

Australian Government

Department of Transport and Regional Services Bureau of Transport and Regional Economics



Focus on Regions No. 4 Social Capital

Information Paper 55

Bureau of Transport and Regional Economics

INFORMATION PAPER

FOCUS ON REGIONS NO. 4: SOCIAL CAPITAL

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ISSN	1440-9585
ISBN	1-877081-94-9

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Printed by the Department of Transport and Regional Services

FOREWORD

This information paper is the fourth in the BTRE's *Focus on Regions* series. The paper presents and explores statistical information relating to social capital in Australia and its regions. It also explores the relationship between social capital and the economic and social wellbeing of Australia's regions.

The *Focus on Regions* information paper series forms part of the BTRE's regional research program, which aims to improve the understanding of the economic and social factors affecting Australia's regions. This paper accompanies previous releases in this series, which address issues relating to *Industry structure, Taxable income* and *Education, skills and qualifications* in regional Australia.

This project was undertaken by Leanne Johnson, Ibi Losoncz, Christopher Williams and Jacqui Childs, under the general supervision of Judith Winternitz, former Deputy Executive Director.

Phil Potterton Executive Director

Bureau of Transport and Regional Economics (BTRE) Canberra November 2005

ACKNOWLEDGMENTS

The authors would like to acknowledge the cooperation of the Australian Government Department of Family and Community Services (FACS) and the Melbourne Institute of Applied Economic and Social Research in making available the HILDA unit record file for the purposes of this research project.

The authors would also like to recognise the important contribution the Australian Bureau of Statistics (ABS) have made by their development of the social capital framework which forms the conceptual basis of the BTRE's study. The ABS also made available a range of unpublished data from the *General Social Survey* and other collections.

Valuable feedback on earlier drafts was provided by several ABS and FACS staff, and by discussants at the 2004 ANZRSAI Conference in Wollongong and an internal DOTARS seminar.

Thankyou also to Godfrey Lubulwa and Lucy Williams for assistance with this project.

AT A GLANCE

- Social capital is defined as 'networks, together with the shared norms, values and understandings that facilitate cooperation within or among groups'. Social capital theory proposes that social networks and norms play a role in influencing the social and economic development of communities.
- Australia is relatively well endowed with social capital, experiencing high rates of volunteering and civic involvement in comparison to most developed countries. Some elements of social capital appear to be declining in Australia (e.g. trust, church attendance), while other elements are stable or increasing.
- Social capital is rarely uniformly high or low in Australian communities, with most regions displaying strengths *and* weaknesses in terms of the social capital indicators.
- Where a person lives has a significant influence on the social capital resources that are available to them. Aspects of social capital relating to community connections and financial support vary considerably across Australia's regions. Other important aspects of social capital – such as satisfaction with family relationships and the availability of emotional support – are not particularly dependent on place of residence.
- The most important geographic influence on the social capital indicators is the size of the urban centre in which a person lives. Remoteness and State/Territory of residence also have a significant influence on several of the social capital indicators.
- The paper proposes two summary measures of social capital for Australia's regions. Community involvement is measured using indicators of volunteering, active membership, neighbours helping each other out, and integration into the community. General support is measured using indicators of feelings of loneliness, health barriers to social participation, the availability of emotional support, and financial support.
- Individuals who live in rural areas and small towns display very high levels of community involvement. The major metropolitan centres display relatively low community involvement. Community involvement is similar to the national average for urban centres with populations of between 20000 and 1 million.
- There is a relatively low level of general support in some of Australia's more remote regions. The capital cities contain a mix of regions with high and low general support.
- While the evidence regarding social capital's effects is most convincing at the scale of the individual, the international literature also provides evidence that social capital is associated with improved health, education and life satisfaction outcomes and reduced crime and disadvantage at the regional scale. The causality of such relationships has not been clearly established.
- The international literature provides mixed evidence as to whether a relationship exists between social capital and regional economic growth. In the Australian context, a region's recent economic growth rate is *not* significantly associated with any of the core elements of social capital.
- BTRE has developed a *Social Capital Indicators Database* for Australia's regions in 2001–02, which is freely available from <www.btre.gov.au>.

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EXECUTIVE SUMMARY

Social capital is a resource that is inherent in relationships and networks, and can potentially be used by individuals and communities to achieve social and economic outcomes. While there is no universally accepted definition of what constitutes social capital, this study adopts the Organisation for Economic Cooperation and Development (OECD) and Australian Bureau of Statistics (ABS) definition:

'networks, together with shared norms, values and understandings that facilitate cooperation within or among groups'

This report examines social capital from a regional perspective. It aims to:

- Clarify the concept of social capital and its relevance to Australia's regions;
- Investigate the inter-relationships which exist between the various elements of social capital;
- Measure key elements of social capital at a regional scale;
- Analyse the spatial dimensions of social capital in Australia; and
- Explore the extent to which social capital is related to particular aspects of the economic and social wellbeing of Australia's regions.

Social capital and regional development

Social capital theory proposes that social networks and norms have a role to play in influencing the social and economic development of communities, and that social capital is one type of productive resource that regions can use as a basis for their development (alongside human capital, environmental capital and produced economic capital). The process of regional development also has the potential to generate networks based on trust and shared values.

Government initiatives to enhance social capital are already in place in selected communities and there is a growing awareness of the potential relevance of social capital to a wide range of social objectives. However, devising large scale

policies to create social capital is problematic because of our limited understanding of the concept of social capital, how to measure it, and the way different policies interact with it. While the concept of social capital does not offer easy solutions for the development of lagging regions, it does encourage a focus on the resources and capacities of communities, and gives prominence to locally based development solutions.

Measuring social capital in Australia's regions

Researchers have used a number of different approaches to measure and analyse social capital, with the method adopted in each case being dependent on the objectives of the research, how social capital is conceptualised and available resources.

The BTRE has adopted the ABS Framework for Social Capital (ABS 2004a) as the underlying conceptual basis for this study of the spatial dimensions of social capital in Australia. A set of 33 social capital indicators has been selected which measure many of the key elements of social capital and for which regional (i.e. sub-state) data are currently available on a consistent, nationwide basis. The suite of indicators provides a point-in-time snapshot of key social capital dimensions for 2001–02. It draws on several data sources, the most important of which are FACS' HILDA survey and the ABS' *General Social Survey* and *Census of Population and Housing*. The indicators cover a range of different aspects of social capital, including feelings of safety, volunteering, donations, neighbourhood reciprocity, frequency and mode of social contact, ability to obtain support, and satisfaction with family relationships.

The adopted methodology consists of a review of the empirical literature, coupled with a quantitative analysis of this set of social capital indicators. One of the strengths of the methodology is that it reflects the complex and multidimensional nature of social capital and contains a mix of subjective and objective measures. A further strength is that the spatial analysis is undertaken at various scales, including States and Territories, national and state remoteness classes, urban centre size categories and BTRE defined regions. However, the methodology is also subject to several limitations, relating to the limited degree of regional disaggregation, a lack of time-series information and less than comprehensive coverage of the elements of social capital.

Social capital is rarely uniformly high or low in Australian communities, and instead tends to display a more complex, multidimensional pattern. Whether the focus is on the social capital resources of individuals or regions, the available evidence does not support the use a single indicator (such as generalised trust or volunteering) to measure social capital. It is more appropriate to think about composite measures of key dimensions of social capital, rather than an overall summary measure. Two such composite measures were identified at the regional scale, representing the key dimensions of 'community involvement' and 'general support'.

Results for Australia and its regions

In the international context, Australia seems to be relatively well endowed with social capital, experiencing high rates of volunteering and civic involvement. However, some elements of social capital do appear to be declining in Australia — such as trust and church attendance — while other elements of social capital are stable or increasing.

Where a person lives has a significant influence on the social capital resources that are available to individuals, and this result continues to hold when the demographic, social and economic characteristics of individuals are controlled for. A key finding of this study is that the urban centre size classification has a more widespread influence on the social capital indicators, than do either the State/Territory or remoteness classifications. More specifically, individuals who live in rural areas and small towns display very high levels of 'community involvement' (i.e. volunteering, active membership, neighbours helping each other out, and integration into the community). At the other extreme, the major metropolitan centres display relatively low community involvement. For urban centres with populations of between 20 000 and 1 million, community involvement is similar to the national average.

Rural areas stand out as being particularly well placed in terms of community connections and participation, but social contact is relatively infrequent and the literature also suggests that Australia's rural communities may be lacking in bridging ties and acceptance of diversity.

When considered in their entirety, Australia's major cities were found to be lacking in some key elements of social capital, but the major cities are not a homogenous category and there was considerable variation in social capital *within* the major cities. While some metropolitan regions (e.g. Northern Beaches and Central North Sydney) appeared to be well-placed in terms of social capital resources, other metropolitan regions (e.g. Northern Adelaide, Fairfield-Liverpool) displayed multiple weaknesses which cut across several social capital dimensions. The multifaceted nature of social capital meant that it was rarely uniformly high or low in a region, with most regions displaying strengths *and* weaknesses with respect to the social capital indicators.

With few exceptions, metropolitan regions had lower levels of community involvement than non-metropolitan regions. Particularly high levels of community involvement were evident in the regions of southern NSW and nonmetropolitan Victoria. The availability of emotional, general and financial

support was distributed more evenly between metropolitan and nonmetropolitan regions.

A regional typology of social capital was developed which classified most of the 69 BTRE defined regions as either the standard metropolitan type (average general support and informal socialising, but *low* community involvement) or the standard non-metropolitan type (average general support and informal socialising, but *high* community involvement). Social capital took a highly distinctive form in several Australian regions, such as Gippsland and East Gippsland in Victoria.

Analysis of the distribution of social capital amongst residents of each region identified several regions which had a concentration of people with high support and high community involvement (e.g. Yorke, Northern & Eyre SA). It also identified regions with a relatively high proportion of people who felt isolated, lacked support and had weak family and community bonds (e.g. South West Metropolitan Perth). It was not unusual for a region to have concentrations of both types of individuals, so that reliance on regional averages may not identify regions where there is a significant concentration of disadvantage in access to social capital resources.

Overall, it was those aspects of social capital relating to community and neighbourhood connections and financial support which varied most across Australia's regions. Other important aspects of social capital – such as satisfaction with family relationships, feelings of loneliness, and the availability of emotional and general support – were not particularly dependent on place of residence.

Social capital and regional wellbeing

A fundamental principle of social capital theory is that social networks have value, and can affect the wellbeing of individuals and regions. The existing literature provides reasonably convincing evidence that social capital is associated with improved health, education and life satisfaction outcomes and reduced crime and disadvantage at the regional level, but the direction of any causality has not been clearly established. The literature provides mixed evidence as to whether a regional relationship exists between social capital and economic growth.

The report includes an exploratory analysis of associations between the BTRE's social capital indicators and social and economic outcomes for Australia's regions. From this investigation it was apparent that a region's recent economic growth was not significantly associated with core elements of social capital, such as community involvement, support or frequency of social contact.

At the regional scale, limited availability of emotional and general support was associated with high unemployment rates and poor self-reported health. Limited availability of financial support was associated with high unemployment rates and limited educational attainment. The level of socioeconomic disadvantage of a region was positively associated with the level of financial, emotional and general support residents could access, but a region's level of socio-economic disadvantage had no apparent association with aspects of community involvement. Regions with high community involvement and high satisfaction with family relationships reported above-average life satisfaction.

These regional relationships between social capital and wellbeing reflect significant associations between the social capital indicators and wellbeing outcomes for individuals. The evidence regarding social capital's effects tends to be much more convincing at the scale of the individual, where the underlying processes and mechanisms of social capital can best be observed. While some studies have concluded that the social capital of the place in which a person lives has 'spillover' benefits for the wellbeing of individuals, above and beyond that person's own social capital resources, no such effects were identified in the Australian context.

A new database

The *Social capital indicators database* contains the data which underlies the regional analysis in this report and is available from the BTRE website <www.btre.gov.au>. The database provides a valuable contextual basis for understanding social capital in Australia's regions and informing regional development.

CHAPTER 1 INTRODUCTION

'The basic idea of social capital is that one's family, friends and associates constitute an important asset, one that can be called upon in a crisis, enjoyed for its own sake, and/or leveraged for material gain. Those communities endowed with a rich stock of social networks and civic associations will be in a stronger position to confront poverty and vulnerability, resolve disputes and/or take advantage of new opportunities.' (Woolcock 2001 p12)

A fundamental principle of social capital theory is that social networks have value, and can affect the productivity and wellbeing of individuals and communities. This study aims to explore the spatial dimensions of social capital within Australia, and the extent to which social capital is related to the economic and social wellbeing of Australia's regions.

In recent years, there has been strong international interest in the concept of social capital, and its relevance to public policy. The World Bank's *Social Capital Initiative* provided evidence that social capital is a critical determinant of progress in many types of development projects and an important tool for poverty reduction (Grootaert & van Bastelaer 2001). OECD (2001) undertook research into the role that social relationships play in economic activity and human wellbeing, and noted that 'government and other public agencies have a diffuse, but collectively powerful influence on social capital formation'. In Australia, the Productivity Commission (2003) explored the social capital literature and its ramifications for public policy.

Reflecting the broad interest in the topic, the ABS recently developed a conceptual framework for statistics on social capital, and proposed a set of indicators for measuring aspects of social capital (ABS 2004a). The BTRE has adopted this ABS Framework as the underlying conceptual basis for the present study. Consequently, the OECD definition of social capital has been adopted:

'Networks, together with shared norms, values and understandings that facilitate cooperation within or among groups. Networks relate to the objective behaviour of actors who enter into associative activity. Shared norms, values and understandings relate to the subjective dispositions and attitudes of individuals and groups, as well as sanctions and rules governing behaviour, which are widely shared.' (OECD 2001 p41)

In the ABS Framework, social capital is viewed as a set of resources, inherent in relationships, networks and communities, which can be drawn upon to achieve social and economic outcomes. The sustainable development of regions involves conserving, investing in and making use of the shared resources of the region. Social capital is one such resource (alongside human, environmental and produced economic capital), that has a role to play in supporting regional development. The concept of social capital does not offer easy solutions for the development of lagging regions, but does encourage a focus on the resources and capacities of communities, and gives prominence to locally-based development solutions.

This report brings together the information which is presently available on social capital in Australia's regions, in order to improve the current understanding of the spatial dimensions of social capital and provide a sound basis for future research into this issue. The adopted methodology consists of a quantitative analysis of social capital using a suite-of-indicators approach and a review of the relevant empirical literature.

The primary objective of this study is to explore the spatial dimensions of social capital within Australia. Other key objectives are to:

- Improve understanding of social capital, its key drivers and inhibitors, and its relevance to regional wellbeing;
- Investigate the inter-relationships which exist between the various elements of social capital;
- Explore the relationship between social capital and particular aspects of regional economic and social wellbeing; and
- Develop a *Social capital indicators database,* which will be a useful tool for those wishing to explore the role of social capital in Australia's regions.

Chapter Two reviews the conceptual literature on social capital, as well as its determinants and outcomes. Chapter Three explores the relevance of social capital for public policy, with a particular focus on its relevance to regional development. Chapter Four provides an overview of the measurement and analysis approaches which are commonly used in the literature, while the following chapter details the BTRE's approach to measuring and analysing social capital for Australia's regions. Chapter Six puts Australia in the international context. Chapter Seven examines recent Australian trends in social capital and explores the extent to which the various elements of social capital depend on the demographic and social characteristics of individuals. Relationships between the different elements of social capital are the focus of Chapter Eight.

Chapter Nine uses the BTRE's suite-of-indicators to analyse social capital for States and Territories, remoteness classes and urban centre size categories, while in Chapter Ten the analysis is undertaken at a more detailed regional scale. Chapter Eleven explores the regional linkages between social capital and economic and social wellbeing. The BTRE's *Social capital indicators database* is described in Chapter Twelve, and Chapter Thirteen provides some concluding comments.

CHAPTER 2 WHAT IS SOCIAL CAPITAL?

Social capital is a relatively new term, coming into wide use throughout the 1990s and 2000s. There is as yet no universally accepted definition of what constitutes social capital, and it is viewed as an evolving concept. Social capital has been identified as having an influence on various socio-economic wellbeing areas, and has thus become a new field of interest for policy makers.

2.1 SOCIAL CAPITAL IN CONCEPT

The current literature conceptualises social capital as one of four types of resources: physical or produced economic capital, natural capital, human capital and social capital. These capitals are seen as a pool of resources that can be drawn on by individuals, groups and communities, in various combinations, to achieve social and economic outcomes. Social capital refers to the dimension that describes how economic agents interact with one another as they draw upon resources to achieve these outcomes.

