participant stated that:

...there's probably concerns for men that go down under, well my husband went underground and...I didn't really have any concerns...and that...black lung well that...I guess, you need to find out from those men. Did they follow all those safety procedures and wear their masks and do everything properly? (EM11)

One Moranbah participant noted that the workplace at the mines was detrimental to employee's health when stating that:

...we go to work and we're working there and we're breathing [coal dust] in, there's no air like up here, we actually in the hole, not underground but we're open cut so you got the underground they probably have those breathing apparatus...but...that dust at night time lingers there. (MO03)

Another participant noted that the length of shifts at the mine inhibit exercise stating that "because of long shifts too...access to going for a walk or...getting out to, I know they have gyms and things but they're only quite small and then you've got hundreds of people there" (MO06). Another participant noted alcohol use within shift workers stating that "...shift workers they're funny to me...they're happy when they're having a drink" (MO03).

Some participants reported concern regarding employees living in camps as highlighted in one participant's statement that:

...my husband was here first and I was living away, so he was living in a camp and I know just with like general eating...he's found that very difficult when you're offered so, much in a camp environment that he did find his health was, kind of well, his healthy eating habits were waning a little...he would eat a full cooked breakfast every morning. (MO06)

Similarly, another participant noted that "just mining camps in general I just think don't breed really good mental health" (MO02).

*8.2.2.3.3 Population change.* Participants reported negative impacts of population change as a result of mining activity. One Mount Isa participant reported the perceived flow on effect that population loss had on the wider community as "...of course people leave town then and that impacts on the...amount of students at school so that impacts on how many students you've got at a school" (MI03).

One Emerald participant noted that increases in population due to the boom negatively impacted the community when stating that:

...what annoys me with all this, with the big boom that came through with all, the influx of people coming through, different attitudes, some are fine but they've brought the rubbish with 'em...especially with the floods that happened...you try to tell these people, explain it to them, wouldn't listen. So they all built where there's a flood line. (EM03)

Another participant noted that decreases in population due to the downturn negatively impacted the community when stating that: "...there's, probably...between five and 8000 people that've left town now since...the resources boom declined...and the town has felt that" (EM02).

Moranbah participants reported concern regarding decreases in population as a result of job loss in the mining industry. Participants reported that "people have left, because they've lost their position because [the mines], no longer needed those extra people" (MO01). This participant further explained that "...we might have lost a coach from football or we might have lost another teacher because her husband lost his job and they couldn't afford to stay. So...those are just impacts...of again business" (MO01). One participant stated that "...it was in the paper and I don't know whether it's true, 30000 people left" (MO03). Another participant noted that "...they left because of...redundancies or...the company said 'look we can't have you here anymore you gotta move down to New South Wales' or...that sort of stuff so...you lose valuable community members by restructuring" (MO02).

*8.2.2.3.4 Decreased health services.* One Moranbah participant perceived reduced health services as a result of changes in the mining industry. The participant stated that "[the mining industry] has impacts really on...services of the town...and that's everything

from medical professions...with whether we're able to provide that or who's here and who's gone and all of that sort of thing" (MO04).

**8.2.2.4 Environmental capital.** Two themes were identified as negative environmental capital impacts from mining activity – *environmental degradation* and *resource use*. The environmental capital impacts are presented in Figure 32 below.

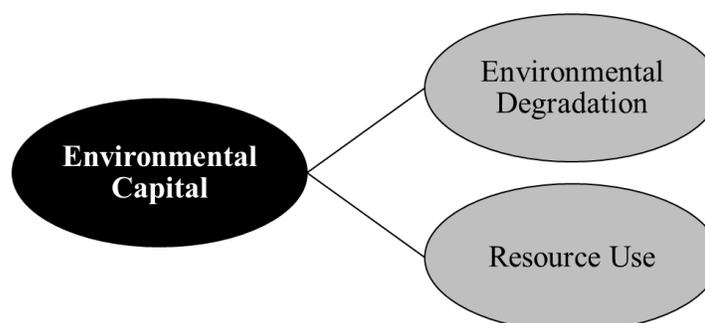


Figure 32. Negative mining activity impacts on environmental capital.

**8.2.2.4.1 Environmental degradation.** Participants reported concern regarding the environmental impacts from mining activity. One Mount Isa participant noted that "...from an environmental perspective, I see [the mining industry] as destructive" (MI14). Another participant stated that "...I think that [the mining industry is] environmentally...disgusting" (MI19). Concerns about perceived air pollution are highlighted by a participant's report that "...they're pumping [pollution] in the air and no one really tells us what it is" (MI17). Some participants negatively viewed the mines' proximity to the community due to the environmental risks posed by the mine. As one participant noted "...I struggle with mines...being so close to town and the pollution that comes out of it" (MI19).

One Emerald participant noted that:

...as far as the environment's concerned, I guess that's always going to be...a talking point and that...fossil fuel is not very good for the environment...and what mines do and the way they leave it, there's obviously some concern there...but I think in the good times, people like to reap the rewards and, they have certainly done that and...I guess now...we might be paying for it in other ways. (EM11)

However, another participant reported that the mines do enough to control the environmental and health impacts that can result from mining activity. The participant stated that:

...I know it's good to be environmentally friendly but, I don't think...people see how the regulations are on site...if that, especially this black lung...that's happening with these workers coming up in the media...my husband for a fact...said there are people that wouldn't wear the apparatuses when they were...given the equipment to wear underground. They wouldn't do it. So, what annoys me is...no one takes responsibility for their actions these days...I know that there...is definitely emissions with coal but there are definitely also...factors put in place...that's why they have environmentalists...on site...they have environmental departments. (EM08)

Moranbah participants stated that "I mean there's still environmental stuff...that's worrying about the mining industry, for the community like the coal dust, round here" (MO05), and another participant noted that "...on a probably more moral ground...there's the raping and pillaging of the earth...permeating the water ways and...there's a lot of environmental downfalls that come with mining" (MO02). Another participant reported specific concern for air pollution describing:

The dust. Unbelievable. We are surrounded [by mines]...Now I know this...I could mop the floor and...my feet is black in one or two days walking around...you don't want to use the air-conditioner, 'cause when it blows this way...you get all these mines surrounding...that is a big concern. (MO03)

Conversely, one participant reported that air pollution was not an issue stating that: I don't think it is a real issue just the simple fact that it gets on the houses and you got to hose your house down...and you get a bit more dust in your house if you've got your windows open, if you don't like some people around here they just have air-conditioning running 24/7, so their windows aren't open so they don't get the coal dust inside. But it's not an issue, it's not...in the air. (MO05)

This participant further explained that they did not perceive the dust as an issue because it did not seem to cause any personal health problems. The participant stated that "...there's coal dust, but it doesn't set my asthma off, so I don't think it's a big issue other than having to clean down stuff a bit more than what you would normally" (MO05).

Some participants reported a level of acceptance of environmental degradation as it was their choice to live in the community. For example, one participant stated that "...but it comes with the choice that you work in a mining community so you, it's kind of like accepting the good with the bad" (MO02). The participant further explained that:

This is where the work is at the moment so people tend to turn a blind eye to [environmental degradation] or...you shut that out...you don't look at the things...that you don't want to look at it. It's like ok we can live with that until someone gets sick in your family and then you might make the big questions...is it actually worth being here? (MO02)

*8.2.2.4.2 Resource use.* Participants reported concerns regarding the use and sale of non-renewable resources. Some Mount Isa participants acknowledged that the mining industry relies on a finite resource and that alternatives need to be considered when the resources run out. For example, one participant noted that:

...I think actually if anything, [what] the mines are doing to the world, as a whole, is we're over mining our actual resources that we've got. If anything we're going to, at some point, turn around and run out of the resources we've got. Then what do we do? (MI10)

One Emerald participant noted a dislike for the resources mined within Australia being sold overseas. The participant stated that "...here we are selling off our products...the biggest dollar and we shouldn't even be selling it at all. We should be...using it, stockpiling it ourselves, or putting it aside or just leaving it until we need it" (EM04). One participant reported that they perceived that people would like to see coal mining stopped when stating that:

I do follow a lot of things on social media and I see that generally...I think there's a perception that you can vote against...coal and if you ran a survey and say 'would

you prefer to not have coal fired power?’ Lots of people would say ‘yes’. But...the realities are...that...it still does underpin 70 or 80 percent of our baseload power in Australia. (EM09)

One Moranbah participant also noted concern regarding the depletion of non-renewable resources when stating that “...those mining giants, they’re here because there’s a resource in the ground and we need to be wise about that because it’s not renewable” (MO04). One participant noted the perception that mining companies need to do more for the environment stating that:

I just think people are becoming more environmentally aware...people are a bit more conscious of...and making...the mining companies accountable for the things that [they do]...they get millions and billions of dollars out of the industry, but they don’t necessarily put that back into the environment which is the thing that if you don’t support the environment it’s not gonna support you and one day we won’t be able to live on earth. (MO02)

**8.2.2.5 Public structural capital.** Two themes were identified as negative public structural capital impacts from mining activity – *lack of royalties* and *reduced infrastructure availability*. The public structural capital impacts are presented in Figure 33 below.

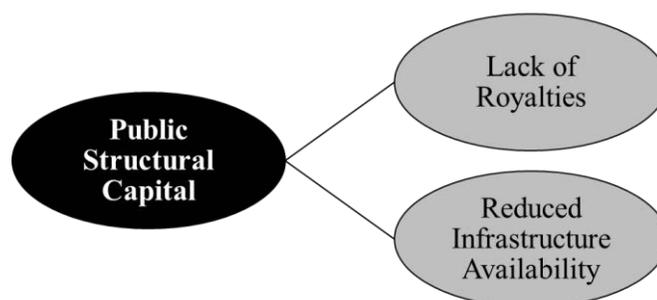


Figure 33. Negative mining activity impacts on public structural capital.

**8.2.2.5.1 Lack of royalties.** Some participants reported negative perceptions of the Royalties for the Regions program that had been instituted by the government. One Mount

Isa participant stated that “well you saw the little amount of money we got back out of royalties, it’s disgraceful” (MI06), while another participant stated that:

This mining tax that they’re hitting us all with...it’d be nice to see some of that money come back into Mount Isa. Our roads are pretty crap...everyone in South-East Queensland whinges about the roads down there and I think to myself ‘well you haven’t driven on half of ours where you can lose a semi in one of those potholes, then when you can do that, then you can whinge.’ (MI10)

Emerald participants reported that they could not identify what the royalties may have been spent on within the community. Participants noted that:

...the State must have been given...and the federal government must have been given...an absolute fortune in money and when times get tough it’s like...‘oh \$100 thousand for this? No way, nup can’t do that.’ It’s really, really disappointing...when you see how much money goes out of the community and...pretty much nothing comes back. But I think the royalties for communities, is set up to try to address that and...maybe it’s doing some good work but it...doesn’t seem like that on the ground...There’s nothing in Emerald that I can point to and say that’s come from...royalties for communities. (EM06)

Another participant stated that:

...they talk about Royalties for the Regions, which sort of came...really as the royalties dropped off is when Royalties for the Regions became a bit of a catch cry for the...State government...We really didn’t...see a lot of that money, spent in the area...where you know it well could have been. (EM09)

However, another participant reported negative perception of the introduction of increased taxes on the mining industry when stating that “...the hardest part is when the, was it the mining tax that they put on?...The whole, it’s, basically the industry died within the day, it was just so scary how that all happened” (EM08).

One Moranbah participant noted that the government did not do enough to support or protect the community from the impacts of mining activity. This participant stated that:

Now...what is the government for? Is it for families?...we really need to think about that. Who is the government for? Are they representing the companies or are they representing us Australians as families? I don't think they're representing us as families ah in the way that they should...there's a lot of issues...when you're looking at...life in a...mining community and the government needs to really think that through. They actually need to say 'hang on...we need to put something in place here for the health of our nation, for the health of our communities.' It's not just about money...and it can't be. (MO04)

**8.2.2.5.2 Reduced infrastructure availability.** One Moranbah participant reported reduced car park availability as a result of meetings held for the mining industry. This participant stated that:

Well I know when they have a big meeting on, because all the car parks get taken up in town square and there's nowhere to park and I never know whether it's at the council building or whether it's at the Black Nugget that they're having their meeting...so that's one thing that changes, they overtake the car park and you can't find a car park anywhere. (MO05)

**8.2.2.6 Cultural capital.** One theme was identified as a negative cultural capital impact from mining activity – *itinerant culture*. The cultural capital impacts are presented in Figure 34 below.

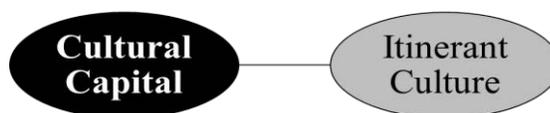


Figure 34. Negative mining activity impacts on cultural capital.

**8.2.2.6.1 Itinerant culture.** One Moranbah participant reported that the mining industry influenced a perceived mentality of treating the community as a temporary place to live. The participant reported that:

And what makes the lifestyle here so fractured and difficult is that people don't see that this is our home. They're only here for six weeks or six months, if they're here...for 12 months, two years, that's a long time...and that's one of the issues with a mining culture. (MO04)

This participant further explained that:

...even the schools...there's this mindset that we're...out from uni we've been placed in this mining town to suffer for the next three years while we [gain] enough credit points to go back to the south east. Like what is that?...that's just such a poor attitude...but that's part of the culture that...has been developed...over time and it doesn't...have to be like that. (MO04)

Similarly, another participant noted concern that some individuals in the mining industry treated it as temporary employment. This participant reported that:

...with mining itself I think...a lot of outside people...don't kind of take it seriously enough and are just here for, 'I'm only here for two years', whatever, I think that can place a bit of danger in the mining industry. So...that's something that concerns me I guess as...part of this community...because I have...grown up with disasters like Moura and different mining accidents...I just now that I have a family and am an adult I guess I would hate to see something like that happen ever again because...there's a lot of people that are just, kind of...using it to get ahead and not, kind of seeing it as a long term thing. (MO06)

One participant noted that the mining culture negatively affected the community.

This participant stated that:

This is a step in career it's not a community, if you want to say it like that...we need to define what is community...it is...I think that there's great things on offer...and there really, really is, but to sustain it and that's really the question...how can it be continually sustained? Because the initial birth of this community...and the culture there is very, very different to the sustainability and the culture now...before it was about sowing, now it's about reaping. You understand the difference?...before it was

about community, now it's about what can I get out of this?...not, what can I put into it? (MO04)

**8.2.2.7 Checkpoint.** Participants from all three communities reported commute workforces to have negative impacts on the community due to decreased jobs for residents, a weakened economy and decreased connectedness. Emerald and Moranbah participants negatively perceived a reduction of employee rights due to an increase in workforce casualisation. Emerald and Moranbah participants also noted that the mining industry's use of 12-hour rosters inhibited community participation. Participants noted decreased job security and decreased employee wellbeing for those involved in the mining industry. Participants from all three communities perceived an over-reliance on the mining industry to decrease employment opportunities outside of the industry and place the community at risk of experiencing economic downturns. Mount Isa and Emerald participants perceived economic downturns to cause stress and feelings of uncertainty within the community while respondents in all three communities perceived economic downturn to decrease businesses and services. Mount Isa participants reported that changes in mining activity to decrease property values while Emerald and Moranbah participants reported changes in mining activity to increase the number of vacant houses in the community. Participants from all three communities perceived mining activity to increase the cost of living, particularly for those not involved in the mining industry. Only Emerald participants reported negative impacts from experiencing economic booms such as decreased availability of services and an increased cost of living. Emerald and Moranbah participants also perceived the mining industry to be decreasing the union presence in the communities.