The concept of social capital differs from the other types of capital in a number of ways (OECD 2001). Firstly, social capital is inherent in relationships, and as such is not the exclusive property of any one individual as human or physical capital can be. This makes it like a public good, in that it is shared by a group, and any effects of an individual investment in social capital will be experienced by more than just that individual. However, social capital is also less directly produced by investments of time and effort than is human or physical capital, as it is shaped by the inherited culture and behavioural norms of a community. Furthermore, while the physical capitals tend to diminish with use, social capital, like human capital, is self-reinforcing: networks, norms and values are strengthened when people make use of them, but will decrease when not maintained by interaction.

While the four capitals approach is generally accepted as a way of understanding economic and social development issues, and social capital is recognised as one of these resources, there are some concerns about the use of the term 'capital' to describe the concept. In particular, there is criticism that using such economic terminology undermines the social dimension that it is meant to represent (ABS 2004a). The term is used widely however, as social capital is seen as something that can be increased though investment of time and effort by individuals, groups and communities. It has been recognised too that social capital has implications for community wellbeing, producing benefits for community members. Social capital is thus an input into the process of building the socio-economic wellbeing of communities.

There is certainly much contention as to what should be included under the 'social capital' label. The theoretical school that a definition has come from will influence its perspective. The OECD (2001) distinguishes between the economic, sociological, political science and anthropological schools of thought, as four broad approaches taken to define social capital. These differ along the lines of what motivates people to invest in social capital, whether it be the maximising of self-interest through weighing costs and benefits as suggested by the economic literature, or the natural instinct of humans to associate with others, as anthropologists would argue. In the sociological view, investment in social capital is influenced by features of social organisation such as social norms and networks of civil engagement, while the political science literature highlights the role of institutions in shaping behaviour.

The current literature offers differing opinions about what constitutes social capital. Putnam et al (1993, p. 167) defines it as:

'features of social organisation such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated action'.

The World Bank (Grootaert 1998, p. iii) describes social capital as:

'the internal social and cultural coherence of society, the norms and values that govern interactions among people and the institutions in which they are embedded. Social capital is the glue that holds societies together'.

The OECD (2001, p. 41) describes social capital as:

'networks, together with shared norms, values and understandings that facilitate co-operation within or among groups'.

Though the concept of social capital is still developing, there are some common themes amongst the various definitions presented throughout the literature. Firstly, norms and networks are considered to be significant elements of social capital. Trust is another concept that is considered important, and is described in much of the literature as either an additional element of social capital, or a close proxy for the amount of social capital present in a community. As has already been mentioned, social capital is generally treated as a resource that people can use to achieve wellbeing outcomes, though it is not something that can be owned by any one individual. Social capital is also considered to be formed at all levels of society. This includes within familiar networks of families, friends, colleagues and neighbours, within community-level networks, and at the level of nation states. There are a number of concepts that relate to social capital. Box 2.1 presents a selection of some of the more prominent related concepts from the literature.

2.1.1 An Australian social capital framework

The ABS (2004a) has developed an analytical framework and range of indicators that contribute to the process of making social capital a measurable concept that may be useful to policy makers. The framework has adopted the OECD definition of 'networks, together with shared norms, values and understandings that facilitate cooperation within or among groups', and in using this definition, tends to equate networks (and their attributes) with social capital. According to this framework, networks are influenced by culture and the particular political, legal and institutional conditions that provide a context for the development and maintenance of social capital. Networks are composed of relationships between various units, which include families (both in-household and exhousehold), friends and acquaintances, neighbours, colleagues, organisations and groups, and people in general.

Social capital is a concept which is centred on communities. However, communities can take many different forms (see Box 2.1). The ABS Framework focuses on analysing the nature of relationships among people, without setting a priori boundaries with respect to the concept of community, since actual networks tend to extend beyond any one local area or any one interest group. This complexity has implications for the measurement of social capital at a regional scale (see Section 3.1). While the ABS Framework views social capital as the resources of a group or community rather than the exclusive property of any one individual, it assumes that the social capital resources of a group can be meaningfully measured by aggregating data collected from individuals.

Figures 1 and 2 provide a diagrammatic representation of the ABS' framework, which conceptualises social capital as a resource (alongside natural, economic and human capital) contributing to a range of wellbeing outcomes. The framework breaks the elements of social capital into key areas of interest:

- Network qualities: norms (trust, reciprocity, sense of efficacy, cooperation and acceptance of diversity) and common purpose (social, civic and economic participation, community support, friendship).
- Network structure: network size, network frequency/intensity, density/openness, transience/mobility and power relationships.
- Network transactions: sharing support, sharing knowledge, negotiation and applying sanctions.
- Network types: bonding, bridging, linking and isolation.

BOX 2.1 RELATED CONCEPTS

<u>Institutional capital:</u> Described as organisations and expert systems, for example business, government and community organisations. The ways these organisations and systems function, in terms of interacting with each other and with individuals and groups, are related closely to social capital (Black & Hughes 2001). Thus the institutional conditions (as well as the cultural, legal and political contexts) in which a community operates are seen to influence its social capital (and vice versa).

<u>Governance</u>: 'Governance comprises the traditions, institutions and processes that determine how power is exercised, how citizens are given a voice, and how decisions are made on issues of public concern' (Health Canada 2003). Governance can be a basis for trust and social inclusion where members of a community share in decision making, in appointing leaders and in the management of conflict. In addition, social capital could be seen in some instances to be a contributor to government efficacy.

<u>Social cohesion</u>: This concept is one which is still undergoing development. Definitions of social cohesion tend to relate to the levels of social inclusion and/or exclusion within a community. Inclusion in this sense refers to full participation in the social and economic life of a community, whereas exclusion means being unable to participate adequately. It has been argued that social capital may lead to a breakdown of social cohesion where groups become so closely networked that non-members are actively excluded, or members follow narrow interests that may be detrimental to others. Putnam et al (1993) thus describes social capital as having a 'dark side', in that it does not always have positive effects. Social cohesion is important for cooperation and coordination of collective action.

<u>Leadership</u>: In social capital terms, leadership is not necessarily only exercised by those who occupy formally designated positions within a community (Black & Hughes 2001). Leadership qualities also apply to those who undertake initiatives that stimulate and facilitate the participation of others, thus contributing to levels of social capital. Leadership can in some ways be seen as a driver of cooperative behaviour, and perhaps as a component of social capital.

<u>Adapting to change</u>: Human capital, networks, norms and social relations can be seen as helpful tools for individuals, regions and firms in their effort to adapt to change (Côté 2001). Social capital in these forms can potentially facilitate the sharing of information, as well as improved learning and flexibility. A community's capacity to manage change depends on its 'ability to identify social and economic problems and opportunities, and mobilise to address them' (Kilpatrick 2004). Thus, the level of human and social capital in a community will have implications for its ability to manage change.

<u>Community</u>: The term has a range of meanings, and may refer to the physical setting within which relationships occur (e.g. town) or to the social networks themselves. It may be used to refer to a small group where everyone knows one another (e.g. intimate communities of families and friends) or to a broad group with which one shares a common bond or interest. Just as a common religious or ethnic background or a shared interest in soccer can tie people together, geography can also tie people together, with people having a shared interest in the place in which they live.

FIGURE 2.1 ABS FRAMEWORK: RESOURCES AND OUTCOMES



RESOURCES

Source Reproduced from ABS Cat. 1378.0 , *Measuring Social Capital, An Australian Framework and Indicators* (Figure 1: Resources and Outcomes)



FIGURE 2.2 ABS FRAMEWORK: SOCIAL CAPITAL, CULTURAL, POLITICAL, LEGAL AND INSTITUTIONAL CONDITIONS

Source Reproduced from ABS Cat. 1378.0, *Measuring Social Capital, An Australian Framework and Indicators* (Figure 2: Social Capital, Culture and Political, Legal and Institutional Conditions)

Network qualities

Network qualities refer to the norms and values that exist within networks and influence the functioning of networks. Black & Hughes (2001) term these the 'qualities of processes' and add to the above ABS list with altruism, proactivity, and a sense of community or belonging. Norms are considered to be important as they facilitate more predictable or beneficial behaviour patterns, helping people (and particularly strangers) to interact. Compliance with norms is facilitated by the application of sanctions; a factor dealt with by the ABS as a network transaction.

Trust, labelled in the ABS framework as a norm, is considered to be important in most of the literature, and has been represented as both a component and an outcome of social capital. Trust is described as being a lubricant for cooperation, by providing an element of predictability to the way people interact, whether it is in terms of social or business transactions. Other strands of literature do not consider trust to be a component of social capital. Rather, it is considered to be a result of social capital, arising out of the interactions of reciprocal networks. Even so, if not a component of social capital, trust is certainly considered to be a close proxy for it.

Reciprocity as an element of social capital is widely accepted by the available literature. Onyx & Bullen (1997) describe reciprocity as 'short-term altruism and long-term self interest'. Self-interest is not always aligned with the interests of communities, and so reciprocity, where people sacrifice benefits to themselves to contribute to the benefits of others, is important to networks and community strength. The ABS framework considers reciprocity as encompassing all types of giving and receiving, including not only altruistic behaviour, but also direct exchanges (ABS 2004a).

Sense of efficacy is the belief that individuals, groups and communities have the capacity to produce desired outcomes by their own actions. The social capital of a community is higher where there is a sense of self-reliance, and solutions to problems are locally generated, thus potentially being more appropriate to the situation than solutions imposed from non-local governing institutions. Where individuals, groups and communities believe their actions will be effective, they are more likely to be proactive in addressing issues and challenges (Black & Hughes 2001).

The inclusion of *cooperation* as an element of social capital is based on the idea that more can be achieved by working together than if people work in isolation. Cooperation is increased by the existence of trust and reciprocity, but is also instrumental in the development of social networks.

Tolerance or acceptance of diversity is important to achieving beneficial effects from social capital. Putnam's 'dark side' to social capital is based on the idea that where networks consist of tight bonds between units with similar interests, without bridging ties to others, there are negative effects for social cohesion. Tightly bonded networks tend to be exclusive, thus reducing access to resources for individuals and groups who do not belong, and this in turn leads to disadvantage and social fragmentation. Tight bonds in networks also have the potential to impose conformity, and limit the range of network resources available to members. Where there are bridging ties which allow for inclusion of difference within networks, these negative effects are reduced. Thus, for social capital to be beneficial there is a need for a balance between bonding and bridging ties within communities. The differing types of social capital are further discussed below.

Common purpose refers to the shared intentions, motivations or aims for which individuals, groups and communities come together. Community support and volunteering are common purpose activities that arise from the ideas of altruism and reciprocity, and have been used by some researchers as indicators of social capital in a community. The social, civil and economic spheres of a community are further forums for interaction between people, and thus participation in these activities is important to the development of networks (ABS 2004a). Sense of belonging to a community is a factor here, as those who identify with a community may be more willing to make time to involve themselves in community activities and civic processes. Social, civic and economic participation give people access to networks and the resources associated with them, and are thus important aspects of social capital.

Network structure

The structure of networks has implications for the level of social capital in a community. *Network size* for example, can influence the range and quality of resources available to individuals, groups and communities. The *frequency and intensity* (or length of time) with which people interact is another important factor in maintaining social capital, as is the mode of communication used. While face-to-face interaction may be considered the most satisfying, new modes such as Internet and Short Message Services allow for more frequent interaction, particularly where networks are not geographically based.

Network *density* refers to the level of linking between members of a network: whether everyone tends to know all others in the network or not. A dense network will benefit members with a relatively high level of trust and cooperation and knowledge of the types of resources available. Conversely, the *openness* of a network refers to one where few members are linked to others, and there are few barriers to joining. Open networks are likely to benefit members in terms of access to more diverse resources.

Network transactions

Network transactions are processes that contribute to the formation and maintenance of social capital. *Sharing support* (whether it be financial assistance, emotional support and encouragement, integration into the community or common action) and *sharing knowledge* are processes that come with being part of a network. *Negotiation* and other conflict resolution techniques are also important to social capital. Though disagreements in some form are inevitable in networks, the ability to manage conflicts is indicative of the health of the network (ABS 2004a). *Sanctions* are important to social capital as they reinforce the norms and values of networks. Like norms themselves, sanctions are generally agreed upon and predictable. They may be formal or informal, positive or negative. These types of transactions involve the use of networks, reinforcing social capital through supportive and productive interactions.

Network types

Putnam et al (1993) notes that some networks are primarily horizontal in nature, while others are vertical, and most tend to be a mixture of both types of relationships. He argues that vertical networks are unable to sustain trust and cooperation since information flows tend to be less reliable and sanctions are less likely to be applied upwards, therefore vertical relationships are not a part of social capital. However, it is becoming increasingly understood in the literature on social capital that norms and values also influence relationships with public and legal institutions, and so social capital may also arise within these situations. Thus it is possible to identify three main types of social capital:

- *Bonding ties* refer to relations among relatively homogenous groups (such as age, ethnic, religious or socio-economic groups) and are often characteristically strong, protective and inward looking (Productivity Commission (PC) 2003; ABS 2004a). Bonding social capital tends to imply high network density, where there is a high level of trust and shared norms.
- *Bridging ties* refer to relations between people of different backgrounds, and thus relatively diverse networks. Bridging social capital strengthens ties across heterogeneous groups, providing these groups with access to a wider range of resources. Mobility increases the opportunity for people to form a large number of ties, thus enhancing bridging social capital.
- *Linking ties* are those 'relations between individuals and groups in different social strata in a hierarchy where power, social status and wealth are accessed by different groups' (PC 2003). Relationships with people in authority and positions of power are considered to fall into this category. These types of relationships can be considered useful for garnering resources that normally may not be accessible (ABS 2004a).
Isolation occurs when people do not participate in networks. Individuals and groups who feel cut off, or do not participate may find their access to social capital limited.

Where strong bonding social capital exists without bridging social capital, there is a potential for social fragmentation in the form of exclusion of others, as well as restrictions to the range of resources available to members. Similarly, where linking ties are not balanced with bridging social capital, some groups become advantaged where others are not, and there is a potential for corruption. Thus it is important to realise that not all of the effects of social capital are positive, and to reduce negative effects, there is a need for bonding and linking social capital to be balanced with bridging ties.

2.1.2 Key sources and influences on social capital

There are a wide range of factors identified in the literature as potential influences on the level of social capital available to individuals, groups and communities. The culture and the particular political, legal and institutional contexts of a community will shape the development and maintenance of its social capital (ABS 2004a). However, identifying specific factors that influence the creation, development, and maintenance of social capital is not easy. The difficulties arise from the complex feedback that occurs between many of the sources of social capital and the effects of social capital. For example, while an individual's position of employment may affect their access to social capital, it can also be shown that the social capital that individual has access to can improve their career prospects. The complex interactions between social capital's sources and effects may be one of the reasons why social capital is not depleted with use: accessing social capital may also mean building on it.

Despite the difficulties in identifying a causal link between social capital and its sources, the OECD (2001) has suggested eight dimensions that are relevant for its development. These are family, schools, local communities, firms, civil society, public sector, gender and ethnicity. Family is considered to be crucial in providing the primary building blocks of social capital, by creating norms and social ties, as well as representing a beneficial social network that is based on reciprocity. Schools and other educational institutions 'can foster values for social cooperation as well as providing "meeting places" where various social networks can intersect' (OECD 2001 p. 46). Local communities, firms, associations and voluntary organisations also play a role in networking people, sometimes bringing a diverse range of people together for a common purpose. Gender and ethnicity have been deemed important in determining access to social capital as inclusion or exclusion from particular networks is sometimes based on these factors.

Stone & Hughes (2002) add a number of other influential factors to this list. These include personal characteristics such as age and health; family characteristics such as relationship status and the presence of children; resources such as employment and home ownership; attitudes and values towards shared goals and diversity; and characteristics of residential areas, including level of urbanisation, socio-economic advantage and local area safety. These factors are considered to influence the types of social, civic and economic activities available for people to engage in, which activities they choose to engage in, and the levels of trust that may be built within these networks of engagement.

Glaeser (2001) has put forward a model that examines the key determinants of individual decisions to invest in social capital. The model recognises that social capital takes time to accumulate, and this has an opportunity cost. It also assumes that social capital levels may depreciate over time. Based on the assumption that social capital has no value when the individual leaves the community, a variable has been incorporated to model the probability of mobility. The stock of social capital, S, is described as:

 $S_{t+1} = \delta S_t + I^{S_t}$

where: δ represents the depreciation of accumulated social capital; and I^s is the level of investment in social capital.

Specifically Glaeser models social capital investment as depending on residential mobility, wages, age and the social requirements of an occupation. Glaeser proposes that investment decisions also depend on factors that induce individuals to internalise the benefits of social capital, particularly home ownership. Other influences on social capital that are discussed by Glaeser include education and ethnic heterogeneity.

While the literature identifies a range of factors which influence the creation of social capital, the process of social capital accumulation is not deterministic. Rather, social capital is created (or depleted) through a series of voluntary human actions and behaviours. Individuals who share identical personal characteristics (e.g. age, sex, education, home ownership) will choose to behave in different ways and will have differential access to social capital resources.

2.2 SOCIO-ECONOMIC IMPACTS OF SOCIAL CAPITAL

Social capital is recognised in the literature as having an impact on a number of different aspects of social and economic wellbeing. Social capital may have positive or negative effects for these wellbeing dimensions, or in some cases there may be no effect. What is a positive outcome to some individuals and groups may be detrimental to others (ABS 2004a). Generally speaking, the

positive links of social capital to wellbeing are associated with reducing transaction costs, disseminating knowledge, promoting cooperative and socially minded behaviour, individual benefits and associated spillovers (PC 2003). Negative effects of social capital on wellbeing, as previously discussed, are usually caused by high levels of bonding or linking social capital that are not balanced by high levels of bridging social capital. In these instances, there are adverse effects for outsiders associated with exclusion, and on insiders with regards to imposing conformity and restricting individual freedoms (PC 2003).

Where studies have shown that social capital and socio-economic variables are related to each other, causal links are generally unclear. While there is agreement that social capital has implications for wellbeing, it is probable that social and economic wellbeing also influence levels of social capital (PC 2003). These effects may even occur simultaneously. Some of the areas identified as being related to social capital include heath, equality, human capital, economic performance, crime and violence, child welfare, governance and subjective wellbeing.¹ For many of these wellbeing areas, the direction of causality is uncertain.

Another complexity is that social capital does not necessarily have a direct impact on wellbeing. A recent Australian study found that social capital acts as an intermediate variable, influencing the causal link between various indicators of wellbeing (Vinson 2004).

Some of the most convincing evidence of the positive impact of social capital has come from studies into its relationship with *health* outcomes. In many studies, indices of social capital have been positively correlated with longevity, low physical stress, good mental health and low suicide and mortality rates.

Subjective wellbeing or life satisfaction is another dimension that is thought to be positively correlated with high levels of social capital. Empirical studies have found life satisfaction to be positively related to several aspects of social capital, including trust, involvement in voluntary organisations and neighbourhood interaction.

Schools and other educational institutions have already been discussed as a potential source of social capital, as *education* 'can foster habits, skills and values conducive to social co-operation and participation' (Côté 2001). However, the literature also suggests that social capital has a positive influence on educational outcomes.

Many studies of social capital have examined its relationship with *economic performance* at the individual, micro and macro levels. Social capital is generally

¹ This is not meant to be an exhaustive list of those wellbeing areas that are related to social capital, but represents some of the key areas that may be of interest to policy makers.

considered to benefit job seekers, and to benefit firms and regions in terms of innovation. To date, evidence regarding the impact of social capital on economic growth is mixed. According to theory, trust and shared norms contribute to economic growth by reducing transaction costs, minimising the costs of enforcing agreements, and reducing fraud and corruption (Fukuyama 1995).² Looking at the empirical evidence, indexes of trust and civic engagement tend to correlate with GDP growth in some studies while in others the relationship is negative, or no relationship is established. Thus, further research is required before any definite conclusions can be made about the impacts of social capital on economic growth.

Social capital is considered by the literature to have positive effects by limiting *crime and violence* and improving the *welfare of children*. Norms and the sanctions that enforce them play a role in discouraging anti-social or criminal behaviour, as well as positively rewarding behaviour that is approved (OECD 2001). Studies have shown that where civic participation is low, there is an increased risk of crime and violence, even when poverty and other recognised contributing factors are controlled for (PC 2003).

The relationship between social capital and *equality* is not clear-cut. Some studies find high levels of trust and civic engagement to be linked to higher levels of equality in terms of income, adult literacy and access to further learning (OECD 2001). However, it is also possible that high levels of social capital could lead to social fragmentation where societies are divided along the lines of class, ethnicity or language, and through exclusion of some groups, create inequalities (PC 2003). Due to the ambiguity of empirical evidence surrounding the concept of social capital and its effects, the OECD (2001) cautions against simplifying this relationship with equality.

The literature also suggests that social capital is important for *government efficacy*. Empirical studies have shown that trust tends to increase judicial efficiency, reduces corruption, increases bureaucratic quality and increases tax compliance (PC 2003). The OECD (2001) suggests that the effectiveness of government and public institutions in promoting inclusion and cohesion may depend on social capital and that levels of trust and engagement influence the quality of government. These results conflict with the idea that high bonding social capital may actually encourage corruption and tax evasion by dominant groups where bridging ties are lacking. This suggests that the relationship

² Other theoretical work by Bezemer, Dulleck & Frijters (2005) argues that economic growth is based on increasing the stock of relational capital or productive contacts. Informal, personalised social networks can spur the initial growth in relational capital, which in turn may lead to the formation of market institutions. These institutions then start to replace informal social networks as a means of forging business contacts. Economic growth via innovation requires the creative destruction of individual social capital linkages in the search for better contacts.

between governance and social capital works in different ways for different communities, depending on the types of networks present. Though it may not be clear whether social capital has positive or negative implications for governance, it is agreed that it can influence the effectiveness of public institutions and government.

Much of the above discussion relates to relationships between social capital and the characteristics of individuals (for example their subjective wellbeing or health). However, the relationships between inequality and social capital, and governance and social capital, clearly relate to a more aggregate scale (e.g. local government area, region or nation). Similarly, research on the relationship between social capital and crime is often conducted at a neighbourhood or broader scale. The relationship between economic wellbeing and social capital has been examined at the individual or household scale (eg income), the firm scale (eg innovation) and the macro scale (eg national economic growth).

In this paper, our main focus is the relationship between social capital and the wellbeing of regions, rather than individuals. Chapter Eleven explores the evidence on how social capital is related to different aspects of the social and economic wellbeing of regions, paying particular attention to economic wellbeing, education, health and life satisfaction. Of course, regional wellbeing is dependent on the wellbeing of individuals who live in the region, and Chapter Seven presents evidence on the extent to which social capital in Australia is related to selected characteristics of individuals, including age, gender, income and health.

2.3 IN SUMMARY

The current literature conceptualises social capital as one of four types of resources (alongside produced economic capital, natural capital and human capital) which can be drawn on by individuals, groups and communities to achieve social and economic outcomes. While there is as yet no universally accepted definition of what constitutes social capital, in this study we have adopted the OECD (and ABS) definition:

'networks, together with shared norms, values and understandings that facilitate cooperation within or among groups'

The BTRE has adopted the ABS Framework for Social Capital (ABS 2004a) as the underlying conceptual basis for this study. The ABS Framework views networks as being composed of relationships between various units, which include families, friends and acquaintances, neighbours, colleagues, organisations and groups. It categorises the elements of social capital into: network qualities, network structure, network transactions and network types. The ABS Framework distinguishes between social capital; other forms of capital; the cultural, political, legal and institutional context in which social capital operates; and the potential outcomes of social capital in terms of individual and community wellbeing. While social capital is viewed as the resource of a group rather than exclusive property of any one individual, the ABS assumes that the social capital of a community can be meaningfully measured by aggregating data collected from individuals.

Social capital is created (or depleted) over time through a series of voluntary human actions and behaviours which build, sustain (or weaken) relationships. The literature identifies a range of factors which can influence the creation of social capital, such as families, schools, businesses and local communities. The literature has also identified social capital as being related to wellbeing outcomes such as heath, education, equality, economic performance, crime, child welfare, governance and life satisfaction. For many of these wellbeing areas, the direction of causality is uncertain, due to the complex feedback that occurs between many of the sources of social capital and the effects of social capital.

Some of the most convincing evidence of the positive impacts of social capital has come from studies into its relationship with health outcomes. Studies of social capital's relationship with economic outcomes are much less conclusive. While further research is needed to more definitively establish the nature and/or existence of such links, the current interest in the concept of social capital is undoubtedly related to claims that high levels of social capital help to bring about positive impacts on individual and community wellbeing.

Focus on Regions No. 4: Social Capital

CHAPTER 3 SOCIAL CAPITAL, REGIONS AND PUBLIC POLICY

Social capital is a concept which is centred on communities, whether they be communities of identity, interest or location.³ The present study has a particular focus on communities of location and this chapter establishes the place-based nature of the concept of social capital. It also discusses the relevance of social capital to community and regional development, and identifies the ways in which social capital considerations can enter public policy analysis.

3.1 SOCIAL CAPITAL AND REGIONS

3.1.1 Social capital as a spatially-based concept

Social capital can be defined at a number of different scales, with certain elements of social capital being more relevant at different scales. These scales include the individual, household, neighbourhood, regional and national levels.

Social capital can be viewed as a spatially based concept, with differences in the level of social capital observable across geographical space. Many elements of social capital are strongly dependent on spatial proximity. People who live spatially far apart are less likely to form social connections than people who live in close proximity (Glaeser et al 2002). Involvement with churches, sporting clubs and social groups also tends to be focused on the local area. While telephone, mail and e-mail can enable relationships to be maintained across distance, face to face interaction is probably the most satisfying form of contact, and is recognised as particularly important in the development of social capital (Onyx 2001).

³ The term 'community' is often used to describe a group that has a common bond or interest tying them together. Such bonds could be based on a common cultural, ethnic or religious background, a common history or experience, or a shared interest in a particular activity or issue. Geography can also tie people together, and in the present study we use the term community to reflect people's common interest in the place they live, recognising that this can be defined at various levels (e.g. suburb, city, state or nation).

Stone & Hughes (2001b) present estimates of the proportion of each informal network type within 30 minutes of respondents. Not surprisingly, the proportion is highest for neighbours at 100%, followed by friends (54%), in-laws (34%) and kin (29%). Overall, 52% of informal network members were located within 30 minutes of respondents.⁴ The authors also refer to research which indicates that when network ties are locally-based, the frequency of contact is greater, and it is more likely these ties will form part of support networks.

These results indicate that while relationships in the local area are an important component of social capital, so too are relationships which exist outside a person's local area. Some networks are still effective across large expanses of geographic space. Smailes (2002) explains that for a given household, patterns of social interaction consist of local, face to face and generally short distance contacts ('distance sensitive' networks), as well as interaction with remotely located contacts. With improvements in transport and telecommunications, 'distance sensitive' networks have become more dispersed, because the opportunity cost of distance has reduced.

This highlights the spatial complexity of social networks, with local interactions often overlaid with a more diffuse mesh of long distance contacts. Development of communication technologies such as the internet and telephone are overcoming barriers caused by distance (Putnam 2000), and weakening the extent to which networks are confined to the local area.

Although technology has reduced the cost of distance, personal face to face interaction with 'real people' and a feeling of identity and place-based belonging are still important. Thus, location remains central to the concept of social capital (Smailes 2000).

A community of location can be defined on a number of different scales (e.g. housing block, neighbourhood, suburb/town, local government area). Many rural people identify with social groups at both a highly localised, neighbourhood level consisting of relatively few households, and at a community level that provides opportunities for a broader range of social interactions (Smailes 2002). The fact that an individual may identify with a range of geographical communities is also illustrated by the results of the 1995 *World Values Survey*. It found that Australians identify themselves most closely with Australia as a whole (43% nominated this as the first geographic group they identified with), followed by the locality or town where they lived (32%) and the State or region of Australia where they lived (13%).

⁴ Residents of rural and remote Australia had a lower proportion of family members within 30 minutes (22%) than residents of capital cities (28%) or other metropolitan areas (27%).

3.1.2 Measurement of social capital on a spatial basis

Place-based concepts such as contact with neighbours, involvement in the local area and a sense of community belonging, are integral components of the key Australian frameworks for measuring social capital (ABS 2004a, Stone & Hughes 2002, Black & Hughes 2001). In addition, considerable quantitative research focuses on the social capital of communities of location.

In the current study, BTRE explores the extent to which social capital differs across Australia's regions, and the degree to which social capital is linked with regional wellbeing. Social capital is measured based on individual's responses to survey questions, and regional indicators are derived based on the region in which those individuals live. The analysis does not assume that individual's responses are constrained to the region in which they live.⁵ *Thus, BTRE's regional indicators of social capital refer to the average social capital resources available to individuals who live in the region, and not necessarily to networks located within the region.* Nevertheless, particular attention is paid to several aspects of social capital which are specific to the local area, including:

- Anticipated support from neighbours in a time of crisis;
- Extent to which neighbours help each other out; and
- Integration into the local community.

Thus, it is assumed that social capital in a region can be measured by aggregating the responses of individuals who live in a region. Some argue that social capital is more than the sum of social capital in the individuals or households within an area (The National Economic and Social Forum 2003). However, measurement of social capital at the scale of the individual, and aggregation of data to a neighbourhood, regional or national level, continues to be the standard approach in the empirical literature (see Lochner et al 1999 for further discussion of this issue).

3.1.3 Social capital and regional development

Since social capital is a concept which is centred on communities, it has particular relevance to the social and economic development of communities and regions. A key finding of the World Bank's *Social Capital Initiative* (SCI) was that 'successful community based development depends critically on harnessing the social capital of the community' (Grootaert & van Bastelaer 2001).

⁵ For example, questions on frequency of contact with friends and relatives are intended to encompass contact which occurs outside the region (e.g. visiting friends and relatives who live at a distance), as well as contact within the respondent's region of residence.

Regional development refers to the process of investing in and using the set of resources available to a region as a basis for further wealth creation. Social capital theory proposes that social networks and norms have a role to play in influencing the social and economic development of regions, and that social capital is one type of productive resource available to regions, alongside human capital, environmental capital and produced economic capital. While social capital can play a role in fostering particular types of regional development, interventions which have been designed to promote regional development also have the potential to generate networks based on trust and shared values. Thus, the relationship between social capital and regional development can operate in both directions.

Regions with a large stock of social capital have a competitive advantage to the extent that social capital helps to reduce illegal conduct, causes agreements to be honoured, places negotiators on the same wave-length, improves information flows or enhances the creation of knowledge and innovation (Maskell 2001). The concept of social capital can also be seen to contribute to the literature on 'clustering', which argues that regional competitive advantage resides largely in the ability of local companies and other relevant parties to form functional networks (Landoboso 2003). Since social capital refers to the characteristics of relationships (between organisations as well as individuals), it impacts upon the way clusters are built and developed.

Maskell (2001) argues that due to globalisation, the competitiveness of those local firms that are exposed to international competition is increasingly dependent on the only major inputs which remain largely immobile — labour and social capital. Social capital is a resource that cannot be bought, and is impossible to imitate, replicate or substitute. Consequently, the means by which social capital is accumulated, reproduced and maintained is becoming increasingly relevant to regional development.

However, the consequences of social capital for development will not always be positive. For example, a strong regional identity could inhibit change if individuals and businesses are strongly embedded or locked into a region. The concept of social capital does not offer easy solutions for the development of lagging regions, but does encourage a focus on the resources and capacities of communities, and gives prominence to locally-based development solutions.

3.2 POLICY RELEVANCE OF SOCIAL CAPITAL

Due to the mounting evidence that social capital can enhance personal and community wellbeing many believe that social capital has important implications for public policy. However, the fact that social capital resides in voluntary relationships, implies that governments will typically be facilitating or supporting the development of social capital, rather than actively intervening to create new social capital (OECD 2001).

Options for public policies range from promoting accountable and transparent public governance; to proposing government policies to support existing social capital; or proposing active government policies to create new social capital. Some literature argues that the ability of government to intervene directly to build social capital is limited, and that government intervention may 'crowd out'⁶ civil society and reduce personal and community self-reliance. This section will look at the rationale of government intervention to enhance social capital and the ways in which social capital considerations can enter public policy formation and application.

The Productivity Commission (2003) identifies three ways through which social capital considerations can enter policy analysis.

- Many of the existing government policies and programmes, in practice, have as one of their underlying goals the development of forms of social capital. Some of the examples are; family support, regional development, community support⁷, sports and leadership programmes. Box 3.1 shows how the concept of social capital is reflected in two of DOTARS regional programme initiatives under the Commonwealth's framework for developing Australia's regions: *Stronger Regions, A Stronger Australia*.
- Some government policies and programmes while not specifically targeted at social capital, can inadvertently affect it. This, in turn, may increase, or more often, decrease the transmission of benefits from that intervention. An example is public liability laws.
- Existing social capital can facilitate the implementation of policies.