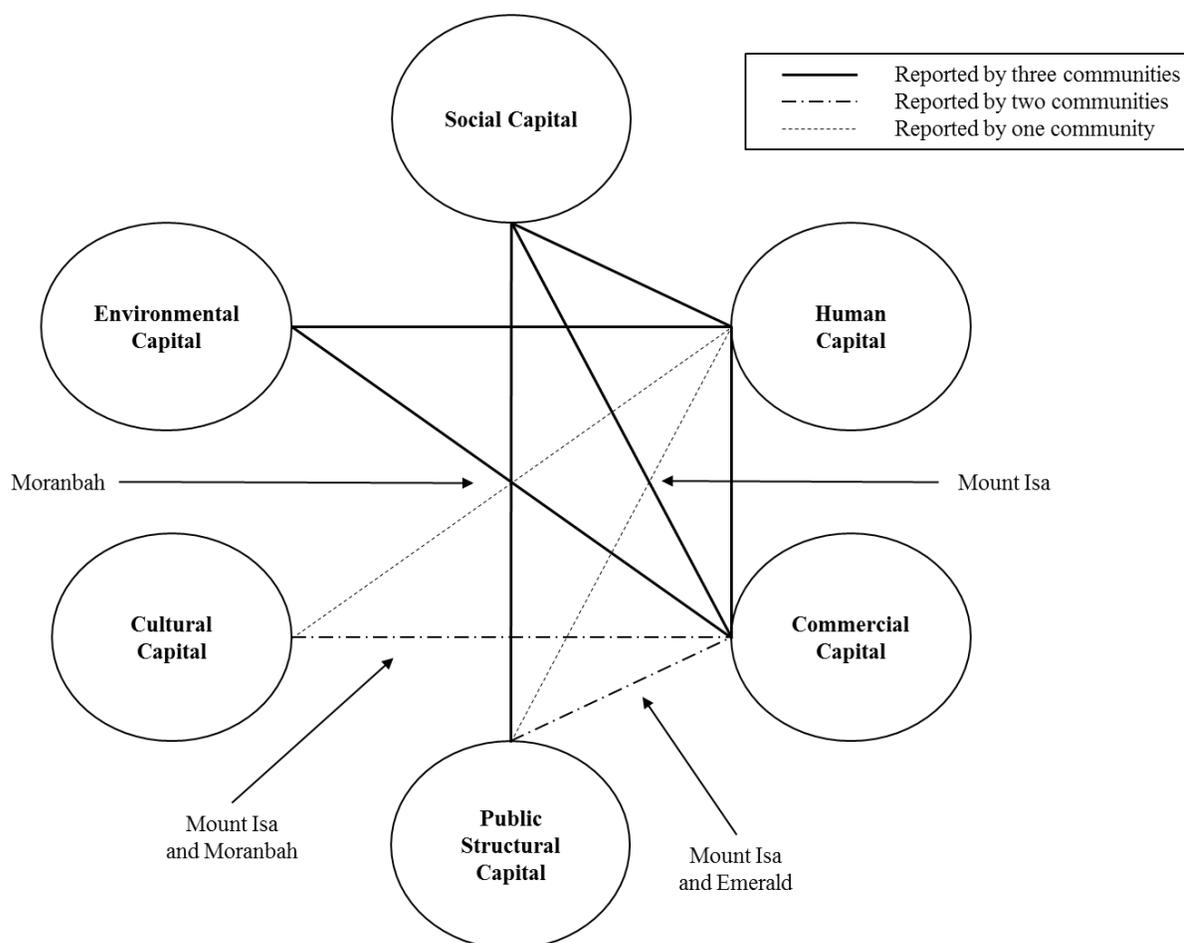
Emerald and Moranbah participants reported that mining activity introduced divisions between groups (such as mining vs non-mining, union vs non-union and contract vs permanent), which decreased the communities' connectedness between residents. Participants from all three communities reported involvement in mining activity reducing residents' ability to engage in social activities within the community. Only Moranbah participants reported a lack of reciprocity from the mining industry and decreased trust due to an increase in mining activity.

Mount Isa and Moranbah participants reported mining activity to decrease residents' health while Emerald and Moranbah participants reported mining activity to decrease employee's health. Participants from all three communities negatively perceived population loss to have flow on effects to the community such as decreased number of school students and other community members. Emerald participants negatively perceived population gain due to the influx of people with different attitudes that were not consistent with existing community values and attitudes. Moranbah participants also noted mining activity to decrease the community's health services.

Participants from all three communities reported environmental degradation as a result of mining activity. Additionally, participants reported concern regarding the use and sale of non-renewable resources. Participants also perceived a lack of royalties from the mining industry flowing into the community. Only Moranbah participants perceived mining activity to reduce the community's available infrastructure as well as to introduce an itinerant culture into the community.

**8.2.3 Integrative summary.** From participants' reports about mining activity's impact on community, relationships between and within each form of community capital can be identified. Figure 35 below provides the combination of each of the communities' reported relationships between the forms of community capital within mining activity impacts.

Participants reported mining activity to have many impacts on the communities. Of most concern for participants from all three communities were shift work, commute workforces and the associated impacts such as families being separated (social capital) and enforcement of where to live (human capital). Participants did report some positive perceptions of residential workforces and recognised the benefits of commute workforces. These benefits of commute workforces included accessing skills (human capital) not available in the community, providing some individuals with choice of living situations (human capital) and providing other industries (such as hospitality) increased income (commercial capital). Reductions in commute workforces were associated with increased trust (social capital). A Moranbah participant also noted an increased sense of



*Figure 35.* Identified relationships between the forms of community capital within mining activity impacts.

community (cultural capital) resulting from decreased commute workforces (commercial capital) and transient populations (human capital). Commute workforces were also perceived to place strain on community services such as the hospital (human capital) and emergency services (public structural capital).

Emerald and Moranbah participants also noted increased workforce casualisation. Workforce casualisation (commercial capital) was perceived to occur to prevent employees being a part of the union. Emerald and Moranbah participants reported the importance of a union presence within the community as unions were perceived to offer social opportunities (social capital). Furthermore, Emerald and Moranbah participants reported concern

regarding the perception that the mining industry was actively decreasing the union presence within their communities.

Participants from all communities reported increased economic stimulation as a perceived benefit resulting from mining activity. Mining activity was perceived to result in job creation within mining as well as other industries. Economic downturns were also reported to have positive impacts such as decreased housing prices, cost of living and improved business customer service. However, most salient was that economic downturns resulted in negative impacts such as increased employment insecurity, reduced spending, businesses experiencing hardships, reduced housing prices, oversupply of housing, and uncertainty with economic markets or mine lifespans. Participants also perceived population loss (human capital) resulting from economic downturns to reduce the available social groups and activities (social capital) in their communities. Additionally, Moranbah participants noted that economic downturns reduce the available health services (human capital). Emerald participants noted that boom times can also have negative impacts on the community such as decreased availability of services and increased cost of living.

One Moranbah participant noted that due to the reliance on mining, residents were better able to understand and support each other (social capital). However, reliance on the mining industry was negatively perceived by participants from all three communities. Perceived reliance was reported to influence the community economy, employment and population levels. A lack of employment opportunities outside of the mining industry was also reported as a negative impact particularly for mining downturns. Additionally, participants perceived their cost of living to be increased due to the presence of mining.

The nature of the mining workplace environment was reported as allowing for the development of close ties (social capital). Moranbah participants reported a lack of reciprocity from the mining industry to the community. Emerald and Moranbah participants reported divisions within their community between mining and non-mining industry employees, mining companies, workforce structures and union and non-union members. Participants from all three communities reported that the mining industry's rosters interfere with residents' available time to participate in social activities. Mount Isa and Moranbah participants reported mining activity and the mining industry as forming a sense of community.

Reported positive population changes included population loss of those who did not want to be in the community as well as population gain resulting in increased services. However, participants from all three communities reported population loss as a negative impact of mining activity. Emerald participants also reported population gain as a negative impact.

Emerald participants reported the distance between the mines (commercial capital) and the community as a positive aspect due to improved air quality (environmental capital). Mount Isa and Moranbah participants reported health concerns resulting from mining activity. Emerald and Moranbah participants also reported concerns for the health of mining industry employees. Participants from all three communities reported concerns for the environmental impacts mining activity has and the resultant health problems (human capital). Additionally, participant reported concerns regarding the extraction of non-renewable resources (commercial and environmental capital) and the possible future implications for the economy (commercial capital).

Mount Isa and Emerald participants reported the mining industry's contribution to infrastructure within their communities. However, participants from all communities reported a perceived lack of royalties received from the mining industry through the government. These reports further highlighted participant's perceptions of a lack of reciprocity from the mining industry to the community.

### **8.3 Conclusion**

There were many mining activity impacts participants perceived to influence community wellbeing. This chapter provided an in-depth exploration of participants' perceptions of the mining industry and the perceived mining activity impacts in terms of community capital and the relationships between the impacts in terms of community wellbeing. Given the characteristics of the communities and the impacts of mining, the next chapter explores participants' intentions to stay in or leave the community and the strategies they used to adapt to the challenges of living within their communities.

## Chapter 9: Results – Residential Decisions

This chapter outlines findings regarding factors that influenced participants' decision to remain within their community. Residential decisions were explored to further understand and provide suggestions for residents to better adapt to life within mining communities. This chapter explores the research question of 'how do residents adapt to the challenges of living within their communities?' Participants were asked whether they had any intentions to leave their community. Participants were also asked about the strategies they used to adapt to the challenges they face living in their community. Results showed a distinction between participants who reported intentions to stay and those who reported intentions to leave. The reasons behind these intentions are explored in the following sections. The final section explores the strategies reported as assisting participants or others in being able to remain within the community.

### 9.1 Intentions to Stay

Of the participants who reported intentions to stay, there was a distinction between those who wanted to stay in the community and those who had no reason to leave at that point in time. *Committed stayers* reported that they would stay in the community regardless of the perceived foreseeable events. For example, participants reported "no we don't have intentions to leave here...even if the town did go down quite a lot" (MI06), "...no I don't want to leave the community" (EM06), and another participant stated "...we've laid our hat down and called it home" (MO04). *Ambivalent stayers* were open to leaving or reported perceived foreseeable events as potential reasons to leave. For example, participants stated "...when I find it's my time to move on I will, but at the moment I'm staying put" (MI18), "...we're not actively looking to move but...we might may well go somewhere else in the future" (EM09), and another participant stated "no, [we do not have any intentions to leave]...we made the commitment for the next two years to stay" (MO01). *Committed stayers* and *ambivalent stayers* reported similar reasons to stay within the community, however *ambivalent stayers* also reported potential reasons that would influence their decision to leave the community. The differences between committed and ambivalent stayers are presented in Figure 36 below.

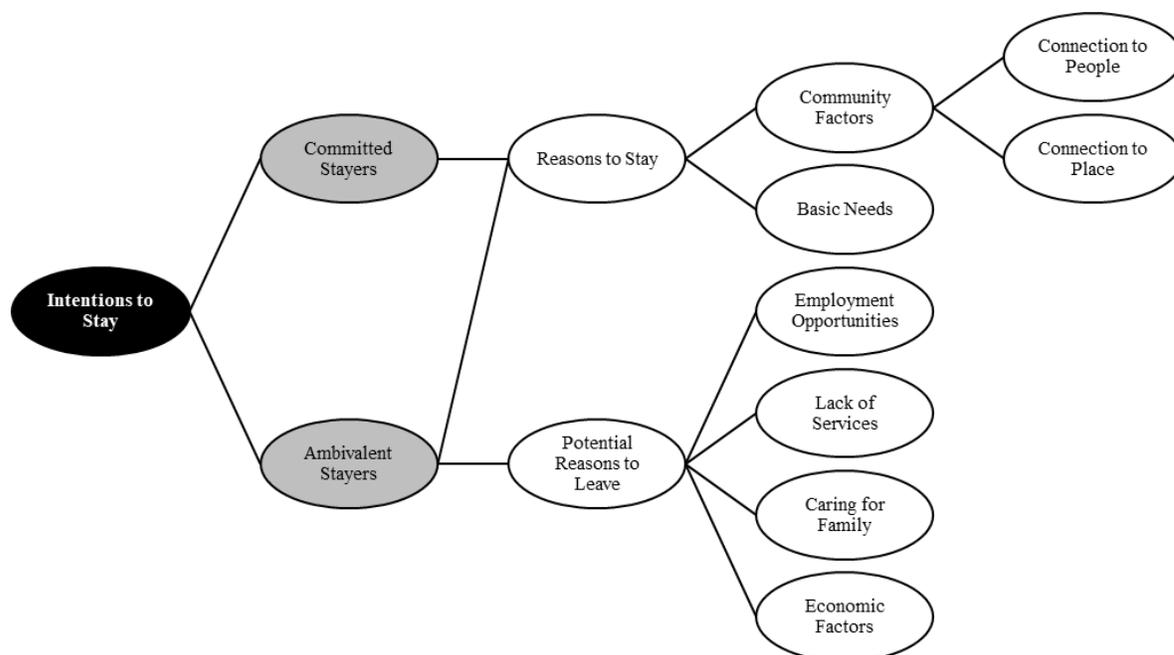


Figure 36. Differences between committed and ambivalent stayers.

**9.1.1 Reasons to stay.** Three themes were identified within participants' reported reasons to stay – *community factors* and *basic needs*.

**9.1.1.1 Community factors.** Community factors were reported by participants as factors being unique to the community. Two factors were identified - *connection to people* and *connection to place*.

**9.1.1.1.1 Connection to people.** Participants reported the positive influence of being close to family and friends both physically and emotionally. Mount Isa participants reported “if I wasn’t here I [would not] be seeing the kids as regularly” (MI15), and “I think the, people is the most important thing about this place and so I think it’s the people that keep me here” (MI14).

Emerald participants reported “...we’ve got family and friends here” (EM09), and another participant stated “...I’ve made some good stable friends that are friends forever...I think the nicest part about Emerald is the friendliness” (EM08).

**9.1.1.1.2 Connection to place.** Participants reported the positive influence of their attachment to the surrounding environment and the community itself. Mount Isa

participants reported that "...the environment, we love getting out bush..." (MI05), and also:

...you've been brought up to live in the conditions out here, the dirt, the dust, the no water, and it is your roots, so...you can appreciate more than what people would when they come here for just say to work in the mine. (MI18)

Participants also reported that their enjoyment and happiness within the community positively influenced their intentions to stay. Participants reported "I enjoy living [here]" (MI18), and "the kids are happy" (MI05). Additionally, one participant reported the community formed part of their identity. This participant stated "I would like to see...the seventh, eighth generation [Mount Isa residents]" (MI01).

Similarly, Emerald participants reported that the community "...is our home" (EM08). Additionally, participants reported that their family's enjoyment of the community positively influenced their intentions to stay. This enjoyment of the community was reported as being due to increased opportunity for children (such as quality of friendships and sporting) resulting from the small size of the community. One participant noted that:

...[the kids] don't want to leave, they say 'no we want to stay here'...and I know it's because of...all their friends and everything but you would also think that...if there wasn't those opportunities then they would want to leave...I actually think, living in a small town has given my son, my eldest son more opportunity...than if he lived...in a big city. (EM11)

One Moranbah participant reported that the community's lifestyle factors increased their enjoyment and therefore provided a reason to stay in the community. The participant noted that:

We have a life that we actually go and do things where you can sit on the boat and you hear what your children are saying, actually are listening and processing it rather than just hearing the noise coming from them. (MO01)

Another participant reported that they had called the community "home" (MO04) because they were contributing to the community. This participant stated that "I'm

certainly...working with...the leaders around town and...working in at the schools...I'm working at the court...so we're...trying to do...what we can do in the community" (MO04).

**9.1.1.2 Basic needs.** Basic needs were reported by participants as the minimum standard of expected services and other factors that enhance suitability to live and stay within a community. One Mount Isa participant reported "...your needs are small when you get old, and as long as you've got a good hospital that you can fall into when you need to and a couple of doctors...you're alright" (MI06). Another participant noted "...there's nothing that we can see in our lives at the moment that would warrant us wanting to go...the schools are great" (MI05).

One Moranbah participant noted that when questioned by their family about why they live in the community, they reported that:

...it's a small town...and it's a country community and there's just enough of everything there to look after your needs and that's all I want...if I want to come in and see you guys...I can catch the bus in and...see ya's whenever I like so I said 'I've got the best of both worlds.' (MO05)

**9.1.2 Potential reasons to leave.** Ambivalent stayers also reported potential reasons to leave. Four themes were identified as reasons participants reported that would determine their decision to move – *employment opportunities, lack of services, caring for family and economic factors*.