Another potential way that social capital can enter policy formation is through its potential mediating role. In his research of Victorian and NSW communities, Vinson (2004) found that communities with high internal cohesion seemed to cope considerably better with socio-economic disadvantage than communities with low cohesion.⁸ This mediating function of social capital is potentially relevant to policies aimed at improving the wellbeing of communities. It suggests that interventions to improve wellbeing outcomes in disadvantaged

⁶ 'Crowding out' occurs when government intervenes in order to build up social capital in a region, but in doing so can displace volunteers and other organisations in the region.

⁷ Further information on the federal government's range of community support initiatives is available from www.facs.gov.au/internet/facsinternet.nsf/communities/nav.htm.

⁸ Vinson's analysis was based around the concept of social cohesion (see Box 2.1 for a discussion of this related concept). However, his social cohesion indicators (informal help, volunteering and sports participation) can equally be viewed as measures of social capital.

areas may be relatively ineffective for those communities with limited social capital.

BOX 3.1 DOTARS INITIATIVES

The Federal Government's regional programmes incorporate the view that community generated ideas, self reliance and leadership are fundamental to achieving successful, vibrant and growing regions. The *Stronger Regions, A Stronger Australia* policy statement (Commonwealth of Australia, 2001) outlines a partnership approach to regional development, with the Federal Government supporting community plans and aspirations and regional communities managing change, realising their potential and leading their own development. Therefore, in DOTARS current regional programmes, community involvement, leadership and social capital are seen as central to achieving successful regional development outcomes.

The <u>Sustainable Regions Programme</u> sets out to assist regions which are undergoing major economic, social and environmental change, and have shown a strong degree of initiative, self reliance and a commitment to community action. Currently, this programme runs in ten selected regions. The objectives are decided by regional advisory committees and often include a social capital component. For example, a key goal of the Sustainable Regions Programme in Playford-Salisbury is 'to involve the community in laying the foundation to realise the region's long-term potential to be economically vibrant, *socially inclusive* and environmentally sustainable, building on its natural advantages' (DOTARS 2004). One of the priorities under this objective is to improve the social and physical character of the residential neighbourhood. Similarly, the Far North East NSW Sustainable Region listed strengthening social capital and the sense of community in the region amongst its objectives.

The <u>Regional Partnerships Programme</u> is a grant-based programme open to community initiated proposals that focus on: improving access to services, supporting planning, assisting structural adjustment for communities, or providing greater opportunities for economic and *social participation in the community*. One of the proposed ways to create or enhance opportunities in the community is by enhancing *interaction in the community* (e.g. by funding upgrades to Community Halls, business networking initiatives etc).

3.2.1 Government involvement to build or support social capital

A number of practical benefits can flow from positive externalities associated with the existence of social capital. Examples of such externalities include a reduction in transaction costs resulting from high levels of trust, facilitation of the provision of public goods and the reduction of crime. In addition, social capital can facilitate democratic processes. For example, civic engagement can discourage persons from free riding, disobeying the law, cheating on their taxes and so on (PC 2003). The generation of such positive externalities may be used as an argument for government involvement to build or support social capital.

Another common argument for government involvement is the premise that social capital is a public good (i.e. it is not the private property of those who benefit from it) and public goods tend to be undervalued and underprovided without government intervention. Since social norms and sanctions benefit everyone (not just the people who bring them into being), the incentive for individuals to invest in their creation is missing, unless they can appropriate a significant share of the benefits for themselves (Couto 1997). This means that social capital must often be a by-product of other social activities. An unequal distribution of social capital is another possible argument for government intervention, as groups with poor access to social networks may be subject to social exclusion.

It does not necessarily follow that government intervention is the best possible solution to rectify shortfalls or inequalities in social capital. A number of other considerations need to be taken into account, including the size of relative costs and benefits of intervention, ability to intervene and available alternatives to intervention.

While basic cost-benefit analysis could determine if intervention should take place, there are a number of features of social capital that make the evaluation of intervention by governments difficult.

Firstly, the concept of social capital is not clearly defined or conceptualised within the literature. These uncertainties make the assessment, development and evaluation of policies aimed at social capital difficult.

Secondly, the organic nature of social capital, which arises over time from a series of voluntary human actions and behaviours, means that it is inherently difficult to artificially create or to replicate from place to place.

Thirdly, in order to achieve a substantial change in the level of social capital, a number of mutually reinforcing policies will need to be put in place. A coordinated approach across agencies would be needed to reach the desired outcomes. Such changes to policy and processes would be challenging, as would coordination and negotiation across government agencies.

Fourthly, the form social capital takes varies from area to area, and solutions will need to be localised. A 'one size fits all' approach may be inappropriate, thus policy developers need to work closely with local government and community groups in order to tailor programmes to local conditions. For higher levels of government this means that their policies need to be robust to

variations in local conditions, or have mechanisms that allow for flexibility and discretion when implemented in different areas.

It should also be noted that in some circumstances social capital can have negative effects. For example, certain policies aimed at enhancing social capital within a community can in fact lead to the exclusion of those not already a part of the community. Therefore interventions need to promote all aspects of social capital, so that one element is not developed more intensively than another.

Finally, identifying areas where intervention is needed is difficult. Accurate measurement of social capital is a major impediment in this identification process. However, it has also been suggested that even if social capital could be effectively measured, turning that information into a benefit-cost estimate which could be compared against other possible and competing interventions is difficult (PC 2003).

One proposed way to improve these very real assessment issues is small-scale policy experimentation to provide data on different policies which set out to enhance social capital, coupled with evaluation of these policies to assess their effects and to suggest design adjustments when appropriate.

While the development of large scale policies to create social capital is problematic, there are a number of initiatives by federal, state and local government which work towards enhancing social capital in selected communities. Box 3.2 illustrates some government initiatives.

3.2.2 Incorporating social capital considerations into policy assessments

As mentioned earlier there is a wide range of views on the role that governments can and should play in relation to social capital. In practice however, governments in developed nations already undertake many functions that influence social capital. This means that social capital can be unintentionally affected by a number of different types of government policies and programmes. Doing no harm to existing social capital is just as important as what governments can do directly by investment in social capital.

For example, careful urban and residential planning, which incorporates social capital considerations into the design and layout of the built environment, can enhance social interaction (The National Economic and Social Forum 2003). Another example is public liability laws, which can affect the viability and subsequently the prevalence of community and organisation events through such mechanisms as high insurance costs, and thereby have a negative effect on social capital. From a public policy point of view it is important to ensure that these government programmes, regulations and policies do not unintentionally harm social capital.

BOX 3.2 GOVERNMENT INITIATIVES TO STRENGTHEN COMMUNITIES

Place management programmes: These programmes typically focus on areas of relative social and economic disadvantage where there is a high-level of concern about the inadequacy of existing programmes and arrangements. The focus of the programme is the coordination of activities between government agencies, community organisations and local government, and the aim is to foster locally based solutions. The NSW Government, in particular, has trialled place management as a strategy in Kings Cross, Cabramatta and other areas of Sydney. The Kings Cross place management project was jointly run by the state government and the local city council. The objective of the project was to develop innovative strategies to respond to local issues, and to pilot a whole-ofgovernment approach to the delivery of services. The evaluation report of this project found tangible results (such as improved policing and transport) for the community and an improvement in the skills (such as consultation or drafting submissions) of community groups. One of the major benefits of the project was the strengthening and valuing of existing networks and cooperation between existing organisations, agencies and community members (Nexus Management Consulting 1999).

<u>Community building or capacity building initiatives:</u> These programmes are designed to address place-based inequality and disadvantage by helping communities to develop and implement local responses to local issues. One example is the Community Capacity Building Initiative in Victoria. The programme mobilised eleven rural communities, each of which developed action strategies to suit their local needs and resources (Department for Victorian Communities 2002). Another example is the Australian Government's Local Answers programme which is designed to strengthen disadvantaged communities by funding small-scale, local projects that help communities build their skills and capacity to identify opportunities and take action (Department of Family and Community Services 2005). These programmes are premised on the belief that government can go beyond simply coordinating programmes to **enhance the capacity of communities** to take charge of their future and grow.

In addition, the way in which policies and programmes are formed and implemented can also impact on social capital. For example, community input into the development of programmes can have a positive social capital sideeffect, such as creating a greater sense of efficacy. Implementation of programmes that do not engage communities adequately can bring about feelings of exclusion from the process and detract from social capital.

A common problem in this area is lack of awareness. Although social capital issues could potentially feature in the context of a wide range of policies (e.g. industrial relations, border control strategies) some policy analysts may be unaware that the policies with which they are dealing have ramifications for social capital. Consequently, some authors (e.g. Cox & Caldwell 2000) have

suggested a social capital assessment framework be developed and incorporated into existing policy assessment procedures.

Grootaert & van Bastelaer (2001), in their synthesis of the World Bank's *Social Capital Initiative*, recommended a social capital assessment exercise be systematically introduced at the early stage of project design and in the analysis of poverty. The authors argued that inclusion of information on the nature of a community's social capital in the design of World Bank projects would lower costs and increase the likelihood of success. It would ensure development activities did not negatively affect existing social capital and could be used to choose a project design that maximised the leveraging role of social capital.

3.2.3 Redesigning policies to harness existing social capital

Another consideration when we look at the relevance of social capital for public policy formation is how the presence of existing social capital can facilitate the implementation of policies or can actually broaden the range of policy options open to government.

For example, communities may provide volunteer services to their residents such as 'meals on wheels'. Government can create interventions that support and draw upon these services. For example, the 'meals on wheels' services may make home-based care for the elderly a more realistic and affordable option to governments than the provision of nursing homes.

By mapping out possible non-governmental or governmental solutions that use existing community structures and resources as part of the standard policy assessment procedure, policies could make more effective use of existing social capital resources. Such assessments should also consider the appropriateness of using civil society, or other elements of social capital, to deliver government services, as well as the potential to undermine existing sources of social capital by drawing too heavily upon them. For example, volunteers may not offer their services if it was thought that governments were exploiting their goodwill.

3.3 IN SUMMARY

Social capital can be viewed as a spatially based concept, with differences in the level of social capital observable across geographical space. Many elements of social capital are strongly dependent on spatial proximity, and while technology has reduced the barriers associated with distance, face to face interaction and a feeling of place-based belonging remain important.

Place-based concepts such as contact with neighbours and a sense of community belonging are key elements of the ABS framework for measuring social capital (ABS 2004a) and of the present study. The BTRE's analysis is

focused on the social capital resources available to individuals who live in each region, irrespective of whether those networks are located within the region. Thus, it is assumed that social capital in a region can be measured by aggregating the responses of individuals who live in the region.

Social capital theory proposes that social networks and norms have a role to play in influencing the social and economic development of regions. Interventions which have been designed to promote regional development also have the potential to generate networks based on trust and shared values. Thus, the relationship between social capital and regional development can operate in both directions. While the concept of social capital does not offer easy solutions for the development of lagging regions, it does encourage a focus on the resources and capacities of communities, and gives prominence to locally based development solutions.

Some government initiatives to enhance social capital in selected communities are already in place and there is a growing awareness of the importance of social capital for a wide range of social objectives. However, devising large scale policies to create social capital is problematic because of our limited understanding of the concept of social capital, how to measure it, and the way different policies interact with it. To gain better knowledge and tools to incorporate social capital considerations in policy analysis, the Productivity Commission (2003) recommends further research, aimed at better conceptualisation and measurement methodologies, coupled with small scale policy experimentation and evaluation. In the short term, the Productivity Commission recommends that governments can and should:

- critique new and existing policies using a social capital lens to ensure that government policies do not unintentionally erode social capital and that any beneficial side effects on social capital are taken into account;
- consider modifying policies that are found to damage social capital; and
- attempt to harness existing social capital to deliver programmes more effectively.

Focus on Regions No. 4: Social Capital

CHAPTER 4 SOCIAL CAPITAL AND MEASUREMENT

Since what is measured should be based on what is understood to comprise the concept of social capital, the imprecise and evolving nature of social capital has been reflected in its measurement. The OECD (2001) notes that 'much of what is relevant to social capital is tacit and relational, defying easy measurement'.

Researchers have used a number of different approaches when measuring and analysing social capital. The methods used vary according to how social capital is conceptualised, the research questions and the resources available to those undertaking the study. This chapter provides an overview of the different measurement and analysis approaches which are commonly used in the social capital literature, while the following chapter details the BTRE's approach to measuring and analysing social capital across Australia's regions.

4.1 SOURCES OF INFORMATION

Empirical studies of social capital and its effects have drawn upon information from a range of sources, including:

- Purpose-designed surveys of individuals (e.g. Australian Institute of Family Studies (AIFS) *Families, Social Capital and Citizenship Survey,* Onyx & Bullen 1997);
- Secondary analysis of existing surveys of individuals, which are not specifically designed to measure social capital, but contain relevant questions (e.g. *World Values Survey*, ABS *Voluntary Work Survey*);
- Administrative data (e.g. data on voting patterns, membership records of trade unions or clubs);
- Community-centred approaches in which information is gathered from a variety of sources within one community;
- Experimental methods (such as trust games); and
- Qualitative methods (such as focus groups and community discussion forums, interview transcripts and newspaper content analysis).

Box 4.1 provides an overview of some key principles for measuring and analysing social capital. The remainder of this section provides an overview of how these different information sources have been applied in social capital studies, and their respective strengths and limitations.

3OX 4.1 PRINCIPLES FOR MEASURING AND ANALYSING SOCIAL CAPITAL
Measurement and analysis needs to be theoretically informed, with a clearly defined link between social capital theory and the measures of social capital used in a study.
Empirical work should reflect the multidimensional nature of social capital, and be as comprehensive as possible in its coverage of key dimensions.
Empirical studies should recognise that social capital will vary by network type and social scale.
There should be a clear distinction between social capital and its outcomes or determinants.
Empirical work should reflect a balance between subjective (e.g. perceptions) and more objective measures (e.g. behaviours) of social capital.
There should be a clear identification of whether social capital is viewed primarily as an individual or community-level resource, and the implications of this assumption for measurement.
Community-level analysis should reflect the distribution of social capital as well as the overall level of social capital.
Where possible, distinctions between bonding, bridging and linking social capital should be reflected in empirical work.
Empirical analysis should not assume that all forms of social capital always have benign effects.
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Sources: Stone 2001, Stone & Hughes 2002, PC 2003, OECD 2001

4.1.1 Surveys of individuals

The most widely used measurement approach is surveys of individuals. Compared to reliance on pre-existing data sources, purpose-designed surveys offer a number of potential advantages. Such surveys can be designed to operationalise a preferred definition and conceptual framework of social capital, or targeted to address the specific issues of interest for a project. A purpose-designed survey is likely to be more comprehensive in its coverage of the different elements of social capital, and permits structured analysis of the relationships between these different elements.

While purpose-designed surveys directly measure key elements of social capital, reliance on pre-existing data sources sometimes involves use of rough

'proxy' measures, when more direct measures are not available. It has been suggested that since such data were gathered for a purpose other than to measure social capital, it is unlikely to provide a conceptually thorough measure of it (Stone 2001). However, depending on project objectives and available resources, analysis based on pre-existing data sources may be the preferred approach.

There is as yet no standardised survey instrument or set of questions available to researchers to measure social capital. Many studies have developed a set of survey questions that they believe measure the level of social capital in a community (e.g. Onyx & Bullen 1997, Saguaro Seminar 2001, Stone 2001, Narayan & Pritchett 1997). However, as they are based on differing concepts of social capital, and relate to particular geographic scales and cultural settings, none of these have been accepted as a general standard. These studies typically provide a snapshot of social capital in a community at a particular point in time.

Such purpose-designed surveys of social capital are a relatively recent development, and other sources of information are generally used to assess medium and long term trends in social capital. There are a range of surveys of individuals which have not specifically been designed to measure social capital, but can be used to derive indicators of some of the key elements of social capital. Many of these surveys are focused around a particular topic – examples include voluntary work, time use, caring responsibilities, job search, union membership and sports participation. Other surveys, such as the *World Values Survey*, the ABS' *General Social Survey* and the *Victorian Population Health Survey*, address a more general set of social issues and have the advantage of providing data relevant to more than one aspect of social capital.

Surveys of individuals are a potentially rich source of information on the social capital resources available to individuals, and can be aggregated to provide an overview of social capital for a community. Unit record data from a survey permits analysis of the distribution of social capital within a community. Unit record data also makes it possible to undertake in-depth analysis of how different aspects of social capital are related to one another.

However, the survey approach to collecting information on social capital is subject to a number of limitations:

• *Subjectivity:* Information gathered through survey instruments is limited to the perceptions, attitudes and experiences of respondents. Surveys often rely on the subjective views of respondents, making comparison of data reliant on the assumption that individuals have interpreted questions in similar ways. For example, where a question pertains to community, how the individual understands the concept of community becomes an important factor in their response to that question. Another example is whether respondents interpret the standard attitudinal trust

questions⁹ in the same way across countries, cultures and time. Furthermore, reported attitudes are not necessarily closely matched to behaviour, with Glaeser et al (2000) finding that attitudinal trust measures are not significantly related to trusting behaviour.

- *Comparability over time and across instruments*: Survey responses can be sensitive to small changes in question wording, to the level of prompting, to sequencing and to the data collection technique.¹⁰ Therefore it can be risky to compare results from different survey instruments, even if at face value the questions seem to be similar.
- *Continuity*: To reliably assess the direction and magnitude of social change, it is necessary to have comparable measurements over multiple time periods. To confidently conclude that observed changes reflect long term trends, and not merely random variation, seasonal effects or one-off shocks, it is preferable that comparable measurements be repeated as many times as possible.
- *Limited insights into change process:* Surveys which are repeated over time, can provide insights into aggregate changes in social capital. Cross-sectional surveys involve random selection of a different sample of individuals each time the survey is repeated, and can only provide limited insights into the process of change for individuals, through reliance on recollection of past experiences. Longitudinal surveys repeatedly collect information from the same set of individuals over time, and offer greater potential for understanding the processes by which the behaviours and attitudes of individuals change over time.
- *Scale:* It is argued that social capital is a community concept and may not accurately be measured by summing individual responses (UKONS 2001). This argument suggests that while individual attitudes or behaviour provide proxy measures for social capital, these measures should not be confused with the underlying concept.
- *Resource intensiveness:* Surveys of individuals can be quite resourceintensive, and involve a significant respondent burden, particularly if the aim is to measure social capital in a comprehensive manner. These considerations mean that surveys are unlikely to be a viable method for collecting reliable and comprehensive small area information on a nationwide basis.

⁹ The *World Values Survey* asks 'Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?'.

¹⁰ For example, Patulny, Bittman & Fisher (2003) report evidence that volunteering rates are consistently higher when measured by values-based surveys rather than time diaries.

Due to the limitations of survey data, other data gathering methods may provide a useful complement to surveys of individuals and enable a more complete picture of social capital to be developed for a community.

4.1.2 Collection of data from organisations and communities

Another commonly used approach involves bringing together information from a range of pre-existing sources, such as administrative records of community groups, professional organisations and government agencies. This approach can produce measures of the characteristics of organisations and place-based communities, such as the number of people who participate in an organisation, turn up to community events or vote in local elections.

Collection of administrative data has advantages in that it does not depend on subjective individual responses, comparisons can sometimes be made over long time periods, and national data can potentially be disaggregated to a regional level without substantial loss of reliability. The main limitation of this approach is that it really only allows for measurement of some aspects of social capital, namely more formal types of participation. It is not well suited to measuring attitudes (e.g. trust, reciprocity) or characteristics of informal networks (e.g. frequency of contact with friends). Therefore, to draw robust conclusions about social capital as a whole, this approach would generally need to be used in conjunction with data from other sources.

Putnam (2000) used membership data from 32 national chapter-based voluntary associations in the United States between 1900 and 1997 to examine trends in civic participation.¹¹ Putnam also used administrative data sources to examine membership trends for professional organisations and trends in voter turnout.

A related approach involves focusing on a particular community, and gathering a range of information relating to that community from some combination of administrative data, audits of local resources, surveys and qualitative methods. This approach was adopted by a Canadian study of social capital in 32 small rural communities (Reimer 2002). Four categories of indicators were developed to measure four types of social relations: communal, market, bureaucratic and associative. The indicators were constructed on the basis of the number of organisations such as banks and credit unions; town halls; community education courses; half way houses; community bulletin boards; and the number of local, regional and national newspapers available.

¹¹ Putnam's analysis cannot provide a comprehensive picture of trends in group membership as it is based on a fixed set of formal organisations which keep detailed membership records and were in existence throughout most of the 20th century. It is possible there was 'another shadow universe of organisations that was growing while these were declining' (Putnam 2003 p43).

4.1.3 Experimental methods

There have been a number of experimental techniques used to measure and analyse aspects of social capital in a controlled, laboratory setting. The experiments are designed to capture certain aspects of decisions that are undertaken in everyday life, such as trust, trustworthiness, reciprocity, cooperation and enforcement of norms. Such experiments involve real incentives, with payoffs typically dependent on the decisions of others. This measurement approach is based on the assumption that as long as the financial rewards are sufficient, participants will take their decisions seriously and reveal their preferences and underlying motivations through their actions in the experiments. The main limitation is that it is not clear to what degree behaviour in economic experiments can be generalised to behaviour in the larger economy and society.

Experiments have been used to directly generate measures of trust and reciprocity in a community, to analyse how attitudes and demographics influence behaviour, and to analyse the formation of social capital through repeated experiments.

Glaeser et al (2000) measure trust and trustworthiness through a survey and two experiments. They find that the standard attitudinal survey questions about trust are good predictors of trustworthy behaviour, but are not significantly related to trusting behaviour. They also find that trustworthiness declines when partners in the experiment are of different races or nationalities. Individual characteristics relating to family status, social skills and charisma were strong predictors of financial returns in the trust game, as people with these characteristics were able to elicit more trustworthy behaviour from others. Barr (1999) applied experimental techniques to measure trust in Zimbabwean villages, and found that people in established communities trusted each other more than those in resettled villages. Carter & Castillo (2003) developed distinct measures of trust, trustworthiness and altruism in a study of 14 South African communities, and concluded that the communities maintained distinctly different normative environments, with some communities being systematically more trusting or altruistic than others.

4.1.4 Qualitative approaches

Qualitative analysis of social capital may take the form of talking to people in detail about their networks and norms, observing people engaged in collective action, or developing descriptive histories of individuals, groups or communities. The main advantage of qualitative methods lies with their ability to provide a more in-depth understanding of the internal and underlying processes which influence social capital than can typically be provided by quantitative methods. For example, while it can be difficult to identify negative

effects of social capital from a set of quantitative indicators, qualitative methods can provide an account of positive and negative experiences, and help reveal the subtleties and complexities of relationships within the community.

The World Bank's Social Capital Assessment Tool (World Bank 2003) involves a mix of qualitative and quantitative methods applied at the household, organisation and community scales. At the community scale, the approach involves undertaking a number of focus groups, with groups stratified by gender (and where relevant, age or ethnicity). Each focus group has a moderator and a number of observers who record details of group processes and issues discussed. The qualitative data collection involves a case study of collective action and a community mapping exercise (indicating location of community assets and services).

Devine & Roberts (2003) describe a qualitative study aimed at better understanding the processes by which people become active volunteers. They concluded that informal social networks such as family, friends and neighbours were an important influence on whether an individual became involved in group activity. Their in-depth interviews suggested that an individual's involvement in voluntary groups was only very loosely linked to their wider views of government and democracy.

Another approach, adopted by Kreuter, Young & Lezin (1998) involved analysing the content of local newspapers. Specifically, this study identified the frequency of the use of expressions such as *civil participation, trust, social engagement* and *reciprocity*, as well as noting the positive or negative perspective in which the words were used. This methodology, complemented by interviews with local leaders and a telephone survey, was used to compare social capital across two rural communities in the United States.

4.2 ANALYSIS BASED ON INDICATORS

Social capital is generally recognised as a multifaceted concept, implying that it needs to be conceptualised and measured in multidimensional terms. However, Stone (2001) notes that a number of studies have relied upon stand-alone indicators representing a single dimension of social capital,¹² with little consideration of whether that indicator is representative of social capital more broadly, or of the relationships between the chosen dimension and other elements of social capital.

More appropriate is the suite-of-indicators approach, which sets out key measures of social capital side-by-side and discusses the links between them. A

¹² In particular, a single measure of trust has sometimes been used as an indicator of social capital as a whole (e.g. Knack & Keefer 1997).

suite-of-indicators may be used to analyse the nature of social capital in a particular community, to analyse trends in social capital over time, or to compare social capital across different communities. The main advantage of this approach lies in its capacity to reflect the multidimensional nature of social capital. According to the OECD (2001),

'measures of social capital should be i) as comprehensive as possible in their coverage of key dimensions (networks, values and norms); and ii) balanced between attitudinal or subjective elements on the one hand (e.g. reported levels of trust) and behavioural aspects on the other (e.g. membership of associations and extent of social ties).'

Much of the empirical literature on social capital adopts a suite-of-indicators approach, although the number of indicators varies widely across studies. Indicators are most often derived from surveys of individuals or administrative sources. Measures of participation in voluntary associations, social contact and trust are perhaps the most commonly used indicators of social capital.

Differences in the selection of indicators across studies tend to reflect differences in project objectives, the conceptualisation of social capital and data availability. Some of the indicators used in previous studies are open to the criticism that they do not actually measure social capital, and an explanation has not always been provided of how an indicator relates to the conceptual definition of social capital. Some studies are based on indicators of the presumed outcomes of social capital,¹³ rather than of social capital itself. However, there is not yet general agreement on where social capital ends and its outcomes begin. For example, voting in elections is regarded as an indicator of social capital by some (e.g. ABS 2004a) and as an outcome of social capital by others (e.g. Paxton 1999). The wide range of indicators used in social capital studies highlights the important role played by subjective judgements in the indicator selection process, as well as the variety of conceptualisations of social capital.

A limitation of the suite-of-indicators approach is that reliance on quantitative indicators may only provide a guide to the nature of social capital in a community, without capturing more qualitative aspects of social capital (such as any negative externalities of group membership). A further limitation relates to the complexity of analysing and drawing overall conclusions from a large set of indicators. A clearly defined conceptual framework can help provide

¹³ Fukuyama (1995) emphasises that the function of social capital is to promote social cohesion, and so interprets the consequences of a lack of social cooperation (e.g. crime, family breakdown) as inverse indicators of social capital. With this sort of approach it is important to recognise that changes in crime rates (or other forms of social dysfunction) are likely to be caused by a range of factors, and so should not be solely interpreted as reflecting declining social capital.

structure and focus when analysing a suite-of-indicators, and lead to a more informed analysis of social capital.

4.3 OTHER ANALYSIS TECHNIQUES

This section provides a brief overview of some of the other analysis techniques which have proved useful in understanding the nature of social networks (network analysis), in producing summary measures of social capital (factor analysis, cluster analysis) or in exploring the relationship between social capital and economic or social wellbeing (multivariate regression analysis).

4.3.1 Network analysis

Social network analysis involves the measurement, mapping and analysis of the relationships between a set of individuals. It aims to understand the patterns of people's interactions, and the extent to which network structure affects beliefs, behaviours and outcomes (such as the success of organisations or communities). The unit of analysis is not the individual, but an entity consisting of a collection of individuals and the linkages among them. There are two basic kinds of network analysis:

- *ego network analysis:* where no attempt is made to link up the networks of different individuals, and which can be based on data collected through traditional sample surveys; and
- *complete network analysis:* where the aim is to obtain information on all of the relationships among a set of respondents.

Network analysis is guided by formal theory expressed in mathematical terms. It involves a distinct set of concepts (e.g. central connectors, network density, boundary spanners, cliques, structural holes) and a distinct approach to data analysis, including extensive use of visual presentation techniques.

This analytical approach has provided evidence on the role of networks in accessing resources such as jobs and information. Granovetter (1973) presents evidence that weak ties (i.e. acquaintances, rather than friends) play an important role in the job search process as they often act as bridges between different groups. Krackhardt & Hanson (1993) use network analysis to investigate the structure of advice, communication and trust networks within an organisation, and the extent to which network structure influences organisational effectiveness and the acceptance of change.

4.3.2 Techniques used to summarise social capital indicators

Factor analysis

The multidimensional nature of social capital cannot be easily reconciled with the policy need for a small and simple set of social capital indicators. This requirement has led to factor analysis techniques being used to reduce large sets of indicators into one or more summary measures of social capital, using the correlation among these indicators. Combining a set of social capital indicators into a single composite measure is an improvement on the standalone indicator approach, since each element of the concept is partly reflected in the overall measure. However, it does prevent analysis of the interactions between the different elements of social capital.

The main applications of factor analysis techniques¹⁴ are to reduce the number of variables and to detect structure in the relationships between variables (i.e. to classify variables). Factor analysis techniques involve combining two or more correlated variables into one factor which is a linear combination of the original variables and captures most of the variability of the original variables (Tabachnick & Fidell 2001).

Once factor analysis has identified the interrelationships and logical combinations among variables, the number of variables may be reduced by deriving new variables for reporting or subsequent statistical analysis. One option is to select the variable with the highest factor loading as a surrogate representative for a particular factor dimension. Another option is to replace the original variables with a computed factor score based on the factor loadings of all variables on the factor. The third option is to replace the original variables that loaded highly on a factor by combining them into a summated scale (Hair et al 1998). The advantages of using summated scales are its tendency to reduce measurement error and its capacity to represent the multiple aspects of a concept in a single measure. Creation of a summated scale should always be guided by conceptual and practical considerations, not just by empirical issues. Other important considerations for summated scales are unidimensionality, reliability and validity (Hair et al 1998).

The multidimensional nature of social capital raises questions about the validity of using any single measure to represent social capital. Indeed, based on factor analysis of selected indicators from the AIFS *Families, Social Capital and Citizenship Survey* dataset, Stone & Hughes (2002) found that an overall measure

¹⁴ In this discussion, the term *factor analysis* is used generically to encompass both principal components and principal factors analysis. While principal components analysis assumes that all of the variability in an item should be used in the analysis, principal factors analysis only uses the variability that an item has in common with the other items. Principal components analysis is often preferred for data reduction, while principal factors analysis is often preferred when the goal is to detect structure amongst a set of variables.

of social capital made no statistical sense. However, they did conclude that a number of valid composite measures could be identified, representing (i) trust and reciprocity and (ii) network size. These two composite measures cut across different types of network.

In the United States context, Putnam (2000) uses factor analysis to construct a single social capital summary measure from a set of 14 state-level indicators (including measures of involvement in organisations, voting turnout, attendance at public meetings, volunteering, informal socialising and trust). He concludes that the indicators are 'sufficiently intercorrelated that they appear to tap a single underlying dimension'. The summary factor is used to explore differences in social capital across states and to investigate the relationship between social capital and selected aspects of social and economic wellbeing.

Cluster analysis

Cluster analysis is a technique which groups cases (or respondents), rather than variables, based on the characteristics they posses. It aims to identify subgroups (or clusters) in the sample, which have a distinctive profile with regard to a set of indicators. Clusters are formed so that cases within a cluster tend to be similar to one another and different to cases in other clusters (see Hair et al 1998 for more detail).

The main advantage of this approach is that it can produce a single summary measure which emphasises the multifaceted nature of social capital. With factor analysis, people with high trust and reciprocity but small networks may simply be given an average social capital score — cluster analysis, however, can produce a single measure of 'type' which reflects these different dimensions of social capital. Cluster analysis can be particularly useful for analysing the distribution of social capital within a community.

Stone and Hughes (2002) applied a cluster-based approach to selected indicators from the AIFS *Families, Social Capital and Citizenship Survey* dataset, and concluded that this technique was a meaningful method of summarising social capital data and showed strong statistical validity. They identified four distinct clusters (share of Australian population provided in brackets):

- *Strong norms, civic connections* (56%): Respondents in this cluster were characterised by high levels of trust and reciprocity in all network types and high rates of group membership, but had small informal networks.
- *Extensive connections, generalised norms* (19%): Respondents in this cluster tended to have extensive and quality relationships across the board, and were described as 'social capital rich'.
- *Socially excluded, social capital poor* (6%): Respondents in this cluster had low connectedness, trust and reciprocity across all network types.

• *Informal only, social capital limited* (18%): This cluster was characterised by small but dense informal networks with high levels of trust and reciprocity. However, there was low trust and reciprocity in broader networks, such as neighbours, community groups and institutions.

In this example, cluster analysis has been used to produce a typology of social capital for individuals, but it can also potentially be used to develop a typology for regions.

4.3.3 Techniques used to explore sources and effects of social capital

Many studies have attempted to examine the relationship between social capital and aspects of social and economic wellbeing. Identifying the determinants and outcomes of social capital involves linking social capital data to data on potential determinants and outcomes at the individual, regional or national scale. A key issue is that the direction of causality is not always clear, since while high levels of social capital may lead to high levels of economic and social wellbeing, it is also plausible that the reverse (or both) can occur.