**9.1.2.1 Employment opportunities.** Concerns of work being relocated or work not being available are highlighted in Mount Isa participants' reports that "...if work were to have to relocate me I will have to go" (MI18), and "...if it wasn't for the work...we wouldn't be living here" (MI16).

Some Emerald participants reported that they would need to leave the community if they gained employment elsewhere. One participant noted that "...we're not actively looking to move but...we might may well go somewhere else in the future...it's all dependant on work" (EM09). Another participant reported "maybe, I mean I don't want to but...it would just be for work. It's not because we want to leave a mining community or Emerald, it would just be because...we would have to go for work" (EM11).

One Moranbah participant noted that if employment opportunities were available outside of the community, that they were open to moving. This participant reported that:

...so we have thought about [moving] last year, we've had some opportunities present themselves...both nationally as well as globally, and my husband chose to, based upon all the elements, which was really an interesting process to kind of go through,...whether we stayed in Australia for one or moved overseas...and how that was going to not only affect the two of us but our children...and we made the commitment for the next two years to stay. (MO01)

**9.1.2.2 Lack of services.** Participants reported that they would consider leaving if they required services not available in the community. Mount Isa participants reported concerns about whether the town itself were to close. For example, a participant noted "...the only thing that would probably definitely make me move is if the place was closing up" (MI15).

One Emerald participant reported considering leaving the community if they decided to seek tertiary education. This participant stated that:

...if I go to uni I'll probably move simply because I'm after a fairly large course which this town simply wouldn't have...I don't know if I plan to move anywhere otherwise. If I didn't go to uni I'd probably end up staying here. (EM05)

One Moranbah participant noted that they would leave the community if their health deteriorated when stating that "I'm happy to stay here...I don't look at leaving...Moranbah at all. The only reason I'd leave Moranbah is if for any reasons to do with the health, a health reason, that would be the only reason" (MO05).

**9.1.2.3 Caring for family.** Caring for family was characterised by Mount Isa participants' concern for being able to provide for the needs of children. This was highlighted by one participant's report that "...if it comes to the point of making sure she's got everything she needs be it education, a house, opportunities and [if] it means we have to move then we have to do it" (MI01). Participants also reported concern for being able to care for ageing parents. For example, a participant stated "...the only possible reason to move would be probably for family reasons... 'cause my family's all, mostly down in

[metropolitan area]. My parents are elderly” (MI09). Additionally, participants reported considering leaving the community to be close to grandchildren as one participant stated “if grandkids came on the scene, you’d be tempted [to leave]” (MI02).

**9.1.2.4 Economic factors.** Economic factors were reported as reasons preventing residents from leaving the community. One Emerald participant noted that although they wanted to remain in the community, they had no other option but to stay due to the housing prices within the community. This participant noted that “...we took the opportunity and bought [the house] and...don’t regret it however...in hindsight should have offloaded it sooner...so that we were able to just move if we wanted to, but anyway we don’t know these things” (EM11).

## 9.2 Intentions to Leave

Of the participants who reported intentions to leave, there was a distinction between those who wanted to leave the community and those who wanted to leave but perceived factors that kept them within the community. *Committed leavers* reported that they were actively seeking to leave the community. For example, participants reported “...I am finished with the middle of Australia” (MI10), “at the end of the year I [will] be leaving” (EM03), and another participant noted “...we’re relocating to the coast at the end of this year” (MO02). There was one *ambivalent leaver* who reported perceived factors as potential reasons to stay or that prevented them from committing to leaving. One Emerald participant stated “...I’ll probably stay here. But I’m looking [to leave]” (EM04). *Committed leavers* and *ambivalent leavers* reported similar reasons to leave the community, however *ambivalent leavers* also reported potential reasons that would influence their decision to stay within the community. The differences between committed and ambivalent leavers are presented in Figure 37 below.

**9.2.1 Reasons to leave.** Four themes were identified within participants’ reported reasons to leave – *lifestyle factors*, *lack of services*, *time limit* and *family factors*.

**9.2.1.1 Lifestyle factors.** Participants reported intentions to leave to have a change of lifestyle. Mount Isa participants reported wanting to be closer to the coast as one participant noted “we are coastal, I am finished with the middle of Australia” (MI10). Some participants also reported wanting greater access to shopping. For example, a participant

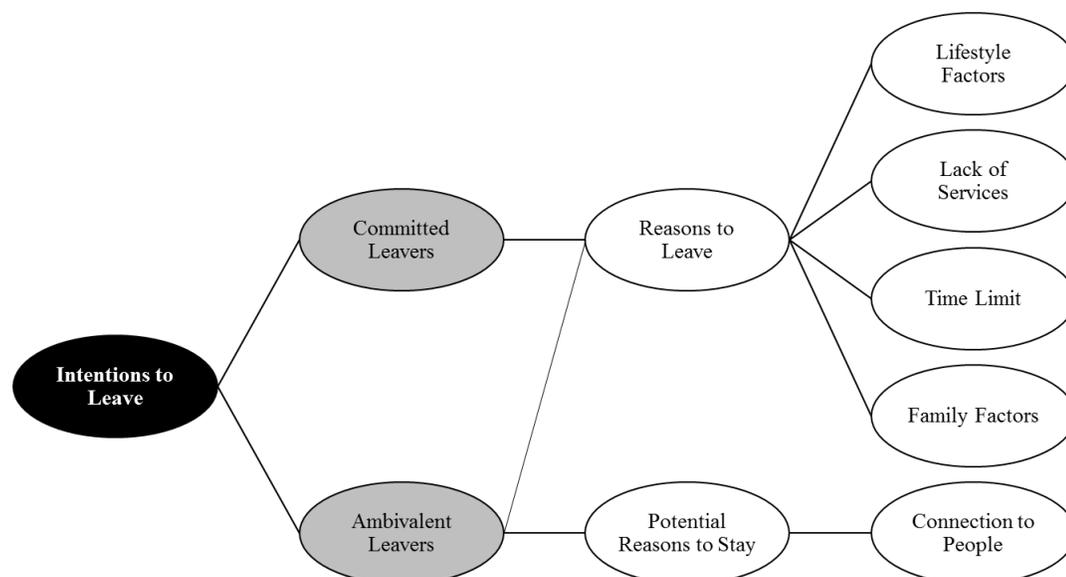


Figure 37. Differences between committed and ambivalent leavers.

noted “we miss...just having everything available to you. You go shopping, well, Bunnings here is a prime example, it’s in a tin shed” (MI08). Additionally, one participant reported wanting to purchase more affordable land when stating “probably in the next couple of years I’m planning to move towards [coastal city] a bit because I want a couple of acres of land and I can’t afford to buy it here” (MI03).

One Emerald participant noted that “...at that point, I will have done enough time giving back to rural communities, I’ll be looking for a lifestyle” (EM10), and another participant stated that “...in the next five years we’ll be gone... ‘cause we want to retire back to the coast, that’s where we’re from...there’s nothing here for retirement for us” (EM01). These particular reports reflect a perception of the community as not being the participants’ permanent home. Additionally, one participant reported that they wanted to leave the community because they wanted to travel. This participant noted that:

...I’m gonna buy myself a paradise bus and I won’t have a car behind it I’ll probably have a couple of...pushbikes behind it, and we’re going travelling for the rest of my life. So I’ll go where I want to go when I want to go. (EM03)

One Moranbah participant stated that they wanted to move closer to the coast because:

The pros will be hey we can jump in the car and we can go to the beach for a picnic any day of the week that we want...we can go to the movie picture theatre and...watch a movie, we can go and...have coffee at nine o'clock at night in a café...there's lots of lifestyle benefits that will be there. (MO02)

Another participant reported intentions to leave due to a personal preference of not wanting to remain in the same community. The participant reported that:

...we just would like to experience...a different lifestyle for our lives...I'd have the same attitude if I lived in Brisbane...I don't want to live in the same place for my whole life...I don't necessarily want to [leave] and yeah it's nothing to do with Moranbah itself but...I just don't want to spend 40 years living in the same town. (MO06)

**9.2.1.2 Lack of services.** Participants reported wanting to leave due to required services perceived as not being available in the community. Some Mount Isa participants reported a need to be closer to health specialists, specifically tertiary healthcare. For example, one participant reported:

I'd prefer to be closer...to services and stuff because I'm supposed to see an eye specialist every six months, or thereabouts, and I see them about once every 18 months, when I can get the money together to do it. (MI03)

Some participants also reported wanting access to a wider range of schooling options for their children. This was highlighted in a participant's report that "...the school that I was looking for was a play-based education system and that's the reason why I'm going" (MI13). Furthermore, some participants reported a need to find more employment options or relocating due to work. As a participant noted, "...we're looking at [might have to] leave town because there is no work" (MI04). One participant also reported that "the only thing that will move us out of here faster is if Mount Isa shuts down" (MI10).

Emerald participants reported intentions to leave to gain further education in a different community. One participant reported that:

When my children need to access a higher level of education [we will leave]...I was sent away myself to boarding school...I would rather be, sending my children definitely to schools of that quality but...and also access within the community for those different activities that...those larger places have, however I don't want them to be boarders. (EM10)

**9.2.1.3 Time limit.** Mount Isa participants who reported intentions to leave often also reported a specified self-imposed time limit on their length of stay within the community. A participant stated that "...as soon as my daughter finishes high school...she's in year 10 now, we joke with her that we'll have our car packed and idling out the front of her graduation ceremony" (MI19). Additionally, participants reported a more general perception that they would not remain in the community permanently. As one participant stated "it's not our forever home, it's not somewhere we want to live out our entire working life and retirement, but in terms of it being a period of [our] lives, definitely enjoy living here" (MI12).

**9.2.1.4 Family factors.** Some participants reported wanting to be closer to family to see them more often or to care for ageing family members. Mount Isa participants stated "...we probably still would leave, cause we're finding the stretch from between when we visit our families is getting bigger and bigger" (MI13), and "...we've got ageing parents and that kind of thing" (MI04).

Emerald participants reported that "I'm looking at leaving, only because my family have moved" (EM04), and another participant noted that "...we want to go down, [the] kids have now...moved, two of them down that way" (EM01).

**9.2.2 Potential reasons to stay.** Ambivalent leavers also reported a potential reason to stay. This reason to stay was captured in the theme – *connection to people*.

**9.2.2.1 Connection to people.** One Emerald participant noted that although they wanted to leave the community, their connection to people within the community might prohibit them from leaving. The participant reported that:

I enjoy Emerald...it will be hard to move because I've made a lot of friends here. In fact, I probably won't even move, I'll probably stay here. But I'm looking...but...I don't see my grandchildren very often but no, I think it's a good little town. (EM04)

### 9.3 Strategies to Remain in the Community

Participants reported strategies that they perceived assisted them or others in being able to remain within the community. Participants often reported challenges inherent within the community (such as cost of living and a dry climate) which some people find difficult to manage. As a result, these people were more likely to leave the community. For example, one Mount Isa participant stated "...there's some who love it and can't get enough and then there's some who just can't wait to leave and go" (MI18). Overall, two themes were identified in participants' reported strategies – *person-focused strategies* and *problem-focused strategies*. Person-focused strategies were reported in relation to general challenges within the community whereas problem-focused strategies often referred to specific challenges. Participants' reported strategies are presented in Figure 38 below.

**9.3.1 Person-focused strategies.** Participants referred to the person-focused strategies they used to adapt to the challenges they faced within the community. Participants discussed person-focused strategies in terms of *acceptance*, *emotional support*, *instrumental support*, *positive attitude*, *avoidance of negative information* and *adjustment*.

**9.3.1.1 Acceptance.** Participants often referred to acceptance of the challenges faced within the community as assisting in adapting to these challenges. Mount Isa participants would refer to terms such as "you've got to adapt" (MI10), "accept that it is what it is" (MI15), and "it's just part of our day" (MI05). This acceptance seemed to result from a perceived lack of ability to control the experienced challenges as highlighted in one participant's report that "to a degree...it is just...an acceptance...there's no choice, fait accompli, and it's trying to position themselves as best they can to either hang on and survive, and hope that things do get better" (MI11). Acceptance also seemed to result from the perception that it was the individual's decision to remain within a mining community. Participants stated "get over it. You live in a mining town. If you don't like it, there's the highway, it's not going to stop you" (MI10), and another participant reported:

...I think we chose to live here so really I don't, you can't really complain about that too much...because like I said most people do choose to be here, most people...so yeah there's [an attitude of] what can you do? (MI16)

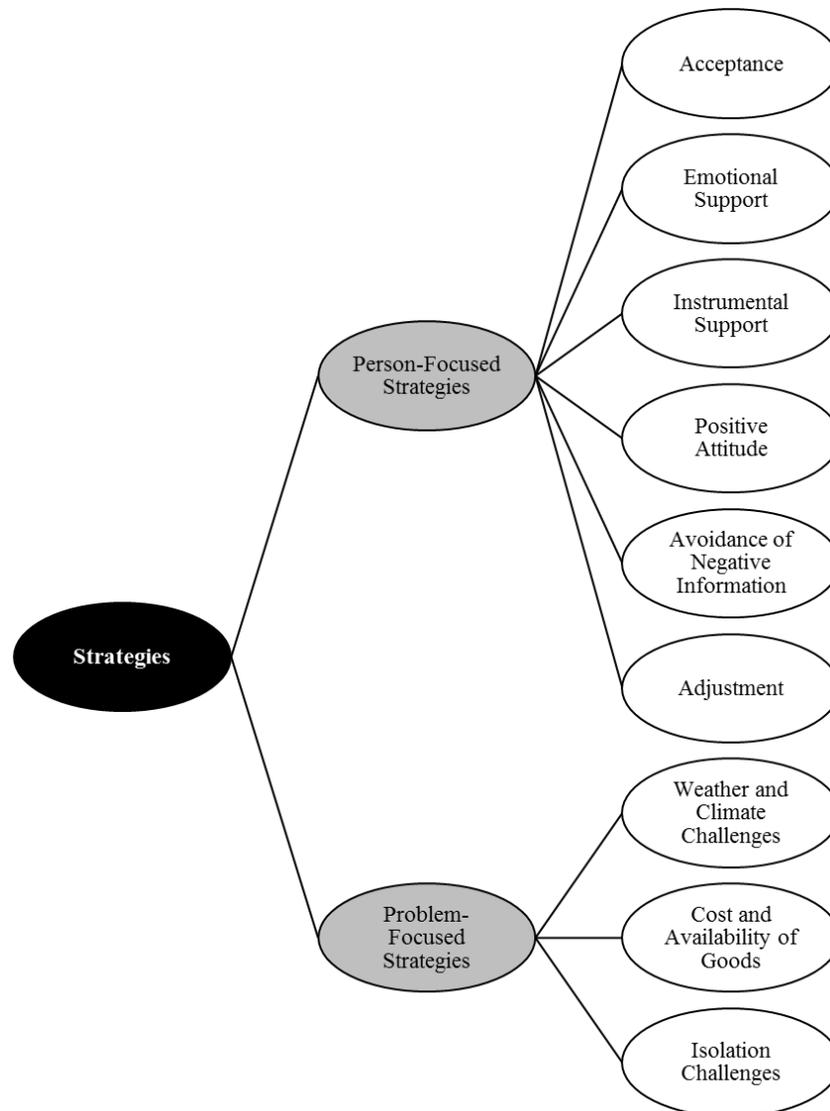


Figure 38. Participants' reported strategies.

Emerald participants would use statements such as "...you accept it, and you work around it" (EM08), and "...it is what it is" (EM10). Furthermore, some participants noted that others within the community who may not be happy need to accept the community to be able to adapt to challenges. One participant noted that "...they need to realise that it's a small community, it's not going to be like the south east corner" (EM11). Additionally, one participant noted that acceptance for the community may result from a perceived lack of ability to control the experienced challenges when stating that:

...if you want to live here and...some people have been here forever or...they're third generation, I think they, you just put up with what you have because you have to live around what you have because I don't think it's gonna change. (EM08)

Another participant reported that residents need to expect and accept the economic cycles within the mining industry when stating that "...people should understand that because coal's exactly the same, energy resources, you always have your cycles so all you do is play with the cycles" (EM03).