In reviewing studies of the effects of social capital, Productivity Commission (2003 p45) notes that:

'the statistical methods used in various effects studies are of limited explanatory power, as they do not isolate cause from effect or control sufficiently for extraneous factors. Statistical correlations (as used in some of the literature) can only indicate that two series are moving (to some degree) in union. They can not indicate if two series are systematically related, or the direction of any causality. While regression analyses can control for extraneous influences, some have been criticised for insufficient sophistication.'

The standard approach for assessing the effects of social capital is to run regressions of some outcome (e.g. economic growth) against one or more indicators of social capital and a set of control variables. Regression is a form of statistical modelling that is used to establish the relationship of one variable (the dependent variable) to one or more other variables (the independent variables). In its simplest form, a social capital regression can be presented as follows:

 Such regressions have been used to assess the impact of social capital on specific outcomes at the scale of the individual (e.g. Baum et al 2000), region (e.g. Beugelsdijk & van Schaik 2001) and nation (e.g. Knack & Keefer 1997). Durlauf (2002a, 2002b) provides a detailed critique of how the regression approach has been applied in the social capital literature, noting that:

- Regression models fail to properly account for the endogenous nature of social capital variables.
- Studies fail to distinguish the effects of social capital from other channels through which group characteristics or behaviours may influence individuals.
- Cross-country (cross-region) regressions make the highly questionable assumption that the countries (regions) in the regression model are comparable, and have a common set of drivers.

To improve understanding of the effects of social capital, Durlauf (2002b) favours 'moving the discussion of social capital away from generalities to specific mechanisms . . . since it will facilitate far more precise and comprehensive modelling of causal mechanisms'. He also highlights the potential value of qualitative and experimental methods in providing stronger causal evidence of the effects of social capital.

4.4 IN SUMMARY

Researchers have used a number of different approaches to measure and analyse social capital. The methods used vary according to the objectives of the research, how social capital is conceptualised and the data and resources available to those undertaking the study.

Surveys of individuals serve as the most common source of information for empirical studies of social capital, and can be aggregated to provide an overview of social capital for a community. Other common information sources for empirical studies include collection of data directly from organisations or communities, experimental methods and qualitative approaches.

Much of the empirical literature adopts a suite-of-indicators approach to analysing social capital. The main advantage of this approach lies in its capacity to reflect the multidimensional nature of social capital, but the number and type of indicators varies widely across studies. The suite-of-indicators approach has been used to analyse the nature of social capital in a community, to assess trends in social capital over time or to compare social capital across different communities.

A range of other analysis techniques have proved useful for understanding the nature of social networks (network analysis), for producing summary measures

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of social capital (factor analysis, cluster analysis), and for exploring the relationship between social capital and wellbeing outcomes (multivariate regression analysis).

CHAPTER 5 METHODOLOGY

5.1 OVERVIEW OF BTRE'S APPROACH

The primary objective of this study is to analyse the spatial dimensions of social capital within Australia. Secondary objectives include investigation of the interrelationships between different elements of social capital and exploration of the relationship between social capital and selected aspects of regional wellbeing. For each of these objectives, the adopted methodology consists of two key elements:

- Quantitative analysis of social capital using a suite-of-indicators approach; and
- Review of the empirical literature.

The BTRE has adopted the ABS Framework for Social Capital (ABS 2004a) as the underlying conceptual basis for this study. An overview of the framework was presented in Chapter Two. Some of its key implications for measurement and analysis are highlighted in Box 5.1.

BTRE has selected a set of social capital indicators which measure many of the key elements of social capital (as identified in the ABS Framework) and for which regional¹⁵ data are currently available on a consistent, nationwide basis. Considerable attention is paid to investigating the relationships between these different indicators (see Chapter Eight). The suite-of-indicators is then used to provide a description of the nature of social capital in Australia's regions.

The process used to select the suite-of-indicators is described in detail in Section 5.4. In essence, for each element in the ABS Framework (ABS 2004a), a search was undertaken for pre-existing data sources that provided a useful indicator of that social capital element, were available nationally, and could be disaggregated to a regional (i.e. sub-state) level.

¹⁵ Specifically, BTRE was interested in data which could be (reliably) disaggregated below the State/Territory level. In this report, the term 'region' is used to refer to any spatial disaggregation below the State/Territory level, and can be used to refer to major cities as well as remote and rural areas.

BOX 5.1 IMPLICATIONS OF ABS FRAMEWORK FOR MEASUREMENT AND ANALYSIS OF SOCIAL CAPITAL

Social capital is defined as 'networks, together with shared norms, values and understandings which facilitate cooperation within or among groups' (OECD 2001).

Social capital is recognised as a multidimensional concept – the framework identifies the elements of social capital and organises them hierarchically, starting with the distinction between network qualities, network structure, network transactions and network types.

The framework reflects a balance between behavioural elements of social capital and attitudinal or perception-based elements.

The framework distinguishes between social capital; other forms of capital; the cultural, political, legal and institutional context in which social capital operates; and the potential outcomes of social capital in terms of individual and community wellbeing.

While social capital is viewed as the resources of a group rather than the exclusive property of any one individual, it is assumed that it can be accessed by individuals and that the social capital resources of a group can be meaningfully measured by aggregating responses across individuals.¹⁶

While the ABS Framework provides a list of suggested indicators, it is not intended to represent a final definitive set of indicators for social capital. At present, national data exists for a relatively small proportion of the suggested indicators, and where national data exists, the level to which it can be spatially disaggregated varies. Consequently, the BTRE's set of social capital indicators partly reflects the indicators which were proposed in the ABS framework, and partly reflects alternative indicators derived from non-ABS sources which nevertheless measure key elements of the ABS framework. An overview of the main data sources used in the project is provided in Section 5.3, while the BTRE's indicators are listed in Section 5.5.

The ABS Framework represents an important step along the path to developing standard survey instruments and indicators of social capital in the Australian context. However, further work is needed to agree on a small, manageable set

¹⁶ Glaeser (2001) argues that to understand the formation of social capital, it is necessary to begin at the level of the individual. He proposes a definition of individual social capital that can be viewed as the counterpart to the community social capital which is the main focus of the existing literature. Similarly, Berry & Rickwood (2000) identify a 'personal social capital', which refers to the individual experience of living in a community with a given level of social capital. Personal social capital consists of three related facets of individual social behaviour – community participation, social support and trust.

of indicators which adequately cover all the key elements of social capital and can be used to analyse social capital for Australia's regions.

BTRE's reliance on pre-existing data sources has a number of limitations:

- The emphasis is on a point-in-time snapshot of social capital, rather than long term trends, as the relatively recent uptake of social capital measurement has meant there is a general absence of time-series data for most elements of social capital.
- Coverage of the key dimensions of social capital is less than comprehensive. The suite-of-indicators has a very strong coverage of the 'sharing support' element of the ABS framework, and also has good coverage of the economic participation, social participation, community support, mobility, isolation, and network size, frequency and mode elements. However, the suite-of-indicators has more limited coverage of norms and civic participation, and there are gaps with regard to the density, bonding, bridging and linking elements of social capital.
- The indicators are derived from sources which were not specifically designed to measure social capital, which can impact upon their usefulness as indicators of social capital.
- The indicators may only provide a guide to the nature of social capital in a region, without capturing more qualitative aspects (such as the extent to which certain groups are included or excluded).
- Indicators are derived from a number of different data sources, and are available at different levels of spatial disaggregation. This limits the extent to which the indicators can be linked together to provide a comprehensive spatial analysis of social capital.
- Since the existing national data sources are primarily sample surveys, data are typically not reliable at a small area level, and so much of the regional analysis is presented at a more aggregated regional scale.

Of course, a social capital survey which could produce reliable and comprehensive small area information on a nationwide basis would be very costly to conduct. Therefore, when the objective is to explore the spatial dimensions of social capital across *all* of Australia's regions, reliance on existing data sources is a viable alternative.

This study represents an attempt to bring together the information which is presently available on social capital in Australia's regions, in order to improve the current understanding of the spatial dimensions of social capital, and provide a sound basis for future research.

The existing state of knowledge of how social capital varies across Australia's regions is quite limited. There have been several empirical studies which
measure and analyse social capital, or key dimensions of social capital, for one or more regions (e.g. Onyx & Bullen 1997, Salvaris & Wolcott 2002, Vinson 2004). Some regional analysis has also been undertaken based on state-specific surveys which include questions relevant to social capital (e.g. WA *Living in the Regions* study 1999, Tasmanian *Healthy Communities Survey* 1999, Department for Victorian Communities 2005). There are also some national studies which compare social capital in urban and rural areas of Australia (Stone & Hughes 2001b, Young & Byles 2001).¹⁷ However, to date, there has been no *national* study which investigates the regional dimensions of social capital at a more disaggregated level. This paper fills that gap by bringing together existing information and undertaking new analysis of some key dimensions of social capital.

The process of analysing and drawing overall conclusions from a large set of indicators can be quite complex. In Chapter Eight, factor analysis is used to explore whether the social capital indicators can be meaningfully summarised and to detect structure in the relationships between the indicators. The ABS Framework also helps provide structure to the analysis.

The analysis of the spatial dimensions of social capital in Chapters Nine and Ten is undertaken at various scales (States and Territories, national and state remoteness classes, urban centre size categories, and more detailed regions).¹⁸ At each of these scales, the suite-of-indicators is used to:

- Compare the average levels of key elements of social capital across regions.
- Identify those aspects of social capital in which a particular region has a relative strength or weakness.
- Explore the distribution of social capital within regions (using cluster analysis).

To ensure that conclusions are not based on unreliable data, wherever possible, the estimated Relative Standard Error (RSE) is taken into account to determine whether a regional estimate is *significantly* different from the national average.

¹⁷ Stone & Hughes 2001b compare 'capital cities', 'other metropolitan centres' and 'rural and remote areas'. Young & Byles 2001 compare 'urban', 'large rural centre', 'small rural centre' and 'other rural/remote' for older women only.

¹⁸ Section 5.3 provides an overview of the various regional classifications used in this study.

This suite-of-indicators analysis for 2001–02¹⁹ represents the most comprehensive available snapshot of the spatial dimensions of social capital in Australia. Other important strengths of the study include:

- The ABS Framework for Social Capital (ABS 2004a) provides a clearly defined link between social capital theory and the measures of social capital used in the study, and a clear separation between social capital and its outcomes and determinants.
- The analysis reflects the multidimensional nature of social capital, and contains a mix of subjective and objective measures of social capital.
- The suite-of-indicators has strong coverage of behavioural elements of social capital, such as sharing support, social and economic participation, volunteering, group involvement, mobility, network frequency and network mode.
- The analysis is strongly focused on improving understanding of the relationships between the different elements of social capital.
- Several different regional classifications are used to develop a more complete understanding of the spatial dimensions of social capital.

The previously identified limitations do place some restrictions on the conclusions which can be drawn from this study. For example, little can be said about social capital trends at a regional level. However, the study does provide a detailed snapshot of the spatial dimensions of social capital, which can serve as a benchmark for future research and assessment of trends.

The BTRE's suite-of-indicators is not intended to serve as a recommended set of indicators for future regional analysis — it simply represents the best available set of information at this point in time and for the purposes of this study. Any subsequent update of this study would probably be based on a revised set of indicators, reflecting the latest available information (such as indicators derived from the social capital module of the ABS' *General Social Survey* in 2006).

The other key element of the methodology is the literature review, which feeds into all chapters, but represents the main information source for Chapters 6 (International context) and 11 (Social capital and regional wellbeing). Chapters 7, 8, 9 and 10 rely more heavily on quantitative analysis of the BTRE's social capital indicators, but empirical research by other authors provides a useful supplementary source of information for those aspects of social capital which are not comprehensively covered by the BTRE's suite-of-indicators.

¹⁹ Of BTRE's 33 regional social capital indicators, 29 relate to data collected between August 2001 and July 2002. Job search and donation data relate to 2000, while union membership and carers data relate to 2003.

5.2 OVERVIEW OF DATA SOURCES

Data from a number of sources has been drawn upon to analyse the level of social capital in Australia's regions. The two main data sources are the *Household, Income and Labour Dynamics in Australia* (HILDA) survey and the ABS' *General Social Survey* (GSS). Other data sources for the suite-of-indicators were the Australian Electoral Commission, and ABS' Census of Population and Housing, Labour Force Survey (LFS), *Survey of Voluntary Work* and *Survey of Disability, Ageing and Carers*. Appendix II outlines some additional data sources which do not contribute to BTRE's set of regional social capital indicators.

5.2.1 HILDA

HILDA is a longitudinal survey of Australian households which is funded by the Department of Family and Community Services (FACS), and managed by the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne (Melbourne Institute). The primary objective of HILDA is to provide the supporting data for research into income, labour market and family dynamics. Data are also collected on topics such as life satisfaction, health outcomes, neighbourhood characteristics, time use and work-family balance.

Wave 1 of the survey was undertaken in 2001 and involved four different questionnaires: the Household Form and Household Questionnaire, a Person Questionnaire (PQ) and a Self-Completion Questionnaire (SCQ). In the first wave, 7 682 households were interviewed, 13 965 people completed the PQ and 13 159 people completed the SCQ (Melbourne Institute 2002). The HILDA questions of relevance to social capital are largely from the SCQ, although some are from the PQ.

The original sample design involved a selection of 22 to 34 dwellings in each of 488 Census Collection Districts (CCDs) throughout Australia. People aged under 15 and those living in particularly remote and sparsely populated areas were excluded from the scope of the survey. The sample tended to under-represent residents of Sydney, males, unmarried persons and immigrants from a non-English speaking background. However, survey results were weighted so as to be representative of the in-scope population.

The unit record data files for the HILDA survey have been made available to researchers at minimal cost. This is a significant advantage for the purposes of the present study as it allows for maximum flexibility in defining regions,²⁰ exploring the relationships between social capital indicators, and the extent to which social capital indicators are related to demographic characteristics, life

²⁰ More detail on the regional classifications applied to HILDA data are provided in Section 5.3.

events and aspects of economic and social wellbeing. When analysing regional estimates from HILDA, the estimated RSE²¹ has been taken into account to determine whether a regional estimate is significantly different from the national average. All HILDA-based indicator estimates are presented on a weighted basis, to be representative of the in-scope population.

The analysis of HILDA data in this report is based on the first wave (collected between August and December 2001) rather than the second wave, as the significantly larger sample has a beneficial effect on the reliability of regional results,²² and because some relevant questions were not retained for the 2002 PQ. While the longitudinal nature of the survey is not utilised in this study, as data from later waves become available, the HILDA survey will provide a rich source of information for investigating the underlying dynamics of some key aspects of social capital.

5.2.2 General Social Survey

Between March and July 2002, the ABS conducted the GSS for the first time. The survey aims to collect data across a range of topics which are of importance to human wellbeing. Topics of particular interest to this project include family and community support, voluntary work, financial stress, social activities, use of information technology and perceptions of personal safety. The GSS collected information from 15 500 people aged 18 and over across Australia. People living in sparsely populated areas were excluded from the scope of the survey (ABS 2004b).²³

While a confidentialised unit record data file from the GSS can be accessed at a substantial cost, minimal regional information is included in the file, limiting its value for the present study. ABS does publish selected output at the State remoteness class level, and additional tabulations can be purchased on a consultancy basis.

- ²¹ The standard RSE formula is based on assumptions which are violated by the use of stratification and clustering in the HILDA survey design. Horn (2004) provides a guide to standard errors for the 2001 HILDA, and finds that the effect of the HILDA survey design is that RSEs average 1.22 times RSEs calculated based on the assumption of simple random sampling. In this study we were not able to directly derive RSEs for each HILDA regional indicator estimate. Instead, RSEs were estimated as 1.22 times the simple random sampling RSE. This means there is a degree of approximation underlying significance testing. This approach was seen as preferable to one which ignored differences in the reliability of estimates or to an approach which used the simple random sampling RSEs (and systematically overstated reliability).
- ²² In the second wave, the sample for the SCQ dropped by about 12% to 11 636 respondents.
- ²³ The 2002 National Aboriginal and Torres Strait Islander Social Survey collected a similar set of social capital related information to the GSS and was conducted Australia-wide (i.e. including sparsely populated areas).

The ABS is currently planning the 2006 GSS, which will contain a social capital module as well as a module on voluntary work (comparable to the 2000 *Survey of Voluntary Work*). It is anticipated that most of the social capital indicators included in the 2002 survey will be repeated in 2006, forming the start of a time-series, while a more comprehensive range of social capital data will also be collected in the 2006 GSS.

5.2.3 Other ABS Collections

The ABS conducts its *Census of Population and Housing* every five years, most recently in 2001. The census aims to accurately measure the number of persons in Australia on census night, their key characteristics, and the dwellings in which they live. The main advantage of the census is that data are available at a very detailed spatial level, albeit for a relatively limited number of topics. In this project, census data on mobility, English proficiency and labour force participation are used as indicators of particular elements of social capital. The 2006 *Census of Population and Housing* will, for the first time, include questions on voluntary work and caring responsibilities.