Moranbah participants' reports of acceptance were characterised by sentiments of embracing the community. For example, one participant stated that:

...well it's just a case of you just have to deal with what you've got...you just get on with it...I'm not really a person to sit and dwell on those kinds of things. There's always a solution for everything so it's just how you choose to look at it. You just make the best of what you've got. (MO02)

Another participant reported "...I sorta don't worry about it" (MO03). Participants also reported that this acceptance aided in remaining within the community when stating that "...the people that come and stay...are ones that...embrace it" (MO02), and another participant noted that "...those that have lived here longer, tend to I think in some ways accept and engage and find the positive...because those that are doing things that...see it in a...tainted view aren't engaging are they?" (MO01).

One participant reported negative perceptions of acceptance when stating that:

But I think too that people just kind of, resign themselves to well that's just the way it is so, we can't do anything about it let's just go with it even if they're not happy with it...there's people that yeah they just like to accept and say 'well you know that's that, I'll just go with [it].' (MO06)

**9.3.1.2 Emotional support.** Emotional support incorporated the social support that participants received from their friends and family. One Mount Isa participant noted that "I had the support of family and friends and I've just found that that has made a big difference having that support around...a lot of people just don't have that support and that sometimes

is what breaks them” (MI01). Participants perceived connectedness or socialising as aiding in adapting to the challenges of living in the community. For example, one participant stated “...so just making sure we’re always sort of socialising in some way or another” (MI14). Participants’ perception that everyone encounters the same problems within the community seemed to act as a buffer against challenges. One participant reported that “you...complain to your neighbours initially, and then you think ‘oh well everyone’s in the same boat’” (MI15). Additionally, some participants reported that residents within the community use alcohol within a group setting to help manage the challenges they face living in the community. This is highlighted in one participant’s report that:

In terms of a drinking culture that we see, it’s a drinking culture of people earning a lot of money and being away from where their homes normally are, and it’s a way I guess to cope with...the long hours, the hard work, perhaps some of the stress about the uncertainty of the security of...their job...and maybe a little bit of not much else to do. So the one thing they go and do is go and get together and drink. (MI12)

Mount Isa participants also noted concerns regarding new residents in the community who may lack social support within the community. One participant noted “...I personally don’t feel isolated but someone who comes from out of town [might]” (MI03). Another participant also reported that new residents are less able to adapt to changes in the community. This participant stated “but in terms of...the temporary population that comes and goes, I think they’re a lot more sensitive to changes” (MI12). Some participants also reported that a lack of available support can make it difficult to live in the community. One participant stated “...if you have no connection to this community, if you’ve just come from somewhere else or...you have no real support network here of friends or whatever...why are you here?” (MI09). Another participant reported considering seeking professional help to manage challenges as highlighted when they stated “...recently um I’ve sort of decided that I’m gonna go talk to a um counsellor or psychologist” (MI03).

Emerald participants discussed the social support received from their friends and family. Participants stated that “I think people cope [as] best, as they know to

do...or...they've got family support" (EM11), and another participant noted that they "[receive support] through my networks" (EM10).

**9.3.1.3 Instrumental support.** Instrumental support incorporated more tangible help or resources provided by friends, family, or other members of the community. Mount Isa participants reported receiving instrumental support within a particular context. Childcare or a stressful life event were often the examples provided for instrumental support. This is highlighted by a participant's statement that "...we were...swapping childcare and making meals for each and that sort of thing" (MI04), and another participant's report that:

I lost my husband a number of years ago and the [boss] of the [workplace] where I was [working] was wonderful, the police were wonderful...going through all of the organising of funerals and everything, I couldn't have had more help from people than what I got, it was just, was really good. (MI15)

One Emerald participant noted that "I rely, I wouldn't say a lot but...I certainly have some really great friends that do favours for me every week in that...my kids either walk to their place or they get picked up by friends" (EM11). Some participants noted that it depended on the individual to ask for help if it was required. One participant noted that "[it] depends on the person I think...too, whether they'd ask [for help], is another thing" (EM08). Another participant noted that people within the community did not seem to ask for help when stating that:

I think [residents] sort of basically struggle on in silence really. It seems as though there's not too many people that...sort of ask for a hand or...make it known exactly how hard it is for them, but...you can only imagine...that it is. (EM06)

**9.3.1.4 Positive attitude.** Participants reported that a person's attitude and commitment to the community played a major role in being able to adapt to the challenges of the community. Mount Isa participants stated that "I think...it depends on your attitude doesn't it?...if you're committed to something you'll follow through with it no matter what the obstacles are" (MI04), and "...it's all about attitude, you either source out stuff, do stuff, make your life great...or you, piss and moan because there's nothing to do in town"

(MI05). Another participant reported “...it’s your frame of mind, you make your mind up about living here and if you enjoy it, you enjoy it, if you don’t, you don’t” (MI18).

Emerald participants would use statements such as “...it depends on...your mindset” (EM10), “...stayers are gonna stay” (EM11), and “...the ones that stay...are the fair dinkum people” (EM03). Another participant noted that residents are more committed to the community when they had more than just employment within the community. This participant stated that “...when people are here, they’re stable, they’ve got their families, they’ve built a life here, they can find a way to cope with it” (EM07).

**9.3.1.5 Avoidance of negative information.** Participants reported concerted efforts to avoid distressing information or not to engage with the challenge they faced or other people. Mount Isa participants noted “...[information about the mine closing] would be something that I wouldn’t like to think about much” (MI05), and:

[The lack of water is] the one I see every time I open the newspaper, so I don’t read the newspaper half the time and I don’t watch the news ‘cause it’s all too depressing. So I try and stay out of it but I hear it from everybody else. (MI10)

Furthermore, some participants reported the use of alcohol to help manage the challenges they face in the community. One participant stated that “ahh I drink a lot. Seriously. Um no...I drink lots of beer” (MI08). Another participant reported a tendency to isolate themselves from others when confronted by challenges. This was highlighted in the participant’s statement that “Um, I stay home a lot...my home, like my fence line, of my property is a bit of a sanctuary” (MI19).

One Moranbah participant also reported that some people use alcohol and gambling to help manage the challenges they face in the community when stating that:

...how do people you know deal with that? Well they gamble...and then alcohol abuses and then like I said look at domestic abuse...humans are very resilient but the thing is...we are becoming crushed...and a lot of people are crushed. (MO04)

**9.3.1.6 Adjustment.** Reports of adjustment were characterised by one Moranbah participant’s efforts to cognitively adapt to life in the community. This participant stated that:

...the longer you stay in a rural community, mining, agriculture, grazing where ever those smaller communities are, when they're further away from...[a] large...coastal community in Australia that has a larger...population...you have to start looking at wants and needs a little bit differently...yes when I go to town I might see something that I want, but when you live out here...is it a need? I'm not gonna drive two hours to go get, a new outfit...am I? (MO01)

The same participant described that "...any place that you live there's a period of adjustment" (MO01). Furthermore, this participant described the community as a whole as being to adjust to changes when they stated that "...I think those people that have been here and that are still here have the adaptability to continue...to change to keep [the community] going forward because they don't want to see it end" (MO01).

**9.3.2 Problem-focused strategies.** Participants referred to strategies they used to physically alter their experience of challenges within the community. These reported strategies were discussed in terms of how participants adapted to *weather and climate challenges, cost and availability of goods* and *isolation challenges*.

**9.3.2.1 Weather and climate challenges.** Participants reported strategies they used to adapt to the weather of their communities. One Mount Isa participant reported altering watering habits to abide by water restrictions when stating that:

...you can whinge about it but then who gets upset? You do...by doing what I can do. I hand hose when I can hand hose...I make sure my pot plants are kept alive...other than that, life goes on. (MI15)

Participants also reported strategies such as structuring activities around the cooler parts of the day or using air-conditioning to avoid extreme heat. For example, participants stated "...we don't look at going and doing anything until after three. Yeah the middle of the day is spent indoors" (MI04), and "...you tend to do what you have to do outside early...and then I just hibernate inside" (MI15). Another participant reported that "just air-con. Yeah not much else you can do really...it took me a good five years to really get used to it" (MI16). One participant also noted that events were structured to avoid the wet season

when they stated "...see [Christmas is] wet season for us, so yeah they try so hard not to actually plan anything because it'll get rained out" (MI10).

Emerald participants often reported problem-focused strategies to adapt to the heat experienced within the community. Participants reported "...it does get fairly hot in summer but that's alright...we've all got air conditioners" (EM06), and another participant stated that:

But during summer we just...go to the pool or go to the dam...people go out fishing or they'll come out [to the park] and sit in the shade, have a bit of a picnic that sort of thing...some people even canoe up and down the river. (EM05)

Another participant also noted that:

...we're very lucky because we have a pool...the house is fully air-conditioned however we don't really use the air-conditioning so much in summer...because we've got a breeze air, like an evaporative cooling system...the kid's school's air-conditioned, my work's air-conditioned...I reckon it's pretty good and it doesn't get too cold so. (EM11)

Moranbah participants also reported structuring their days differently to avoid the heat. One participant noted that:

...if you're getting out, you're getting earlier in the day to run those errands because there's nothing worse than going outside and you sweat and you're not physically doing anything...you have about three months of that hot weather...you'll see the kids not be out in the middle of the day...it's just hot during the days so they stay inside in the middle of the day where heat is and then about four o'clock or five o'clock you'll see the kids come back out...and they just go about and play and they're outside and they're outside in the morning but by lunch it's just gotten hot and it's better to be inside or in a pool or whatever. (MO01)

Other participants noted the use of air-conditioners or fans to avoid the heat when stated that "air-conditioners run a lot" (MO02), and another participant noted "yeah it's hot but...you can turn on a fan or an air-conditioner" (MO06).

**9.3.2.2 Cost and availability of goods.** Participants reported strategies to manage the cost of living within the community. Mount Isa participants noted saving strategies which are highlighted in one participant's report that "[I] try to save my money... You look for the specials on travel" (MI09).

Emerald participants reported that "you grow your own, you build your own... you do it yourself, everything's done by yourself" (EM03), and other participants noted that:

We've saved hard, and, invested, had a few wins and a few losses. Yeah. No. (EM02)

For our age group, most of our, most of our friends in our age group now are quite... you don't have to worry about much. (EM01)

Some Moranbah participants noted ways to purchase items not available within their community. One participant noted that they shop on the internet when stating that "...we tend to use the internet for a lot... I think what you do is you always find work arounds" (MO01). Another participant noted that they ordered their groceries from another town when reporting that "...well with... cost of living even we for a little while there... we were ordering fruit and vegetables through a place in Mackay and they were delivering it out here, they delivered to quite a few people" (MO06).

**9.3.2.3 Isolation challenges.** One Mount Isa participant reported that they try to leave the community to manage their experience of the community's isolation. This participant stated that "...we get away so we go over [to the coast] two or three times a year" (MI05).

One Moranbah participant also reported that:

...and with... isolation we do go away a fair bit... we have, a caravan and a boat so we... do... try and get away on days off and... do things... with different people or whatever so that we're not, I guess just mining, mining, mining. So yeah we do try and... get away. (MO06)

## 9.4 Summary

Results showed a distinction between participants who reported intentions to stay and those who reported intentions to leave. Committed stayers and ambivalent stayers and

leavers reported similar reasons to stay. However, the committed stayers did not report any reasons to leave whereas the ambivalent stayers and leavers did. Similarly, committed leavers and ambivalent leavers and stayers reported similar reasons to leave. However, the committed leavers did not report any reasons to stay whereas the ambivalent leavers and stayers did. Reasons to stay often referred to participants' connection to people or to the community. Participants also reported basic needs as the minimum standard of expected services and other factors that enhance suitability to live and stay within a community. Reasons to leave often referred to more pragmatic factors such as availability of services, employment and economic factors. Additionally, social factors reported as caring for family or family factors, lifestyle factors and a self-imposed time limit were noted as reasons to leave for another community.

In terms of the strategies participants employed to assist them in remaining in the community, most participants discussed acceptance and social support, both emotional and instrumental, as being useful. The person-focused strategies were reported as being used to adapt to the general challenges associated with the community. Problem-focused strategies were reported as being used to adapt to specific challenges associated with the community.

## **9.5 Conclusion**

There was a distinction between participants who reported intentions to stay and those who reported intentions to leave. This chapter provided an overview of the factors that influenced participants' decisions and ability to remain within the community. The following chapter evaluates and integrates the findings presented in Chapters 7 to 9 with the previous research presented in Chapters 1 to 4.

## **Chapter 10: General Discussion**

This chapter provides an evaluation and integration of the current project's findings in light of the research aims and previous research. First, a general overview of the project and the findings is provided. Following this, the appropriateness of the community capital framework, and the communities' similarities and differences of the perceived factors that influence general community wellbeing is explored. Then the findings regarding perceptions towards the mining industry and the associated impacts are discussed. The chapter concludes with an exploration of social capital's role in community wellbeing and the factors that facilitated residents' intentions to stay in the community.

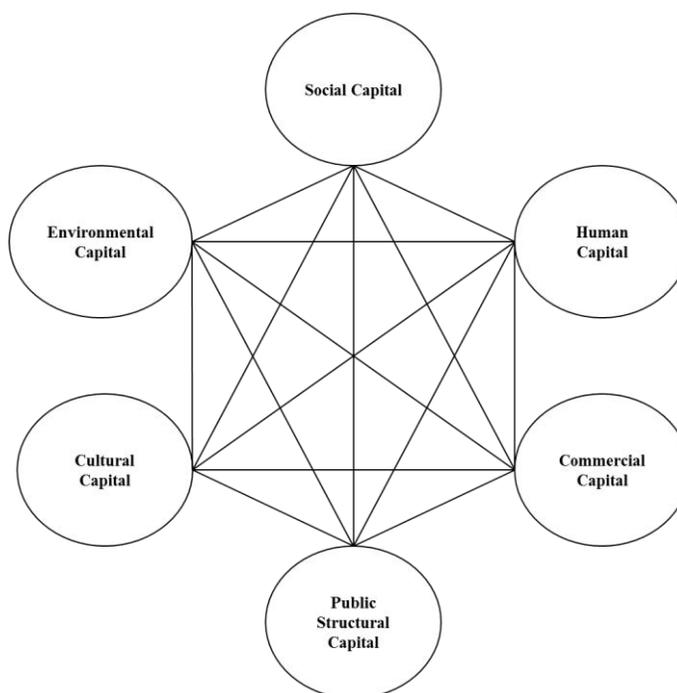
### **10.1 General Overview**

The primary aim of this project was to investigate mining community resilience through mining community residents' perceptions of community wellbeing and the impact of mining activity on community wellbeing. More specifically, this project aimed to explore the relationship between social capital and community wellbeing in mining communities. The concept of community capital provides a framework in which to investigate a community's resources and the ability of these resources to provide outcomes. Therefore, by investigating the forms of community capital, facets of community can be identified that require improvement to increase overall community sustainability. The comprehensiveness of the community capital framework allows for a greater understanding of the relationships between community capital and community wellbeing in mining communities. As so little was known from past research in terms of the determinants of mining community wellbeing, a qualitative lived experience approach was used to explore these relationships. Specifically, an interpretative phenomenological framework was used to guide the collection and analysis of data and thematic analysis was used to identify, analyse and report on patterns within the data gained from semi-structured interviews. Participants' reports of the factors that influenced their experience of living in the community reflected the six forms of community capital (social, human, environmental, commercial, public structural and cultural). Furthermore, the results highlighted the interconnectedness between the forms of community capital. The results also indicated that mining community

residents perceived mining activity to have a pervasive impact on communities. This project contributes a holistic and comprehensive understanding of mining community wellbeing and sustainability.

## 10.2 Was the Community Capital Framework Appropriate?

The results of this project highlight the interconnectedness between the forms of community capital. Within participants' reports, there was an identified relationship between each form of community capital. Given the interconnected nature of the forms of community capital, Callaghan and Colton's (2008) hierarchical representation of the community capital framework, presented in Chapter 2, is inappropriate as each capital was identified within this project to have possible multi-directional impacts on each other. Therefore, the interdependent model for community capital adapted within this project (see Figure 39 below) more appropriately fits participants' reported factors that influence community wellbeing. The adapted community capital model allows for greater representation and identification of the multi-directional and interdependent relationships between the forms of community capital.



*Figure 39.* Map of relationships between the forms of community capital influencing perceptions of community wellbeing.

Even though Callaghan and Colton's (2008) hierarchical graphical representation of community capital did not fit this data, the holistic theoretical framework provided a comprehensive overview of the factors involved in community wellbeing. The framework captured participants' reports of satisfaction as well as concerns regarding the different facets of their communities. This community capital framework provides a comprehensive approach to understanding residents' perceptions of their community's wellbeing. Therefore, this community capital framework is useful in understanding the local factors that influence community sustainability.

### **10.3 How does Community Capital Contribute to Different Community Wellbeing?**

There were similarities and differences within participants' reports of the factors that influence community wellbeing. The following sections explore the similarities and differences between the communities in the perceived contributing factors to community wellbeing.

**10.3.1 Similarities.** Similarities were evident between the communities regarding participants' perceptions of the factors that contribute to community wellbeing. These similarities were identified as social networks based on trust and reciprocity, healthcare, cost and quality of living, and infrastructure and environment.

**10.3.1.1 Social networks based on trust and reciprocity.** Social networks or relationships, specifically those characterised by reciprocity, were perceived as important factors contributing to community wellbeing. Being isolated (environmental capital) from family or friends in other communities meant that residents had to rely on their networks (social capital) within the community to receive support. The norm of reciprocity within these networks meant that residents would help each other with the expectation that they would receive help from others in the community if it were needed. The norm of reciprocity reported by participants reflects a generalised reciprocity (Putnam, 1993) supporting previous suggestions that generalised reciprocity is more useful in groups where all members are willing to perform favours for each other. Even though only Emerald participants reported explicit perceptions of trust, the norms of trust and reciprocity underlined many participants' reports from all three communities regarding both general

community wellbeing and the mining industry. For example, network closure, where everyone knows each other, meant that residents could enforce behaviour that aligned with the norms of trust and reciprocity resulting in the perceived safety (human capital) of the community. Additionally, this perceived safety resulting from network closure seemed to facilitate a family-oriented community identity (cultural capital). In some instances, local councils (public structural capital) were also perceived to play a role in the communities' friendliness (social capital) through holding community events. Conversely, transient populations (human capital) were perceived to increase the difficulty in maintaining friendships (social capital) and therefore enforcing norms of trust and reciprocity. Establishing and maintaining norms of trust and reciprocity were important for residents to perceive positive community wellbeing. Social networks characterised by shared norms of reciprocity and trust can sustain society and enable individuals to act for mutual benefit (Stone, 2001). Given these findings, the social elements within communities need to be considered when addressing community sustainability. The social capital factors were reported to improve enjoyment of the community and as a result facilitate adaptation to the challenges of living within the community, therefore making residents more likely to remain within the community.

**10.3.1.2 Healthcare.** While tertiary level healthcare (human capital) was perceived to be lacking in the communities, the use of technologies and outreach schemes were perceived to increase access to healthcare services. Participants' perceptions of adequate healthcare services improved their perceptions of the communities' wellbeing. Government and healthcare services have a role to play in promoting the available technologies and outreach schemes for rural and remote communities to promote community sustainability.

**10.3.1.3 Cost and quality of living.** Communities lacking variety in the shopping residents' wanted but containing the businesses and services necessary for their needs (commercial capital) highlights the importance of individual perceptions of their wants and needs. The discrepancy between what residents want and what is available within the community suggests that steps need to be taken to change residents' perceptions of what is available in the community or what is adequate for their needs. Positive perceptions of the available businesses and services within a community improve residents' perceptions of the community wellbeing, which may in turn influence their intentions to stay. Similarly,

different perceptions of the cost of living can also indicate individual perceptions of an appropriate cost of living. However, this finding may also indicate divergence in residents' incomes. Those with higher incomes or fewer expenses may perceive cost of living to be more appropriate than those on lower incomes or with more expenses. If the latter is the case, this has important implications for community sustainability considering the previous suggestion that the unequal distribution of wealth can lead to lower social wellbeing within mining communities (Luong & Weinthal, 2006). These findings suggest that government needs to play a role in moderating the increased cost of living associated with mining communities. Moderating these costs could lessen perceptions of an unequal distribution of wealth therefore promoting community sustainability.

Participants also reported that decreased employment availability and stability resulted in population loss and poor mental health. Job loss and the resultant population loss are suggested to disrupt social networks in which subsequently contributes to lower reported trust and fewer social networks (Bell, 2009). As noted previously, social capital factors were reported to improve enjoyment of the community and facilitate adaptation to the challenges of living within the communities, therefore facilitating residents' intentions to remain within the community. As a result, buffering these flow on effects from decreased employment availability and stability is important to promoting community sustainability.

**10.3.1.4 Infrastructure and environment.** The experience of moderate weather (environmental capital) was reported to facilitate social activities and exercise within the communities. The perception of inadequate shaded infrastructure (public structural capital) exacerbated feelings of heat (environmental capital) and therefore, decreased opportunities for social activities (social capital) and exercise (human capital). Additionally, feeling isolated was reduced by the perceived ease of access to other communities. Road and air infrastructure (public structural capital) therefore aids in decreasing residents' feelings of isolation (environmental capital). As a result, these decreased feelings of isolation may facilitate enjoyment of living within the community, therefore making residents more likely to remain within the community.

Participants from all three communities reported the importance of water for recreational use. These reports again highlight the discrepancy between participants' expectations and the reality of life in these communities. As all three communities are

located in dry areas, the expectation of large bodies of water for residents to consistently access for recreational use is likely unrealistic. Matching residents' expectations with the practicalities of the community may facilitate positive perceptions of what is available within the community therefore promoting community sustainability.

**10.3.1.5 Summary.** Between the communities, participants reported factors that influenced perceptions of community wellbeing. The factors included relationships based on trust and reciprocity, available healthcare services, adequate businesses and services, appropriate cost of living, available and stable employment, and infrastructure appropriate for the community's environment. What is evident from these similarities is that the social capital factors had many interactions with other forms of capital. Even though each form of community capital can influence the others, social capital may be the avenue through which to more readily improve other forms of community capital.

**10.3.2 Differences.** Differences were also evident between the communities regarding participants' perceptions of the factors that contribute to community wellbeing. These differences were identified as community identity facilitating support, water infrastructure access and economic diversity.

**10.3.2.1 Community identity facilitating support.** Mount Isa participants reported a strong identification with an isolated (environmental capital) community identity (cultural capital). This isolation identity was not found within the other communities due to their being situated closer to surrounding communities, particularly along the coast. The perception of residents being isolated together was reported as assisting in receiving support through their networks (social capital) with others in the community. Only Emerald participants reported explicit perceptions of trust (social capital) within their community. These reports of trust were facilitated by the perception that residents were rural or "...off the land" (EM06). Therefore, the presence and identity of the agricultural industry (commercial capital) within Emerald facilitated trusting relationships (social capital) through which residents could access support. Even though these community identities were based on different factors, these findings highlight the importance of a community identity in facilitating adaptation to the challenges of living within the communities.

**10.3.2.2 Water infrastructure access.** Water infrastructure (public structural capital) was another important aspect of communities that participants reported increased their

enjoyment. In particular, Mount Isa and Emerald participants noted the dams near their communities added to their enjoyment of the communities, which is further supported by reports from Moranbah participants regarding a lack of access to a major body of water for recreational uses. Even though the dam was reported as a positive aspect from Mount Isa participants, it was also noted that perceived inadequate infrastructure resulted in residents not being able to use the water in the dam recreationally or within their homes. This added to participants' reported frustrations and detracted from community wellbeing. These results suggest that residents' enjoyment of the community, and therefore intentions to stay, may be increased if improvements can be made to the existing water infrastructure. Greater population stability could then have flow on effects to other facets of the community. Therefore, both the presence of infrastructure and the perception that this infrastructure is adequate are both important for community sustainability.

**10.3.2.3 Economic diversity.** Mount Isa and Emerald participants discussed the importance of economic diversity (commercial capital) for community wellbeing as it facilitated economic resilience. Specifically, Emerald participants noted that due to the presence of two major industries (mining and agriculture), the community was better able to be resilient to challenges. Even though Mount Isa participants noted that there are other aspects to their economy outside of mining, other industries (such as tourism) needed to be further developed and invested in to improve the resilience of their economy and therefore enhance the community's sustainability. Unlike Mount Isa and Emerald, Moranbah's economy was reported as being purely dependent on the mining industry. Moranbah participants reported concern regarding the resilience of the community's economy given this high dependence on a volatile industry. These findings highlight the importance of encouraging the development of different industries within mining communities to facilitate their economic resilience during different stages of mining activity and therefore community wellbeing and sustainability.

**10.3.2.4 Summary.** The differences between the communities highlight the importance of the individual community history and characteristics in facilitating community wellbeing and sustainability. Community identities that residents perceive to be unique to the community may help build community sustainability by influencing intentions to stay, as evidenced by Mount Isa participants' reports of an isolated identity

and participants' reports of unique community factors as reasons to stay. Additionally, the historical presence of different industries within the communities has created different levels of economic diversity for each community. These differences between the communities ultimately mean that they will place differing priorities on factors that contribute to sustainability. Therefore, these results highlight the importance of understanding the local context in which sustainability is being investigated (Epps, 2002; Lubbers & Koorevaar, 1999).

#### **10.4 What did Mining Community Residents Think about the Mining Industry?**

Most *Mount Isa* participants had a positive perception of the mining industry due to the perception that it is the reason for the establishment of the community. Participants also reported that the perceived transparency of the mining company's communication with the community facilitated the perception of the mining company's environmental proactivity. In contrast, some participants also reported a lack of transparency in the mining company's communication with the community. A perceived lack of transparency and the ambivalent perception of a need for monitoring to hold mining companies accountable for their actions indicates a lack of trust between some mining community residents and the mining industry. Putnam (1993) argued that trust decreases opportunism within transactions, reducing the need for authoritative monitoring in terms of legislation or laws. The development of trust between the community and industry may facilitate a decreased perceived need for monitoring and therefore facilitate mining companies' ease of operation.

Due to this identified lack of trust, participants reported not believing information disseminated from the mining industry. This finding has implications for the mining industry's communications with the community as residents may not believe the information communicated to them. A company's social licence to operate depends on the community's perception of whether the industry's benefits outweigh the problems that the industry presents for the community (Luke, 2017; Moffat et al., 2017; Moffat et al., 2014). Therefore, a company's social licence to operate would be in jeopardy if community residents do not believe the benefits communicated to them. This finding highlights the importance of trust within networks for the facilitation of communication and information transfer (Putnam, 1993). Without trust, communication and information transfer becomes

more difficult. These perceptions of the mining industry highlight that social capital components, specifically trust, play an important role in terms of Mount Isa residents' perceptions towards the mining industry.

For *Emerald* participants, only those who were involved with the mining industry reported positive perceptions based on their enjoyment of working within the industry. The lack of other positive perceptions of the mining industry indicates that for the wider community, the mining industry did not play a positive role in the community. Emerald participants reported ambivalent perceptions of the mining industry based on the juxtaposition between its necessity and its impacts upon the environment. Negative perceptions of the mining industry related to the mining industry being an “outsider” and “greedy”. These themes, particularly “greed”, were based on a perception of a lack of foresight during boom periods on the part of the mining industry in terms of the participants' perception of the mining industry's long-term sustainability. When compared to Mount Isa participants' more positive perceptions of the mining industry, Emerald participants' perceptions of the mining industry could be due to the industry's history in Emerald. Emerald was already an established agricultural community before mining activity began which may result in residents perceiving the industry as “...an invasion” (EM02). Indeed, Everingham et al. (2015) identified that the introduction of mining activity in a previously agricultural region disrupted the community's sense of place and identity. The findings that positive perceptions only resulted from personal involvement and the negative perceptions were characterised by perceptions of “outsiders” implicate the role of networks between the mining industry and the mining community. Further establishment of bridging social capital between industry and community may facilitate positive perceptions of the industry. Trust would also be important for the relationships between industry and community given Mount Isa participants' perceptions regarding trust. In this case, by facilitating cohesion, bridging social capital would allow the community and the industry to economically get ahead (Narayan, 2002; Stone, 2001). Bridging social capital can be useful for groups in terms of providing extra resources to further goal achievement (Ahuja, 2000; Pretty et al., 2003). The sharing of new knowledge and opportunities between industry and the community would help both parties achieve outcomes.

Similar to Emerald participants, *Moranbah* participants who were personally involved with the mining industry reported positive perceptions. Moranbah participants also reported the perception of the industry positively supporting the community. Negative perceptions of the mining industry were based on a lack of trust between the residents and the mining industry. This lack of trust resulted from perceptions of a lack of reciprocal actions on the part of the mining companies. Similar to Mount Isa residents, Moranbah results indicate that social capital components, specifically trust and reciprocity, play a central role in terms of residents' perceptions towards the mining industry. This finding also further highlights the enmeshed relationship between trust and reciprocity in that the establishment and maintenance of both require the other.

**10.4.1 Summary.** What becomes obvious within participants' perceptions of the mining industry from all three communities is the key role of social capital components. Even though the history of the mining industry is different for each community, networks, trust and reciprocity were all implicated in participants' perceptions of the mining industry. These perceptions indicate that networks based on trust and reciprocity are important for the mining industry to consider as it may facilitate positive perceptions of the mining industry within mining communities and therefore, the industry's social licence to operate.

## **10.5 How did Mining Activity Impact Community Capital?**

One of the projects research questions was what impact do mining community residents perceive mining activity to have upon the community? Participants reported an impact from mining activity on each form of community capital. Participant perceptions of the impact of mining activity upon community capital are presented again in Figure 40 below. Figure 40 indicates that participants more consistently identified negative impacts from mining activity suggesting that mining activity is perceived to have an overall negative impact on community. Mount Isa participants reported the least forms of community capital negatively impacted by mining activity. The perception of fewer negative impacts from mining activity may result from Mount Isa's long standing and stable history with mining activity. In contrast, Emerald and Moranbah participants reported mining activity to negatively impact upon many forms of community capital. The

higher reports of negative impacts from mining activity could reflect the experience of greater instability within both Emerald and Moranbah.

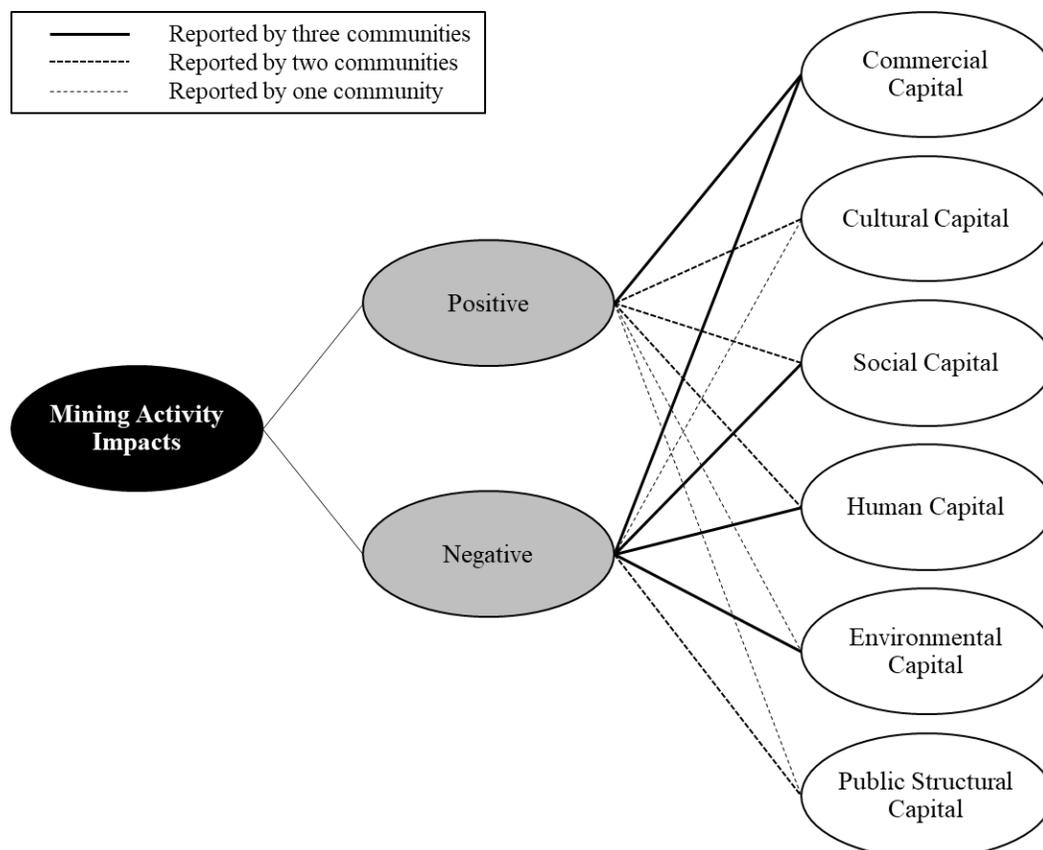


Figure 40. Mining activity impacts on community capital.