The ABS' *Survey of Voluntary Work* was first conducted in 1995, and repeated in 2000 (ABS 2001a). The survey collects data on rates of participation in voluntary work, the characteristics of volunteers, the types of organisations they work for, time spent volunteering and monetary donations to organisations. The survey relates to all usual residents of private dwellings aged 18 and over, apart from those living in sparsely populated areas. The only available spatial breakdowns are State/Territory and capital city/balance of state.

The ABS conducted its *Survey of Disability, Ageing and Carers* (SDAC) in 2003, 1998 and 1993. For social capital purposes, the data collected on carers (who provide ongoing assistance to people with a disability or older people) is of value. The survey covered persons of all ages living in households or cared accommodation, apart from those in the most remote and sparsely populated areas (ABS 2000a).

The ABS' *Labour Force Survey* (LFS) has in the past included supplements on *Employee Earnings, Benefits and Trade Union Membership* (ABS 2004c) and *Successful and Unsuccessful Job Search Experience* (ABS 2001b) which provide useful data relating to trade union membership rates and job search methods at the capital city/state balance and ABS LFS region levels.

5.3 **REGIONAL CLASSIFICATIONS**

The spatial analysis in this report is undertaken at various levels of aggregation and every effort is made to link the social capital indicators from different data sources at the various regional scales. All of the national data sources described in the previous section are available at the State/Territory level and the capital city/balance of state level.²⁴

The analysis utilises two summary (region type) classifications, namely remoteness classes and urban centre size categories. Since it is not known whether social capital is more closely linked to urban centre size or to remoteness in the Australian context, exploration of the potential relevance of both summary classifications was warranted.

5.3.1 ABS Remoteness Structure

The ABS Remoteness Structure (ABS 2001c) groups Census Collection Districts (CCDs) into five broad classes of remoteness sharing common characteristics in terms of physical distance from services and opportunities for social interaction. These classes are: Major cities, Inner regional, Outer regional, Remote and Very remote. Remoteness classes cut across state and local government boundaries. The concept of remoteness is based upon measuring road distance from any point to the nearest ABS urban centre in each of five population size classes. For example, any location within a short distance of an urban centre of more than 250 000 persons belongs to the Major cities class. The population size of the urban centre is used as a proxy for the availability of a range of services.

The ABS Remoteness Structure is used to assess how elements of social capital vary with remoteness at the national level. The survey-based data sources typically exclude the most sparsely populated parts of Australia from their coverage, meaning that indicators calculated for Very remote and Remote Australia may not be representative of the remoteness class as a whole. Indicators have been presented for a combined 'Remote and very remote' class where data permits, or for a combined 'Outer regional, remote and very remote' class in the case of the GSS.

The ABS Remoteness Structure is also used to present more detailed estimates for remoteness classes within each state.²⁵ For the GSS and SDAC, state remoteness classes are the most detailed spatial level at which data are available.

²⁴ Capital cities are defined using Statistical Division boundaries. The capital city/balance of State distinction is made only for the six States, not for the two Territories.

²⁵ For the five largest States, separate estimates are available for Major cities, Inner regional and Other (Outer regional, remote and very remote) areas. For Tasmania, NT and ACT estimates are not further disaggregated. Thus, estimates are produced for a total of 18 state remoteness categories.

5.3.2 Urban centre size categories

The urban centre size categories are based on the ABS' section of state classification (ABS 2001c). The section of state classification is based on CCDs, covers all of Australia, and was defined using population estimates for 2001. The first level of the classification identifies the following categories: Major urban, Other urban, Bounded locality and Rural balance. Each of the first three categories can be further disaggregated into subcategories based upon the population of the urban area or locality.

Due to data availability, only the HILDA and census indicators have been analysed using urban centre size categories. In order to produce reliable estimates it was necessary to combine some of the subcategories from the ABS' section of state classification.

BTRE's urban centre size categories are as follows:

- Major urban, 1 000 000 or more;
- Major urban, 250 000 to 999 999;
- Major urban, 100 000 to 249 999;
- Other urban, 50 000 to 99 999;
- Other urban, 20 000 to 49 999;
- Other urban, 5 000 to 19 999;
- Other urban, 1 000 to 4 999;
- Bounded locality, 200 to 999; and
- Rural balance.

5.3.3 BTRE defined regions

The availability of unit record data for HILDA allows for flexibility in the use of summary classifications (such as urban centre size or remoteness classes), and also means that data can be produced at a finer level of regional disaggregation, subject to reliability. BTRE has developed a set of 69 regions for analysis of the HILDA and census-based indicators. The boundaries of the BTRE defined regions have been based on the requirement that any regional estimates derived from the survey need to have an acceptable level of reliability. Appendix III provides details of the principles underlying the development of the regional classification and includes maps of the 69 regions.

The BTRE defined regions are based on statistical subdivision (SSD) and statistical division (SD) boundaries, as defined in the ABS' 2001 *Australian Standard Geographical Classification* (ASGC – see ABS 2001c), and do not cross state and territory borders. The regions represent one or more neighbouring

SSDs within Sydney, Melbourne, Perth, Adelaide and Brisbane. Outside the major capitals, the regions represent one or more neighbouring SDs. The 69 regions do not cover all of Australia's land mass, as data are not considered sufficiently reliable for several SDs and SSDs.²⁶

The result is a set of 69 regions designed for the purposes of analysing HILDA data relating to social capital. The regions are compatible with the ASGC, but do not exactly match any existing classification. The BTRE defined regions were developed using reliability criteria — the regions do not have any conceptual link to social catchments, communities of belonging or the boundaries within which social capital could be seen to operate. The regions are simply a useful statistical device for exploring the spatial dimensions of social capital.

5.4 INDICATOR SELECTION PROCESS

BTRE has selected a set of social capital indicators which measure many of the key elements of social capital (as identified in the ABS Framework) and for which regional data are currently available on a consistent, nationwide basis.

For each element in the ABS Framework (ABS 2004a), a search was undertaken for existing data sources that provided a useful indicator of that social capital element, were available nationally and could be disaggregated to a regional (i.e. sub-state) level. Initially, more than 100 potential indicators were identified. While it was desirable that the suite-of-indicators be as comprehensive as possible in its coverage of social capital, the aim of the indicator selection process was to reduce the indicator set to a manageable size, without substantial loss of information.

Appendix IV describes the process used to select the social capital indicators in some detail, but the key criteria underlying the selection process can be summarised as follows:

- Indicators should be clearly linked to an element of social capital identified in the ABS Framework. The number of indicators for any one element of social capital should be kept to a minimum.
- All indicators must be available on a consistent, nationwide basis at a sub-state level. Preference was given to indicators which were available and reliable at a more detailed regional scale.
- Indicators should be statistically reliable there should be no remoteness classes or BTRE defined region for which the indicator has an estimated RSE of more than 50%, and the number of remoteness

²⁶ The excluded areas are: Central Metropolitan Perth SSD and the Pilbara, Kimberley, Upper Great Southern and South Eastern SDs in WA; North West, Central West and South West QLD; Far West NSW; and Southern and Mersey-Lyell in Tasmania.

classes/regions for which an indicator has an estimated RSE of more than 25% should be minimal.

• When multiple indicators were available for a particular element of social capital, the aim was to select a single indicator or composite measure which provided an overall measure of that element of social capital.

It was not always possible to select a single representative indicator and the suite-of-indicators includes multiple indicators for some elements of social capital. The most extreme example is the 'receipt of support' element, for which numerous indicators have been selected to capture support from different sources and the different types of support.

The end result of the indicator selection process was a set of 33 indicators for analysing the spatial dimensions of social capital in Australia. All 33 indicators are available at the State/Territory and capital city/state balance levels. Twenty-eight of the social capital indicators are analysed for state and national remoteness classes, while 15 are analysed at a more detailed regional scale.

5.5 BTRE'S REGIONAL INDICATORS OF SOCIAL CAPITAL

Table 5.1 lists the BTRE's set of social capital indicators against the major elements of the ABS Framework for Social Capital (ABS 2004a). It also identifies the data source for each of the indicators, which in turn determines the geographic scale at which the indicators are available. Appendix I provides a detailed description of each of the BTRE's 33 regional social capital indicators, and outlines their conceptual link to social capital.

The BTRE's set of social capital indicators has very good coverage of all of the 'Common purpose' elements of the ABS framework, as well as of network frequency, network mode, sharing support and isolation. The coverage of norms is not as strong, and there are no regional indicators of efficacy, acceptance of diversity, network density, bonding, bridging or linking. Even with 33 regional indicators, it has not been possible to cover all of the major elements of social capital identified in the ABS Framework.

Each of the selected indicators directly relate to one (or more) of the elements of the ABS Framework. The only exception is the 'satisfaction with family relationships' measure which was included as an indicator of the quality of family relationships. While the ABS Framework does not specifically recommend an indicator of the quality of family relationships, it does highlight the central role of family relationships to social capital (see Figure 2.2). Family plays a critical role in creating norms and social ties, and serving as a primary source of social support.

50		Data a suma s			
Element	Indicators	Data source			
Network qualities					
Norms:					
Trust	Feelings of safety at home alone after dark	ABS General Social Survey 2002			
Reciprocity	Donation rate*	ABS Survey of Voluntary Work 2000			
	Volunteering rate*	HILDA 2001			
	How commonly do neighbours help each other out in your neighbourhood?*	HILDA 2001			
Sense of efficacy, Cooperation, Acceptance of diversity	n/a				
Common purpose:					
Social participation	Participation rate in church or religious activities	ABS General Social Survey 2002			
	Participation rate in sport or recreational physical activity	ABS General Social Survey 2002			
	Active membership rate*	HILDA 2001			
Civic participation	Trade union membership rate*	ABS Employee Earnings, Benefits & Trade Union Membership 2002			
	Voter turnout at federal election	Australian Electoral Commission 2001			
	Active membership rate*	HILDA 2001			
	Proportion of carers in population*	ABS Survey of Disability, Ageing and Carers 2003			
Community support	Donation rate*	ABS Survey of Voluntary Work 2000			
	Volunteering rate*	HILDA 2001			
	Active membership rate*	HILDA 2001			
Friendship	n/a (see network size and frequency elements for relevant indicators)				
Family^	Satisfaction with family relationships	HILDA 2001			
Economic participation	Labour force participation rate	ABS Census of Population and Housing 2001			
	Trade union membership rate*	ABS Employee Earnings, Benefits & Trade Union Membership 2002			
Barriers to	Health barriers to social participation	HILDA 2001			
participation [#]	Language barriers to participation	ABS Census of Population & Housing 2001			
	Transport barriers to participation	ABS General Social Survey 2002			
	Proportion of carers in population*	ABS Survey of Disability, Ageing and Carers 2003			
Network structure	1				
Network size	Anticipated source of support in a crisis*	ABS General Social Survey 2002			
	Anticipated support from family in a crisis*	ABS General Social Survey 2002			
	Anticipated support from friend in a crisis*	ABS General Social Survey 2002			
	Anticipated support from neighbour in a crisis*	ABS General Social Survey 2002			
	1				

TABLE 5.1 BTRE'S REGIONAL INDICATORS MAPPED TO ABS FRAMEWORK FOR SOCIAL CAPITAL

CONTINUED OVERPAGE

Element	Currently available indicators	Australian data source		
Network structure continu	ved	•		
Network frequency/	Frequency of social contact	HILDA, 2001		
communication mode	Face to face contact with family or friends in last week	ABS General Social Survey 2002		
	Telephone, mail or e-mail contact with family or friends in last week	ABS General Social Survey 2002		
	Usage of e-mail or chat sites in last 12 months	ABS General Social Survey 2002		
Density/openness	n/a			
Transience/mobility	Proportion who live in same SLA as they did 5 years ago	ABS Census of Population and Housing 2001		
Power Relationships	n/a			
Network transactions		•		
Sharing support:				
Physical/financial	Anticipated source of support in a crisis*	ABS General Social Survey 2002		
assistance, emotional	Anticipated support from family in a crisis*	ABS General Social Survey 2002		
support and encouragement	Anticipated support from friend in a crisis*	ABS General Social Survey 2002		
	Anticipated support from neighbour in a crisis*	ABS General Social Survey 2002		
	Could ask someone for small favours	ABS General Social Survey 2002		
	How commonly do neighbours help each other out in your neighbourhood?*	HILDA 2001		
	Emotional and general support received from others	HILDA 2001		
	Inability to obtain emotional and general support from others	HILDA 2001		
	Capacity to raise \$2000 in 1 week for emergency	HILDA 2001		
Integration into the community	Integration into the community	HILDA 2001		
Common action	n/a			
Sharing knowledge, information and	Used internet to access government services over past 12 months	ABS General Social Survey 2002		
introductions	Proportion of successful job seekers using friends, relatives or company contacts to gain employment	ABS Survey of Job Search Experience 2000		
Negotiation, Applying Sanctions	n/a			
Network types	·	·		
Bonding, Bridging, Linking	n/a			
Isolation	I often feel very lonely	HILDA 2001		
	Only get together socially once a month or less with friends or relatives	HILDA 2001		

TABLE 5.1 CONTINUED

Note

* These indicators appear in more than one part of the framework. # In the ABS Framework, barriers are identified separately under social participation and civic participation, but in this analysis they are grouped together under a single item. ^ This item is not separately identified in the ABS Framework. The ABS Framework includes a satisfaction with friendships indicator, and BTRE considered the quality of family relationships to be sufficiently central to the concept of social capital to be represented by an indicator in this analysis.

A number of indicators relate to more than one element of the ABS Framework. For example, donating money is relevant to both reciprocity and community support. Another example is the 'anticipated source of support in a crisis' indicator (and its family, friend and neighbour counterparts) which have been used to analyse both network size and social support.

5.6 SMALL AREA MEASURES

Although the HILDA-based indicators are available for 69 Australian regions, only three of the indicators in Table 5.1 are available at a small area level (i.e. SLAs, LGAs or SSDs). Since much of the interest in social capital is from the community or small area perspective, Appendix IX builds upon the findings of earlier chapters to explore whether it is possible to identify some useful proxies for particular aspects of social capital at the SLA, LGA or SSD level.

5.7 IN SUMMARY

The BTRE has adopted the ABS Framework for Social Capital (ABS 2004a) as the underlying conceptual basis for this study of the spatial dimensions of social capital in Australia. A set of 33 social capital indicators has been selected which measures many of the key elements of social capital identified in the ABS Framework and for which regional (i.e. sub-state) data are currently available on a consistent, nationwide basis.

The adopted methodology consists of a review of the empirical literature, coupled with a quantitative analysis of this set of social capital indicators. One of the strengths of the methodology is that it reflects the multidimensional nature of social capital and contains a mix of subjective and objective measures. The BTRE's set of 33 indicators does not comprehensively cover all of the key dimensions of social capital, but does have good coverage of the mobility, isolation, sharing support, network frequency, network mode and social, economic and community participation elements of social capital.

The suite of indicators provides a point-in-time snapshot of key social capital dimensions for 2001–02. The social capital indicators draw on several data sources, the most important of which are FACS' HILDA survey and the ABS' *General Social Survey* and *Census of Population and Housing*. The spatial analysis is undertaken at various scales, including States and Territories, national and state remoteness classes, urban centre size categories and BTRE defined regions.

The BTRE's methodology brings together existing information and undertakes new analysis of social capital in Australia's regions, in order to improve the current understanding of the spatial dimensions of social capital and provide a sound basis for future research. Focus on Regions No. 4: Social Capital

CHAPTER 6 INTERNATIONAL CONTEXT

6.1 AUSTRALIA IN AN INTERNATIONAL CONTEXT

There are a number of international surveys which capture one or more dimensions of social capital. The *World Values Survey* (WVS), the *International Social Survey Program* (ISSP) and the *International Adult Literacy Survey* (IALS) are prominent examples of international survey instruments which have measured elements of social capital. Results from these surveys enable comparison of key elements of social capital between Australia and other countries. They also enable cross-country comparisons of social capital trends between 1981 and 1995.²⁷

6.1.1 World Values Survey²⁸

The WVS is now conducted in almost 80 societies across the world. Social trust is at the heart of the social capital concept, and the generalised trust question contained in the WVS has been widely used as an indicator of social capital in cross-country comparisons. A number of difficulties have been raised regarding the international comparability of responses given to questions in the WVS. For example, it may be inappropriate to make comparisons if the respondents' interpretation of the meaning of 'trust' or 'most people' differs across countries, cultures or time (OECD 2001, PC 2003). Thus, results of these international surveys should be treated with caution.