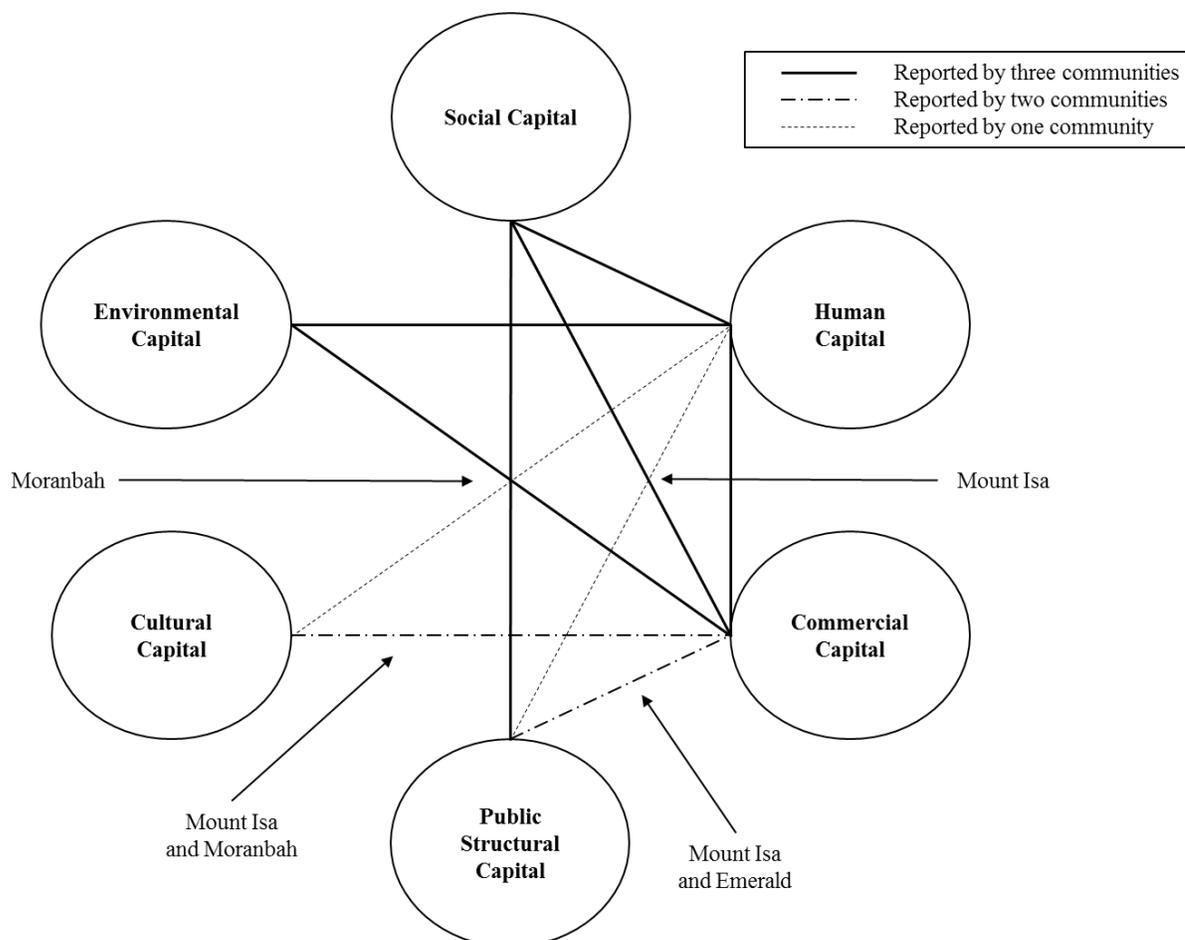
The differences between the forms of community capital the communities reported to be impacted from mining activity are quite telling of the differences between the communities noted in the previous section. Mount Isa and Moranbah perceived cultural capital to be positively affected by mining activity which may reflect that both were purpose-built mining communities. Mount Isa and Moranbah participants reported "...I think [mining activity is] one of the most important things in town...if we didn't have the mines we wouldn't be a town" (MI20) and, "...the mines do support the community in a lot of different ways" (MO05). The mining industry and mining activity formed a large part of Mount Isa's and Moranbah's cultural capital due to these communities being established for mining activity. Cultural capital can play a key role in community wellbeing and sustainability through providing community residents a sense of identity that binds the

community together (Callaghan & Colton, 2008; Throsby 1999). Limited literature on mining activity's impact on cultural capital meant the full extent of the impact of mining activity on cultural capital was not previously captured (as indicated in Chapter 4). The findings of the current project indicate that mining activity can influence a community's cultural capital through multiple avenues, therefore, future research needs to further consider this form of community capital.

Figure 40 above also indicates that the communities consistently perceived the mining industry to have impacts, positive and negative, on community commercial capital. Mining activity impacts on commercial capital were the most salient for participants as participants reported these impacts most, which is consistent with the major focus of past research (Hajkowicz et al., 2011; Kotey & Rolfe, 2014; Schueler et al., 2011; Tonts et al., 2012; Wasylycia-Leis et al., 2014). Additionally, in Figure 41 below, commercial capital was identified to have relationships with each of the other forms of capital in terms of the impact of mining activity. This finding is particularly interesting for Emerald which has less economic reliance on the mining industry than Mount Isa or Moranbah and yet had also reported mining activity to impact many commercial capital factors. The results from this project highlight from a commercial perspective, the extent mining activity can affect nearby communities. Therefore, the emphasis on commercial capital within the literature (Hajkowicz et al., 2011; Kotey & Rolfe, 2014; Schueler et al., 2011; Tonts et al., 2012; Wasylycia-Leis et al., 2014) may not necessarily be inaccurate. Even though commercial capital impacts were more salient for participants, mining activity was reported to affect other forms of capital as well. The following sections further explore the multi-faceted impacts of mining activity on the forms of community capital.

**10.5.1 Environment and health impacts.** Emerald and Moranbah participants reported concerns for the health (human capital) of mining industry employees (commercial capital). Participants' concerns are not unwarranted as previous research has identified increased risk for health conditions in mining industry employees (Fernandez-Navarro et al., 2012). Mount Isa and Moranbah participants also reported health concerns (human capital) for the general community resulting from mining activity. Proximity to the mine site may be a contributing factor as Emerald participants reported perceived improved air quality (environmental capital) due to the distance between the mine sites and the

community. Concerns for the environmental impacts (environmental capital) mining activity has and the resultant health problems (human capital) was found in previous



*Figure 41.* Identified relationships between the forms of community capital within mining activity impacts.

research highlighting the relationship between mining activity and environmental pollution (Gamino-Gutierrez et al., 2013; Munoz et al., 2013; Schueler et al., 2011; Taylor & Hudson-Edwards, 2008; von Braun et al., 2002; Wasylycia-Leis et al., 2014; Zakrison et al., 2015), and the relationship between mining activity and health risks (Fernandez-Navarro et al., 2012; Gamino-Gutierrez et al., 2013; Hajkowicz et al., 2011; Hendryx et al., 2012; Munoz et al., 2013; von Braun et al., 2002; Wasylycia-Leis et al., 2014). Furthermore, a lack of perceived positive impacts from mining activity on environmental capital indicates that the participants did not perceive the mining industry (commercial capital) to counteract

its impact on environment (environmental capital). Therefore, mining companies and the industry as a whole need to take steps to address current environmental practices that may be insufficient. Additionally, further promotion of the steps taken by industry to protect the environment and residents' health would be beneficial for mining companies as it would ease residents' concerns.

**10.5.2 Education, economy and social cohesion impacts.** Population loss of those who did not want to be in the community was reported as a positive impact of mining activity however, most salient was the negative impacts of population loss. These negative impacts included decreased property values (commercial capital) and social network loss (social capital). Population gain was reported as a positive impact due to the perceived resultant increased services. However, Emerald participants also reported population gain as a negative impact as it introduced different groups of people into the community where shared norms of trust and reciprocity had not yet been established. As these results indicate and as noted by Epps (2002), population decline does not necessarily indicate non-sustainability. The problem for these mining communities was not a reduction in population but rather the transient population. Transient populations were perceived to have placed strain on services (human and public structural capital), decreased safety (human capital) and reduced social networks (social capital). Therefore, population decline in mining communities is a superficial indicator of what is really happening within these communities. A more useful indication of the effect population changes has on communities would be length of residency rather than total population growth or decline rates. Future research needs to consider assessing length of residency to indicate the level of transiency within mining communities and its effect on sustainability.

All communities reported increased economic stimulation as a perceived benefit resulting from mining activity. Mining activity was perceived to result in job creation within mining as well as other industries which aligns with previous research identifying positive associations between mining activity and employment (Hajkowitz et al., 2011; Kotey & Rolfe, 2014; Tonts et al., 2012). Additionally, Moranbah participants noted that due to the community's economic reliance (commercial capital) on mining activity, residents are better able to understand and support each other. This improved social support due to the mining industry within the community can assist residents in better adapting to

mining communities as participants reported social support as assisting them in remaining in the community. However, economic reliance (commercial capital) on the mining industry was negatively perceived as it was thought to introduce volatility within the community economy, employment (commercial capital) and population levels (human capital). Therefore, even though mining activity can provide communities with economic stimulus, reliance on this benefit can cause problems for community sustainability through the volatility of economic markets (Kotey & Rolfe, 2014; Shueler et al., 2011; Wasylycia-Leis et al., 2014).

Where there was a perceived high cost of living, this was reported as a result of the presence of mining. However, as noted, there were varying perceptions on what constituted satisfactory cost of living. The different perceptions of the cost of living supports the suggestion that the unequal distribution of wealth generated from mining activity leads to lower social wellbeing rather than just the presence of mining activity (Luong & Weinthal, 2006). This unequal distribution of wealth was particularly visible in Emerald participants' perceptions of greed in the mining industry. Participants from all communities also noted divisions between the "haves" and the "have nots", further indicating an unequal distribution of wealth. Similarly, participants reported "being owed" by the mining industry suggesting they perceived that they were not receiving the benefits they expected. Improving mining community residents perceptions of fairness is important for the mining industry to address as the more communities perceive that mining activity benefits are distributed fairly, the more likely they are to trust the mining industry (Moffat et al., 2017; Moffat et al., 2014). These improved perceptions could be facilitated through further efforts of the mining industry to distribute profits throughout the community and further communication and transparency of where and how profits are allocated.

Emerald and Moranbah participants reported divisions within their community between mining and non-mining industry employees, mining companies, workforce structures and union and non-union members. Previous research had also recognised increased conflict and decreased community cohesion resulting from the introduction of the mining industry or new mines (Bell, 2009; Schueler et al., 2011; Zakrison et al., 2015). These findings indicate that the mining industry as a whole needs to take further actions to integrate with mining communities to promote cohesiveness within the community and

therefore, sustainability. The next chapter discusses the likelihood of mining companies acting on these suggestions.

**10.5.2.1 Economic cycles.** Not only was economic stimulus reported to have a positive impact on community, but so were economic downturns. These positive impacts included decreased housing prices, cost of living and improved business customer service (all commercial capital). However, more salient than positive impacts of economic downturns were the negative impacts such as increased employment insecurity, reduced spending, decreased businesses and services, reduced housing prices, oversupply of housing, and uncertainty with economic markets or mine lifespans (all commercial capital). Participants also perceived population loss (human capital) resulting from downturns to reduce the available social groups and activities (social capital) in their communities. Additionally, Moranbah participants noted that downturns reduced the available health services (human capital). In addition to economic downturns, Emerald participants also noted that boom times have negative impacts on the community such as decreased availability of services (e.g. tradespeople) and increased cost of living (commercial capital). Previous research had also identified that both downturns and boom periods can be stressful for mining community residents due to financial hardships, uncertainty about the future and decreased services (Shandro et al., 2011). Therefore, the economic state of the mining industry can influence mining community wellbeing through influencing cost of living, businesses and services, employment, population, and social groups and activities.

**10.5.2.2 Workforce practices.** Of most concern for participants from all three communities was the mining industry's use of shift work and commute workforces (commercial capital) and the associated impacts of these practices, such as families being separated (social capital) and enforcement of residential location (human capital). Specifically, participants from all three communities reported that the mining industry's rosters interfere with residents' available time to participate in social activities (social capital). The mining industry's use of shift work can result in a decline of community organisations and a lack of community integration (Petkova et al., 2009) therefore implicating the mining industry in reducing community social cohesion. However, participants did note that the nature of the mining workplace allowed for the development of close ties between employees due to their working close with and looking out for each

other while on extended shifts. Even though the mining industry's use of shift work may reduce some social aspects (e.g. family separation and reduced ability to participate in social activities), the mining industry workplace may facilitate other social aspects (e.g. close ties between employees). In addition to the impacts from shift work, participants also perceived commute workforces to place strain on community services such as the hospital and emergency services (human capital) supporting previous findings of community residents' concern regarding the strain placed on local services, amenities and infrastructure (Carrington & Pereira, 2011). Participants did recognise the benefits of commute workforces such as providing skills (human capital) not available in the community, providing individuals with a choice of living situations and providing other industries (such as hospitality) increased income through supporting the influx of people in the community. Conversely, reductions in commute workforces were associated with increased trust (social capital) and sense of community (cultural capital), supporting previous research identifying disruption to the social aspects of communities due to the use of commute workforces or shift work (Carrington & Pereira, 2011; Hossain et al., 2013; Petkova et al., 2009). These findings indicate that workforce used within mining communities can have wide reaching impacts.

Emerald and Moranbah participants also noted increased workforce casualisation as a negative impact of changes in the mining industry. Workforce casualisation was perceived to occur to prevent employees being a part of the union. Emerald and Moranbah participants discussed the importance of unions in their communities for providing social opportunities (social capital). The union was reported to provide a common identity (cultural capital) for Emerald and Moranbah whereas Mount Isa participants did not mention the union indicating that the union plays a less important role in the community than in the other two communities. These results suggest that unions provide a shared identity for residents, or at least workers, in multi-company or multi-industry communities whereas communities with one company or mine have a shared identity based on that company. Therefore, unions have an important role to play in multi-company or multi-industry communities in terms of providing a shared identity that can facilitate cohesive and cooperative actions.

**10.5.3 Housing and services impacts.** Some of the impacts from mining activity are unavoidable, such as the uncertainty associated with economic markets or mine lifespans, but there are actions that the industry and government can take to minimise impacts on mining communities. Moranbah participants reported physical segregation within the community as mining companies housed employees within certain areas within the community. This physical segregation within the community exacerbates divisions between community groups. Explicit division can have implications for community sustainability in terms of reducing cohesive actions within the community. A community as a whole would need to experience the beneficial components of social capital for it to function cohesively (Putnam, 1993, 2000) and to promote its sustainability. However, as different groups within a community can experience varying components of social capital, it is important to bridge these groups so that they operate as a cohesive unit. Local government and industry have a role to play in this situation to ensure physical segregation based on employment is minimised to promote cohesiveness within communities.

Mount Isa and Emerald reported the mining industry's positive contribution to infrastructure (public structural capital) within their communities. However, participants from all communities reported a perceived lack of royalties received from the mining industry through the government. These reports highlight participants' perceptions of a lack of reciprocity (social capital) from the mining industry to the community. Indeed, Moranbah participants explicitly reported a lack of reciprocity from the mining industry to the community. This perceived lack of reciprocity indicates that social capital elements play a key role in residents' perceptions of industry and government.

**10.5.4 Summary.** The findings of the current project indicate that participants perceived mining activity had an overall negative impact on community. These impacts included: environment and health impacts; education, economy and social cohesion impacts; and housing and services impacts. The perceived wide spread impacts of mining activity suggest that a multi-faceted approach from both industry and government is needed to ensure the wellbeing and sustainability of mining communities. As noted within the previous sections, the social capital elements will play a key role in addressing the identified issues.

## **10.6 Did Residents Perceive the Social Capital Components to Promote Community Wellbeing?**

One of the project's research questions was do residents perceive the components of social capital to promote community wellbeing within mining communities? Participants often reported social capital components as contributing to their enjoyment of living within the community. Indeed, participants reported that their networks within the community acted as a strong pull factor in terms of their reported reasons to stay in the community. Participants noted that "I think the, people is the most important thing about this place and so I think it's the people that keep me here" (MI14), and "I think the nicest part about Emerald is the friendliness" (EM08). Even to the extent that an Emerald participant, who reported intentions to leave the community, reported their networks within the community as a reason that would make them consider remaining. These findings indicate that residents perceived their social networks and the norms of trust and reciprocity within these networks as facilitating adaptation to living in a mining community. Therefore, social capital elements need to be considered further in terms of building community sustainability.

In the literature, social capital is proposed to facilitate coordination and cooperation for the mutual benefit of those involved, thus increasing the productivity of investment in other forms of capital (Putnam, 1993, 2000). The results from this project support this suggestion. Participants would report instances where components of social capital improved other forms of capital (e.g., reciprocity encouraging residents to shop at community businesses). Therefore, industry, companies and government need to consider their relationships with communities as these relationships can enhance their commercial investments.

The perceived norms of trust and reciprocity, or cognitive social capital, were evident within participants' reports. The perceived norms of trust and reciprocity within a network are considered social capital (Stone, 2001) and not the outcome of these things (e.g., sense of community and resource gain). The networks between residents, and the associated norms of trust and reciprocity (social capital), in some instances provided the basis for a perceived sense of community (cultural capital). However, using perceptions of a sense of community does not necessarily indicate social capital. For example, in other

instances, a perceived sense of community was based on the industry (commercial capital) in the community or the geographical location (environmental capital) of the community. These findings therefore highlight the limitation in using a sense of community as an indicator for social capital. Additionally, these findings highlight the usefulness of cultural capital in separating the outcomes of social capital from the indicators of social capital within a community context, which addresses the concerns within the social capital literature regarding the use of outcomes of social capital as indicators (Fine, 2001; Portes, 2000; Stone, 2001; Winter, 2000). Cultural capital is the factors that provide a community with a sense of identity (Callaghan & Colton, 2008; Throsby, 1999), whereas social capital is the relationships based on trust and reciprocity (Stone, 2001). Therefore, these results justify the definition of social capital used in this project which further clarifies the discrepancies with social capital being a process or an outcome.

Operationalising social capital as the networks characterised by trust and reciprocity allowed for the negative outcomes of these relationships to be identified. Participants identified instances where a lack of trust and reciprocity between groups inhibited ‘outsiders’ from being a part of particular groups. For mining communities specifically, relationships characterised by a lack of trust and reciprocity between the community and industry meant many participants reported that the mining industry detracted from community wellbeing. Therefore, these findings also highlight the usefulness of operationalising social capital as the networks characterised by trust and reciprocity, which addressed the concerns within the social capital literature regarding the tautology of using positive or pro-social outcomes to indicate social capital (Fine, 2001; Portes, 2000; Stone, 2001; Winter, 2000).

### **10.7 What made People Stay?**

Reasons to stay often referred to participants’ connection to people or to the community. Participants also reported basic needs as the minimum standard of expected services (such as a hospital and schools) that enhance suitability to live and stay within a community. Increasing lengths of residency within mining communities may be achieved through programs that target increasing individuals’ perceptions of basic needs and connection to people and place. Reasons to leave often referred to more pragmatic factors

such as availability of services, employment and economic factors. Additionally, social factors reported as caring for family or family factors, lifestyle factors and a self-imposed time limit were noted as reasons to leave for another community. Therefore, lessening the perceived impact of these reported reasons behind residents' intentions to leave may help to increase length of residency. For example, reducing the perceived difficulty in visiting family outside of the community could reduce residents' intentions to leave. Additionally, changing residents' perceptions of the community's lifestyle through promoting the positive lifestyle aspects of the community could also reduce residents' intentions to leave by improving their satisfaction and enjoyment of the community. Increasing intentions to stay and reducing intentions to leave could aid in increasing lengths of residency and therefore improve mining community sustainability.

One of the project's research questions was how do residents adapt to the challenges of living within their communities? In terms of the strategies participants employed to assist them in remaining in the community, most participants discussed acceptance and social support, both emotional and instrumental, as being useful. The reports of accepting the community for what it is again highlights the importance of matching residents' expectations with the reality of life within the community. Encouraging and facilitating residents' acceptance of the community could increase residents' ability to adapt to the community, therefore improving community sustainability. For example, residents who demonstrate acceptance towards the community may be more likely to remain in the community. Additionally, social support received from friends and family again highlights the importance of networks based on trust and reciprocity (Stone, 2001). The emotional and instrumental support available to residents would not otherwise have been possible without these networks. Therefore, social capital is an important asset to increase residents' ability to adapt to living in a mining community.

## **10.8 Conclusion**

The results of this project indicated that the reported factors that influence general community wellbeing reflected the six forms of community capital and highlighted the interconnected relationships between the forms of community capital. Social capital components played a key role in resident's perceptions of the community's wellbeing.

Furthermore, mining activity was perceived to have various impacts on mining communities. Although participants reported positive impacts, participants more consistently identified negative impacts on community wellbeing from mining activity. Again, social capital components were recognised as playing a key role in residents' perceptions of the mining industry and the negative impacts of mining activity. Due to these reports of social capital components being a key determinant of community wellbeing, these factors need to be considered within sustainable community development approaches. The following chapter further discusses the implications for sustainable community development and outline recommendations for future research.

## Chapter 11: Implications and Recommendations

This chapter explores the factors that contribute to community wellbeing and sustainability, and the practical implications of these findings. Recommendations are made for future directions for policy and program development to promote sustainable community development.

### 11.1 Community Sustainability

The results from this project indicated that the six forms of community capital, as suggested by Callaghan and Colton (2008), need to be considered to achieve sustainable community development. Participants reported positive community wellbeing when they perceived there to be trusting and reciprocal relationships between residents and groups within the community (e.g., government and industry); adequate health services; active residents; quality education services; a stable population; adequate businesses and services; affordable and available housing; employment opportunities; reasonable cost of living; temperate weather; adequate infrastructure and public space (e.g.: roads, water systems and parks); and a sense of community. As participants perceived many factors to influence community wellbeing, all these factors and the relationships between them need to be considered for sustainable community development. Addressing only a select number of factors, for example, just addressing employment opportunities within a community, ignores the many other factors influencing community wellbeing therefore hindering sustainability. Sustainable community development can be achieved through a holistic approach to the community. The community capital framework (Callaghan & Colton, 2008) used within this project can be applied as a tool to identify the facets of the community that need to be measured to assess community sustainability and inform sustainable community development. The application of the community capital framework can ensure the inclusion of indicators for all the forms of community capital. Future research and community development needs to approach community sustainability from a holistic point of view.

As Lubbers and Koorevaar (1999) noted, an expansive approach considering the many factors involved in a community needs to be taken in terms of community sustainability. In doing so, the differences within individual communities need to be

investigated and understood. As suggested by previous researchers, consideration needs to be taken of the actions required at the local level that contribute to or hinder sustainability (Callaghan & Colton, 2008; Epps, 2002; Lubbers & Koorevaar, 1999). The results from this project have also highlighted the importance of considering the specific community to understand community wellbeing from the residents' point of view. As outlined in Chapter 10, there were differences between the communities reflecting the different histories and nature of mining activity within the communities (e.g., the introduction of mining activity in Emerald compared to the reliance on mining in Moranbah). These differences ultimately suggest that sustainable community development will need to be approached differently within the communities. For example, consideration of the sustainability of both the agricultural and mining industries will be needed in Emerald. Conversely, the mining industry in Moranbah will be of greater focus due to residents' perceived reliance on the industry. Additionally, this perceived reliance also indicates that sustainability efforts could focus on diversifying Moranbah's economy. Further research needs to investigate other types of communities (e.g., agricultural communities) to identify if the interconnectedness between community capital is evident within different community contexts. This future research could further explore the applicability of the community capital framework within other contexts.

Participants' reported adaptation strategies could provide useful individual level actions to improve community wellbeing and sustainability. Concern was reported regarding new residents' ability to adapt to living in the communities due to a lack of social networks. To combat this lack of networks, employers can screen employees who are new to the community who may be at risk of not adapting based on satisfaction with and attachment to community. Employers can then provide further support for new employees to improve employees' adaptation to the community. Some companies could achieve this improved adaptation through a community liaison, or where this is already in place, improve the effectiveness of liaison roles. The community liaison could provide new employees who are also new to the community with information regarding the available services and activities within the community. Information packs for new residents were reported as being available within Moranbah however, residents needed to seek out this

information. Making community information easily accessible so that residents or employees do not need to seek it will facilitate community satisfaction and attachment.

The community liaison could also facilitate informal networks between new employees and existing employees as well as other members of the community. Some companies could also facilitate networks within the workplace through the use of a 'buddy' system where new employees can develop close ties with others. Unions could also play an important role in facilitating the development of networks for employees in new communities through social events. It is important to note that while these recommendations are relevant to the mining industry, other industries could also benefit from the suggested strategies. For example, education and health industries may also benefit from introducing these strategies or further promoting these strategies where they may already exist. In doing so, new residents may be able to better adapt to life in a mining community and as a result be able to remain longer in the community, which in turn can reduce population and employee turnover.

Local government can also target new residents and promote the strategies that were reported to help residents adjust to the community. For example, providing new residents with information regarding effective problem-focused strategies may facilitate adaptation to the community. These effective problem-focused strategies will differ for individual communities depending on the challenges residents face within the community. For example, Mount Isa participants were particularly concerned about the community's water restrictions. Therefore, Mount Isa residents would benefit from the sharing of effective strategies to cope with water restrictions. Additionally, community media have a role to play in community sustainability. The results indicated that some participants disengage with media to avoid negative information. Community media needs to promote more positive stories within the community or at least provide actions for residents to take when there is a negative story. For example, water saving strategies could accompany news stories concerning the drought. These suggestions for local government and community media can aid residents' adaptation to community and facilitate longer lengths of residency therefore improving community wellbeing and sustainability.

State and federal level government can also facilitate residents' adaptation to community. Participants reported outreach schemes and travel rebates as increasing their

access to healthcare services. As these programs are already in place, the issue may be that not all residents are aware of what is available for them. Greater awareness of the currently available programs for rural and remote communities can improve residents' perceptions of the community's wellbeing. Indeed, some airline companies and airports have recognised the increased travel costs for regional Queensland mining communities and offer residents a discount on flights (Qantas Airways, n.d.). Additionally, local, state and federal government need to work with communities that are reliant on a single industry to support the establishment of other industries. These suggestions can facilitate residents' adaptation to community and facilitate longer lengths of residency therefore improving community wellbeing and sustainability. Incorporating residents' perceptions into sustainability strategies can ensure that effective sustainability strategies are initiated that are supported by communities.

## **11.2 The Mining Industry and Community Sustainability**

The results from this project indicate that the mining industry and mining activity can have many impacts on nearby communities. Within the mining activity impacts results chapter, there were some forms of capital without an identified relationship. However, there was an identified relationship between each form of capital within the general community wellbeing results chapter. Given this, both sets of community capital relationships need to be considered when addressing sustainable community development. The general community factors reported to impact community wellbeing do not operate in isolation from the mining activity impacts. For example, there was no identified relationship between environmental and social capital within mining activity impacts however, there was an identified relationship within general community wellbeing. Given these relationships, mining activity impacts on environmental capital could feasibly still influence social capital or vice versa. Therefore, when addressing either mining activity or general community impacts on community wellbeing, all forms of community capital need to be considered.

Underlying many participants' reports of mining activity's impact was a lack of trust and reciprocity between the community and the mining industry. Given these results, mining companies and the industry as a whole need to consider how the community

perceives them to improve community relations. Building trusting and reciprocal relationships with community involves genuine engagement. Participants' reports reflected a want of genuine involvement on the part of the mining industry and this involves more than just providing money or funding to the community. Residents want to feel that the mining companies care about the community for more than just the profit the company receives. This perception of genuine engagement could be facilitated through community information or involvement events. These events could provide unsure residents with further information regarding the history of mining companies and the industry as well as the practices of the industry within the community. In doing so, residents can be exposed to the industry's attachment to their community.

However, participants also reported not believing information disseminated from the mining industry. Given this finding, participants may be unlikely to believe information communicated from the mining industry at one of these community information or involvement events. Therefore, mining companies and the industry as a whole need to first establish themselves as trustworthy. A certain level of uncertainty is involved with the mining industry due to its reliance on global economic markets. Mining companies need to acknowledge this uncertainty rather than making certain claims regarding, for example, mine lifespans. Trust is inhibited if mining community residents perceive that mining companies do not fulfil these claims. Therefore, mining companies need to ensure that they present the community with realistic claims of the benefits and disadvantages that mining activity can bring to the community, and how these disadvantages may be avoided or at least minimised.

These suggestions for mining companies and the mining industry may help communities achieve what they perceive they want however, community wants tend to be at odds with the targets of multi-national mining companies. Many mining companies will forego establishing trusting and reciprocal relationships for increased profits. Furthermore, as presented in Chapter 4, the current government is one that supports and facilitates mining companies' operation within Australia (ABC News, 2014; ATO, 2016). Given the previous literature and current findings of the impact that mining activity can have on communities, government need to take further action to minimise the harms experienced within mining communities. This sentiment is reflected in one participants' remark:

Who is the government for? Are they representing the companies or are they representing us Australians as families?... They actually need to say ‘hang on...we need to put something in place here for the health of our nation, for the health of our communities.’ It’s not just about money...and it can’t be. (MO04)

Mining companies are unlikely to take steps to establish trusting and reciprocal relationships unless there is a clear benefit to doing so and/or disadvantage for not taking action. It is in this area that government need to take steps to enforce mining companies’ and the industry’s accountability to communities.

Another area where government can facilitate mining community wellbeing is through the moderation of economic cycles. The experience of cycles within the mining industry was reported to create uncertainty among residents within the community. These results indicate that community wellbeing would be facilitated through moderating the impacts of both economic booms and downturns. Policy changes could address this issue by ensuring increases and decreases in mining activity are moderated to avoid the impact of sudden increases or decreases. For example, policy that encourages other industries within mining communities could help buffer the effect of the mining economic cycles.

Many participants also reported concern regarding the use of commute workforces. After the interviews for this project were conducted, the Queensland government banned the mining industry’s use of 100 percent commute workforces (Dick, 2018; Lynch, 2018). This ruling will have implications for Moranbah where there was a 100 percent commute workforce mine site. However, this ruling should not have much of an impact of Mount Isa or Emerald. Yet, participants from Mount Isa and Emerald still reported concerns regarding the use of commute workforces. These findings indicate that any use of commute workforces causes concern for residents. One of concerns participants held regarding commute workforces was their lack of contribution to the community. This perception could be moderated through companies encouraging employee engagement within mining communities. This engagement could be achieved through encouraging the development of company groups within the community (e.g., sporting groups). In doing so, mining community residents have a chance to see employees contributing to the community and as a result, may express less resentment towards commute workforces. However, given the

rosters of commute workforces, this may not be feasible. Mining companies may then need to rethink the use of mining camps where employees are completely segregated from the community. Explicit division can have implications for community sustainability in terms of reducing cohesive actions within the community. A community as a whole would need to experience the beneficial components of social capital for it to function cohesively (Putnam, 1993, 2000). Therefore, both mining communities and mining companies may benefit from further integration of mining industry employees.

Even though the mining industry is a large user of commute workforces, this issue is not isolated to the mining industry. Concerns were raised regarding the use of commute healthcare workforces as well. Although banning the mining industry's use of complete commute workforces is a step in the right direction regarding community wellbeing, further attempts still need to be made to address community concerns. For example, implementing further continuity of care plans for residents where commute healthcare workforces are used. Additionally, establishing a health professional as a resident within the community that residents have consistent interactions with and that can coordinate care may improve perceptions of the community's available healthcare. A consistent person that residents interact with can help facilitate trust in the care and services they are receiving.

### **11.3 Social Capital and Community Sustainability**

As the results suggested, social capital plays a key role in community sustainability. In particular, the project's results provide clarification around the use of social capital specifically in regards to relationships based on trust and reciprocity. Social capital's role was identified within this project as enhancing other forms of community capital as well as influencing participants' intentions to stay and leave. Trusting and reciprocal relationships within the community can improve residents' satisfaction and attachment to community. Increased satisfaction and attachment to community can inform residents' intentions to stay and in turn, aid community sustainability. Given these findings, social capital needs to be a key consideration in sustainable community development.

As highlighted in Chapter 3, cognitive social capital may facilitate coordination and cooperation within a group where the members adhere to the group's norms (Tsai & Ghoshal, 1998). Providing something for residents to identify with to create a large group

can assist cognitive social capital. Within a community context, a shared identity can provide norms for the whole of the community facilitating coordination and cooperation. That is, a community's cultural capital can facilitate the community's social capital. Participants from this project reported that a shared community identity increased their enjoyment of and satisfaction within the communities. Local government can improve community coordination and cooperation by investigating what residents perceive as being their community's identity. Once this identity is identified and understood, steps can be taken to promote the community's identity to prospective residents as well as current residents to facilitate expectations that reflect the practical and physical limitations of the community.

Additionally, encouraging social adaptation strategies can also improve residents' perceptions of the community. Emotional and instrumental support can be facilitated through community groups either physically or online. Engaging people with the community does not only mean physically socialising and being involved with 'traditional' community groups. Virtual community groups, such as online pages/groups, can also facilitate engagement with community. Participants from this project reported that online community activity facilitated perceptions of reciprocity or the community coming together and helping each other. Given these results, community groups may be able to access more residents through online platforms. Increased online presence of community groups may help facilitate the formation and maintenance of both social and cultural capital.

#### **11.4 Limitations**

One limitation encountered within this project is a function of the difficulty in recruitment. Problems with recruitment had been identified as a possible problem at the start of the project and strategies were devised in case problems were encountered. Nevertheless, participant recruitment was particularly difficult in Moranbah. Difficulty in recruiting participants may have been exacerbated due the community receiving negative media reports shortly before recruitment started. These reports painted the community as being an unpleasant place to live (as seen in Coulthart, 2016). These negative reports from people outside of the community could have resulted in residents' decreased trust in non-residents. Consequently, residents may have been less willing to participate in research

being conducted by a non-resident. In future, further attempts should be made to have a community liaison person that can facilitate community and researcher relationships. By doing so, participants could be more willing to contribute to research conducted by an 'outsider'.

A gender imbalance was present within this sample of mining community residents. Although no overt differences were identified between male and female responses, some experiences may not have been captured within the data. However, the point of this research was not to understand the individual's experience of living within a particular mining community rather than to understand the experience of all residents. As noted within the method chapter, the methodology of the project involved exploring the individual subjective perception of their experience rather than providing an objective statement of the experience itself (J. A. Smith & Osborn, 2008). Further research should investigate the individuals' experiences on a more wide scale and with different methodologies to address the gender imbalance within the current project. Furthermore, this future research would also assist in identifying if the experiences reported in this project are applicable across the genders.

Care needs to be taken when generalising these results to other communities. Although there were similarities within participants' reports between the communities, there were enough differences between them to constrain generalisability. However, in some cases, these differences may be generalisable to other communities. For example, Mount Isa participants' concerns regarding the geographical isolation of the community could apply to other communities with similar geographical constraints. Emerald participants' concerns regarding the 'invasion' of an industry could apply to other communities where an industry is introduced to an already established community. Moranbah participants' concerns referring to their reliance on a volatile industry could apply to other communities that rely on a single volatile industry. What the issue of generalisability also highlights is that all communities are different. To understand the factors at play for each community, a community-specific approach needs to be taken. Even though these results highlight the relationships at play and factors to be wary of, they do not act as a blanket rule for community sustainability.

## 11.5 Conclusion

This project has identified the intertwined relationships that exist within and between the forms of community capital within mining communities. These relationships are important to consider when exploring community wellbeing and sustainability. The adapted community capital model developed within this project allows for greater representation and identification of the multi-directional and interdependent relationships between the forms of community capital. Using the community capital framework within other communities can identify what areas of the community need to be addressed and can inform sustainable community development to achieve a sustainable and resilient community. Therefore, the implications of this project can extend to sustainable community development within regional Australia. Using the community capital framework can allow for effective strategies to enhance sustainability that are supported and accepted by communities. Sustainable community development and therefore community wellbeing requires the consideration of all the forms of community capital. Ignoring one form of community capital is perilous to community resilience.

Facilitating residents' expectations that reflect the practical and physical limitations of rural and remote mining communities can improve their experience of the community, therefore improving community wellbeing and sustainability. The mining industry also needs to consider further engagement within mining communities to facilitate residents' positive perceptions of the industry and the community. In doing so, mining community residents may express less resentment and more positive perceptions towards mining activity being in their community. However, mining community reliance on the mining industry makes these communities vulnerable to changes within the industry. Therefore, though better relationships need to be built between the mining industry and mining communities, community concerns regarding their dependency and vulnerability also need to be addressed by encouraging the development of other industries within these communities. Building trusting and reciprocal relationships between community and industry is central to ensuring sustainable and resilient communities.

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## Appendix A



### INFORMATION SHEET

**PROJECT TITLE: Concerns of mining communities**

You are invited to take part in a research project about attitudes towards living within a mining community. The study is being conducted by James Cook University student Katerina Kanakis and will contribute to the degree in Doctorate of Philosophy (Psychology) at James Cook University.

If you agree to be involved in the study, you will be invited to participate in either a focus group or a one-on-one interview. The focus group or interview, with your consent (and others in the focus group), will be audio-taped, and should take approximately 1 hour of your time. The interview will be conducted at a venue of your choice or over the phone.

Taking part in this study is completely voluntary and you can stop taking part in the study at any time without explanation or prejudice.

At the beginning of the focus group the researcher will ask participants to respect the confidentiality of the group, however the maintenance of confidence by other group members cannot be guaranteed.

If you know of others that might be interested in this study, can you please pass on the contact details provided on this information sheet so they may contact one of the investigators to volunteer for this [study](#).

Your responses and contact details will be strictly confidential. The data from this study may be used in research publications and presentations. You will not be identified in any way in these publications.

If you have any questions about the study, please contact Katerina Kanakis or Dr Connar McShane.

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*If you have any concerns regarding the ethical conduct of the study, please contact:*  
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**Appendix B**

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**Appendix C**

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## Appendix D

### Demographics

**Before we start, we would like you to tell us some general things about yourself.**

- What is your age in years? \_\_\_\_\_
- What is your gender? (*please circle*)            Male            Female
- What is your relationship status?

Single    Married    De Facto    In a relationship    Divorce    Separated    Widowed

- What is your occupation? \_\_\_\_\_
- How long have you lived in this community? \_\_\_\_\_
- On the scale below, how would you describe your general health?

Very Poor                      Poor                      Fair                      Good                      Very Good

- Do you belong to any community organisations?            Yes            No
  - If yes, which ones?

\_\_\_\_\_

## Appendix E

### Perceived Community Wellbeing

Participants were asked “How would you describe the well-being of the community?” The following sections provide an overview of Mount Isa, Emerald and Moranbah participants’ perceptions of community wellbeing.

**Mount Isa.** While Mount Isa participants reported positive, ambivalent and negative perceptions, most participants reported positive perceptions of overall community wellbeing.

**Positive.** Many participants reported that as a whole, “...the wellbeing of the community here is...extremely healthy” (MI02) or “...the whole of the community’s pretty good” (MI03). Both the mine and the community’s perceived longevity were reported as contributing to the community’s positive wellbeing. As one participant noted “...because it’s lasted so long...I mean the history [speaks] for itself that the town has been resilient” (MI13). Some participants reported a sense of reassurance in the community’s permanency due to the mining company investing in the community, with one participant noting that “they wouldn’t have spent 20 million dollars on this thing to shut it down three years later you know, think about it folks” (MI10), and another participant stating:

I was always under the impression that they wouldn’t buy a dud. They know more than what we know, so they wouldn’t be spending multi millions of dollars on purchasing assets if it was gonna go kaput in two years. (MI05)

Some participants reported improvements with the quality of life within the community. One participant stated:

...I came here in 1963 when it was fairly harsh conditions then, but in more recent times the conditions and the facilities here, housing, education, health...are in my opinion equal to, even better than many communities...of equal size. (MI02)

There was also a perception that the residents were responsible for the improvements in the quality of life that the community has experienced as highlighted by a participant’s report

that "...I think that we are, I wouldn't say fortunate but we've worked hard to secure the city which we have today" (MI02).

**Ambivalent.** Some participants reported either mixed or neutral perceptions of community wellbeing as highlighted by one participant's report about community wellbeing when stating that "I would say maybe in the middle" (MI04). Participants described groups within the community that had good wellbeing when stating "...if I speak for the part of the community that we're engaged in...the wellbeing of people here seems pretty, pretty good" (MI12), and also other groups with poor wellbeing when one participant stated "...as a whole, if you remove...that group, I guess the rest of the community is much like any other community" (MI19).

Furthermore, some participants perceived the quality of life within the community to have improved but that there were still areas that could be further enhanced. Participants stated that "...it has gotten easier over the years because...well we're supposed to have clean water" (MI03), and "...it would be a bit better if we could have some other options here like other shops, other cafes, everything like that but it has come further in the few years than it has in the past 20" (MI18).

**Negative.** Some participants perceived the community's wellbeing to be "...closer to poor" (MI09), and "I think it's quite poor" (MI19). Participants suggested grassroots approaches to improve overall community wellbeing. One participant stated "...I don't take the view that big cheques secure and solve all your problems" (MI02). Similarly, some participants reported that "...sometimes it's a pain when outsiders come and say you've got to do this. Well it might work in Brisbane but it don't work out here mate" (MI03). Additionally, participants reported that the media's focus upon negative aspects of the community negatively influenced resident's perceptions of the community. As one participant stated "...I mean to, to sell newspaper you look at the doom and gloom and disaster and everything. It's very, very seldom that you get a good news story on the front page of the paper, the local paper" (MI15).

**Emerald.** Participants reported positive, neutral and resilient perceptions of community wellbeing. Most participants reported ambivalent perceptions of overall community wellbeing. Though participants did not explicitly state that the wellbeing of the community was negative, one participant noted that community members were not happy.

This participant stated that "...the happiness at present in the community is probably a bit of the doldrums" (EM01).

**Positive.** Some participants reported that they perceived community wellbeing to be "relatively positive" (EM07) or that "most people are happy" (EM05). Another participant noted that "...I think people are generally happy...there's no one really living here because they have to live here...there's no one that's sort of stuck here I wouldn't think, so in that respect I think people are happy" (EM09). Additionally, one participant reported that community wellbeing was good in comparison to nearby communities that are experiencing drought when stating that "...I think our wellbeing is fairly good compared to, when you compare it to [other communities], where the drought affects everyone" (EM02).

**Ambivalent.** Most participants reported neutral or mixed perceptions of community wellbeing. Participants noted neutral perceptions of community wellbeing when stating that "on a scale of ten, 'bout five thousand of the population have left which is fine...Emerald's sitting at about five out of ten. It's not good but it takes time" (EM03), and another participant noting "I would think they'd be middle of the road they'd have to be, I think definitely" (EM08). One participant noted that there were differences in wellbeing between groups within the community when stating that "I'd say reasonable [community wellbeing]. It just depends on what you're looking at, like who you're looking at" (EM10). Another participant stated that groups within the community go through different cycles of wellbeing. This participant noted that "I guess it goes in stages doesn't it?...sometimes farmers are happy, sometimes they're not. Sometimes the miners are happy and sometimes they're not" (EM06).

Many participants reported that the community had been experiencing changes. Participants noted that "I know Emerald the way it was...it's got a whole evolution still to go and it's gonna go through some massive changes" (EM10), and another participant stated "we feel like we're in a good community but...it's going through really tough times at the moment" (EM06). Another participant stated that:

[Community wellbeing is] going back to normal. Some people that have lived here forever go 'oh we're just going back to what we were, like before the boom'...because it was really ridiculous, what was happening in our community

was ridiculous....maybe we're just going slightly under what we...normally were.  
(EM08)

**Resilient.** Participants reported that the community will “turn around” (EM09). For example, one participant stated that “I believe it’ll turn around especially...here at some point it’s gonna turn around and...the life will come back into the community. It’s not that it’s missing but it’s just...it’ll be, more people will come back” (EM07). The same participant stated that the community was resilient because residents had lived in the community for a long time. The participant reported that “...the town’s been here a long time and...there’s...enough people that have been here for a long time to create a tight knit community, that can work through stuff” (EM07).

Participants also reported that the rurality of the community contributed to the community’s resilience. Participants stated that “I think [what makes residents resilient is] the country spirit and I think people that are mining people are still country people” (EM08), and another participant reported that “...most people off the land are fairly genuine, fairly good natured...they’ve had...their knocks in life and they’re fairly resilient” (EM06).

One participant recognised that there is no easy way to improve community wellbeing stating that “there’s no silver bullet” (EM09). Furthermore, one participant reported that what had happened to the community was the result of people outside of the community. The participant noted that “...these people who come in and go boom, boom, boom, I go ‘yeah...good on ya mate’. That’s all I say...but understand that, it’s, what’s happened in Emerald, it’s done by other people” (EM03).

**Moranbah.** Participants reported positive, resilient and negative perceptions of community wellbeing. Most participants reported positive perceptions of overall community wellbeing.

**Positive.** Some participants reported that they perceived community wellbeing to be “...pretty good” (MO02), and that the community was “...a very positive place to live” (MO06). Another participant noted that “...the experience here has been...well really quite, a pleasant one” (MO04).

**Resilient.** One participant reported that the community was resilient because it was a mining community stating that:

...mining communities I think that...they are pretty resilient...so, still look to the future yes there's still a place for...our communities to grow...and I think we do just keep moving forward, I think it's a great town for that...things aren't great in the mining industry but we just keep kind of plugging away. (MO06)

**Negative.** Some participants reported concern for the community's wellbeing due to perceived uncertainty in the community. One participant noted that "I think right now it's still really unsettled" (MO01). Another participant also stated that "I probably would say yes I do have worries for the wellbeing of our community...I have worries for...maybe the long term wellbeing of our community...and what I worry for is...uncertainty" (MO06). This same participant also noted that people not from the community hold negative perceptions of it stating that:

...a lot of people are so harsh...on Moranbah... 'it's a shit hole, why would you want to live there?', and I think 'well why would you want to live anywhere?'...I don't care where anybody lives like if you're happy where you live, that's great but people are so negative to the town...and just people that choose to live here...it is surprising to me every day because...it's still ongoing...with the fly-in, fly-out debate, about, choice...so much negativity came back to us even about that saying... 'why? No one wants to live there.'...and that's tough to hear when you're hearing about a community that you're part of...and you love that...there's just so much negativity about it. (MO06)