Table 6.1 shows that, according to the WVS, the level of trust in Australia decreased between 1981 and 1995. In 1981, 48% of Australian respondents indicated that they could trust most people. By 1995, this number had decreased to 40%. For many of the countries in Table 6.1, levels of trust either remained constant or increased over time. For example, Netherlands experienced a large increase from 46% to 55%, while Canada remained

²⁷ The WVS was conducted in Australia in 1981 and 1995, and a new wave is being collected for 2005/2006.

²⁸ Except where otherwise stated, analysis in this section is based on results of the WVS retrieved from <www.worldvaluessurvey.org/services/index.html>.

relatively constant between surveys. The United States of America (USA), Spain and South Africa experienced a decline in trust levels — in all three cases the decline was primarily evident between 1990 and 1995/1996.

Country	Percentage of people stating that 'most people could be trusted'									
	1981	1990	1995/1996^							
Norway	61	65	65							
Sweden	57	66	56							
Canada	50	52	*							
Australia	48	*	40							
Netherlands	46	55	*							
USA	46	50	37							
Japan	41	42	46							
Republic of Ireland	40	47	*							
Spain	35	34	29							
South Africa	31	28	18							
Italy	26	35	*							

TABLE 6.1 GENERALISED TRUST FOR SELECTED COUNTRIES, 1981 TO 1996

Note * indicates that a WVS was not conducted in the particular country during the specified period of time.
^ Data relates to 1995 for Australia, South Africa, Japan and USA and to 1996 for Spain, Norway and Sweden.

Source BTRE analysis of WVS, retrieved from <www.worldvaluessurvey.org/services/index.html>.

The WVS also measures confidence in different types of institutions. Figure 6.1 presents several measures of institutional trust, focusing on those countries which participated in both the first and third waves of the WVS. Australia and the USA both have relatively low confidence in the press, the legal system and the national government. Australians report greater confidence in police and companies — for these institutions, confidence is comparable to Sweden and Norway.

Between 1981 and 1995, Australians showed declining levels of institutional trust, particularly in:²⁹

- Parliament, for which the average level of confidence declined from 52 (on a 0 to 100 scale³⁰) in 1981 to 40 in 1995; and
- The legal system (declined from 56 to 43).

²⁹ The question relating to confidence in major companies was asked differently in 1981 and 1995, so that comparisons are of little value (Hughes, Bellamy & Black 1998).

³⁰ The method for deriving this confidence score is described in the note to Figure 6.1.

This general pattern of declining institutional trust was also evident in the USA and Norway. However, South Africans' confidence in institutions rose strongly between 1981 and 1995.



FIGURE 6.1 INSTITUTIONAL TRUST FOR SELECTED COUNTRIES, 1995/1996

The WVS collects information on a number of different forms of civic participation. In 1995, Australians had an above-average rate of signing petitions and joining boycotts, while it was roughly average in terms of attendance at demonstrations. Canada and the USA had a similar profile to Australia in terms of these forms of civic participation, while European countries had higher rates of demonstration attendance. All three types of civic participation grew strongly in Australia between 1981 and 1995. An increasing participation trend was also evident in Norway, Sweden, USA and Japan.

In contrast, church attendance in Australia has declined notably, from 40% attending church at least once a month in 1981 to 25% in 1995. Spain and the USA also experienced declines in church attendance over this period.

The level of participation in voluntary organisations was also measured in the survey. An overall summary gauge which incorporated all identified categories of voluntary organisations was developed by Norris (2002). Australia ranked

Note Data relates to 1995 for Australia, South Africa, Japan and USA and to 1996 for Spain, Norway and Sweden. The average score for a country was calculated by scoring 100 for a 'great deal of confidence' response, 66.7 for 'quite a lot', 33.3 for 'not very much' and 0 for 'none at all', and calculating the average for all respondents to the question. The higher the country's score, the higher the level of confidence in that type of institution.

Source BTRE analysis of WVS, retrieved from <www.worldvaluessurvey.org/services/index.html>.

highly with a score of 88, compared to Sweden with 92, USA 92, New Zealand 87, Spain 58 and Japan 51.³¹

Figure 6.2 presents a social capital index derived by Norris (2002) from the 'voluntary organisation' and 'trust' questions in the WVS. This index ranks Australia 5th highest out of 47 countries for the level of social capital, below only Norway, Sweden, Finland and the USA. Less developed countries in Eastern Europe, South America and Africa dominate the bottom half of the rankings.



FIGURE 6.2 SOCIAL CAPITAL INDEX FOR SELECTED COUNTRIES, 1995 TO 1997

Note Social capital index was derived from 4 questions in the World Values Survey, namely that (1) most people can be trusted', (2) people who belong to at least one of the nine categories of voluntary associations, (3) number of organisations to which people belong, and (4) an organisational scale adding together whether people were active members, passive members or not members of any of the nine categories of voluntary organisations.

Source Norris (2002) analysis of data from third wave of WVS.

6.1.2 Other international surveys

A number of other prominent international survey programmes have included questions relating to key dimensions of the social capital concept.

The ISSP is conducted across more than 20 countries, and has included questions relating to trust, volunteering, contacts, family and government. Questions relating to voluntary charity work were asked in the 1998–1999

³¹ A high score represents a high level of participation in voluntary organisations.

survey. Australia ranked third highest with 41% of respondents reporting that they engaged in some volunteer work during the previous 12 months. The Philippines ranked highest with 51% of respondents reporting participation, while Germany (excluding East Germany) ranked lowest with 8% (Evans & Kelley 2000).

The IALS is an international survey which focuses on measuring respondents' literacy and skill levels. However, during the mid 1990's, data pertaining to participation in 'volunteer and community organisations' was collected (Healy 2003). Figure 6.3 shows the results for the 20 countries surveyed. Australia ranked 8th with over 25% of respondents participating in volunteer or community organisations at least once a month.

The findings of these two surveys generally support conclusions drawn from the WVS that rates of volunteering, community and civic participation were relatively high in Australia. Only the Scandinavian countries consistently rank more highly. Australian trends in social capital are broadly similar to those operating in the USA. Some elements of social capital are declining — such as trust — while other elements of social capital are stable or increasing. Despite substantial declines in institutional and generalised trust, Australia still seems to be relatively well endowed in social capital on an international scale.

FIGURE 6.3 PERCENTAGE OF POPULATION WHO PARTICIPATED IN VOLUNTEER OR COMMUNITY ORGANISATIONS AT LEAST ONCE A MONTH, SELECTED COUNTRIES, 1994 TO 1998



Source Analysis of International Adult Literacy Survey in OECD 2000.

6.2 INTERNATIONAL EVIDENCE OF REGIONAL VARIATIONS

A number of studies have been conducted in other countries which have a similar objective to the present study, that being the exploration of the spatial dimensions of social capital. The USA, Canada and Europe have been the focus of studies of regional differences in social capital.

Putnam (2000) explored key dimensions of social capital across States of the USA. He found that the level of social capital differed across States, and argued that prominent factors causing disparities included historic patterns of slavery and Scandinavian immigration into the USA. These patterns have limited applicability to the Australian context. However, it does highlight the role of historic and cultural factors in determining the current levels of social capital in regions. Putnam also suggested that community involvement in metropolitan areas is significantly lower than in non-metropolitan areas.

Rash & McCoy (2001) explored differences in social capital across communities in the USA. They found that many big cities had similar characteristics, namely high diversity and low social engagement. They also found that southern cities were relatively more likely to 'bond' through faith based activities, but less willing to 'bridge' with those perceived to be different from them, which was said to stem from historic slavery patterns. A study of Chicago neighbourhoods by Subramanian et al (2003) found that significant neighbourhood differences in trust remained, after accounting for differences in individual social and demographic characteristics, providing support for the notion that social capital is a true contextual construct.

Beugelsdijk & van Schaik (2001) found that trust differs considerably across European regions. They concluded that in some countries (such as the Netherlands), trust is rather homogenous across regions, while other countries (such as Italy) have considerable variation in trust levels between regions. Group membership and volunteering rates also differed markedly across regions in some, but not all, European countries. Studies of social capital in rural communities within Canada (Reimer 2002), South Africa (Carter & Castillo 2003) and the United Kingdom (UKONS 2003) found that key elements of social capital varied significantly across communities in those countries.

A study by the National Economic and Social Forum (2003) analysed key indicators of social capital in the Republic of Ireland. Informal social contact in towns with a population of more than 10 000 far exceeded social contact in smaller towns, villages and the open countryside. Indicators of social trust showed the opposite pattern, with large towns having markedly less trust than smaller towns. Villages and towns with populations up to 10 000 people had higher levels of group involvement and volunteering than larger towns. Similarly, social support from neighbours was markedly higher in villages and the open countryside, compared to larger towns. These international studies indicate that social capital can — but does not always — differ significantly across regions within a country. There is also evidence from a number of countries that community involvement tends to be lower in large urban centres. However, the important role of historic, cultural, economic and political factors in driving spatial patterns may limit the transferability of these international findings to the Australian context.

6.3 IN SUMMARY

The World Values Survey (WVS), the International Social Survey Program (ISSP) and the International Adult Literacy Survey (IALS) are prominent examples of international surveys which capture one or more dimensions of social capital. Results from these surveys enable comparison of key elements of social capital between Australia and other countries. They also enable cross-country comparisons of social capital trends.

The findings from these international surveys generally support the conclusion that rates of volunteering, community and civic participation tend to be relatively high in Australia. Despite substantial declines in institutional and generalised trust between 1981 and 1995, Australia still seems to be relatively well endowed in social capital on an international scale. Over that period Australian trends in social capital were broadly similar to those operating in the USA. Some elements of social capital were declining – such as trust – while other elements of social capital were stable or increasing.

Studies of regional variations in social capital have been conducted in a number of different geographic settings, including the European Union, Ireland, South Africa, Canada and the United States. A number of these studies find that community involvement generally tends to be lower in large urban centres. These studies also show that social capital can differ significantly across regions within a country, but such differences are not apparent in all countries. Focus on Regions No. 4: Social Capital

CHAPTER 7 SOCIAL CAPITAL IN AUSTRALIA

This chapter brings together the available evidence on national trends in social capital and explores the extent to which the various elements of social capital depend on the demographic and social characteristics of individuals.

7.1 TRENDS IN SOCIAL CAPITAL

Social capital is a relatively new concept, and there is only limited time-series data available to assess trends in Australian social capital. The available data are typically sourced from surveys which were designed for purposes other than measuring social capital. The time-series data analysed in this section has been drawn together from a variety of sources, and does not cover all aspects of the social capital concept. No rigorous conclusions about Australian trends in social capital can be drawn due to the sparse coverage of the social capital concept and the inconsistent and partial timeframes.

7.1.1 Trust

As noted in Section 6.1, according to the WVS, the proportion of Australians reporting that most people could be trusted dropped from 48% in 1981 to 40% in 1995. Over the same period, there were declines in the confidence of Australians in parliament, the legal system, the press, the civil service and police. The Australian Election Study (AES) also included questions pertaining to respondents' trust of the government in Canberra. In 1987, 40% of respondents thought the government could be trusted always or most of the time to do what is right, compared to 38% in 1993.³²

7.1.2 Civic Participation

As noted in the previous chapter, the WVS identified significant increases in the number of Australians who had signed a petition, joined a boycott or attended a demonstration between 1981 and 1995.

³² All AES and National Social Science Survey results referred to in this chapter were sourced from <assda224-100.anu.edu.au/nesstarlight/index.jsp>.

Voter turnout at federal elections for the House of Representatives rose from 57% at federation to 94% in 1928, and has remained reasonably stable since then, with voter turnout of 94% at the 2004 federal election.³³ The *National Social Science Survey* (NSSS) included a question asking if people would vote if it was not compulsory. In 1984, 84% of people reported that they would probably or definitely still vote, and this stayed fairly stable at 85% in 1994.^{34, 35}

7.1.3 Social Participation

The NSSS questioned respondents on their level of church attendance. In 1986–87, 57% of people reported that they attended church more than once a year, but this declined to 50% in 1994. The *National Church Life Survey* also indicates that church attendance is declining. From 1996 to 2001, the number of people attending church on a weekly basis declined by 7% (Bellamy & Castle 2004). Both surveys are supported by the WVS, which showed a substantial decline in church attendance in Australia from 1981 to 1995. Furthermore, the ABS *Time Use Survey* indicates that participation in religious activities and ceremonies accounted for less daily time in 1997 than in 1992 (ABS 1998a).

Turning to a different aspect of social participation, ABS (2004g) reports that 'levels of participation in organised, non-organised and social sport or physical activities grew during the 1990s'.

7.1.4 Economic Participation

The ABS reports Australia's labour force participation rate on a monthly basis. A slight upward trend is observable from 1978 to 2004, with the national labour force participation rate standing at 61% in February 1978 and 64% in July 2004 (ABS 2004h). Much of the increase occurred in the late 1980s.

The ABS also monitors the union membership rate. In 1976, 51% of all employees were members of a trade union. By 2003, only 23% were members (ABS 2000c, ABS 2004c).

³³ Compulsory voting was introduced at federal elections from 1924. The voter turnout data are sourced from: <www.aec.gov.au/_content/what/voting/turnout.htm>

³⁴ The AES ran a similar question during the 1998 survey, finding that 86% of people would still vote if it was not compulsory.

³⁵ In non-compulsory local government elections the voter turnout rates have been markedly lower (e.g. 58% in Tasmania in 2002 and 38% in WA in May 2001).

7.1.5 Community Participation

Evans & Kelley (2000) draw on data from the *International Social Science Survey Australia* (ISSSA) to show that volunteering rates in Australia are increasing over time, and that the average volunteer is increasing their hours of volunteer work. In 1995, 27% of Australians regularly engaged in voluntary work, compared to 28% in 1996 and 33% in 1999. Average hours contributed by those who volunteered also increased during this period, from 6 in 1996 to 8 in 1999.

The ABS *Survey of Voluntary Work* reported that 32% of adults volunteered in 2000, up from 24% in 1995.³⁶ Median weekly hours of voluntary work remained stable between 1995 and 2000 (ABS 2001a). The ABS *Time Use Survey* found that the average time spent undertaking voluntary work and care activities increased from 2 hours 20 minutes per week in 1992 to 2 hours 34 minutes in 1997. There was also an increase in the rate of participation in community activities on an average day from 15% in 1992 to 23% in 1997 (ABS 1998a).

The ABS *Survey of Disability, Ageing and Carers* reported that the proportion of the population with caring responsibilities remained relatively constant between 1998 and 2003, rising only slightly from 12.6% to 13.0% (ABS 1998b, ABS 2004i).

Evans & Kelley (2002b) drew upon ISSSA data to report on levels of active neighbouring in Australia. They found no significant change in the level of active neighbouring between 1989 and 2001.

7.1.6 Other

Data from the ABS *Census of Population and Housing* can be used to measure the transience of the Australian population. In 1996, 72% of Australians lived in the same SLA as they did 5 years ago, and the proportion was unchanged in 2001.

7.1.7 Overview

Table 7.1 provides an overview of national trends for various elements of social capital. There is reasonably strong evidence of a declining trend for trust and church attendance, and an increasing trend for voluntary work in the late 1990s. However, the mixed results mean it is not possible to draw an overall conclusion as to whether social capital is growing or declining in Australia.

³⁶ The volunteering rate in the ABS' 2002 *General Social Survey* was estimated to be 34%.

Indicator	Source	Time period	Observed trend
Can most people be trusted?	World Values Survey	1981 – 1995	Declining trust
Trust in government in Canberra to	Australian Electoral Study	1987 – 1993	Slight decline in trust
do what is right			
Confidence in various institutions	World Values Survey	1981 – 1995	Declining confidence
Signing petitions, attending	World Values Survey	1981 – 1995	Increasing participation
demonstrations, joining boycotts			
Voter turnout	Australian Electoral	1901 – 2001	Relatively unchanged
	Commission		
Vote if was not compulsory	National Social Science	1984 – 1994	Relatively unchanged
	Survey and Australian	and 1998	
	Electoral Study		
Attendance at church at least once a	National Social Science	1986–87 to	Declining attendance
year	Survey	1994	
Attendance at church at least once a	World Values Survey	1981 – 1995	Declining attendance
month			
Weekly attendance at church	National Church Life Survey	1996 – 2001	Declining attendance
Participation in religious activities,	ABS Time Use Survey	1992 – 1997	Declining participation
ritual ceremonies			
Involvement in sport	ABS 2004g	1990s	Increasing participation
Labour force participation	ABS Labour Force Survey	1978 – 2004	Slight increase
Trade union membership	ABS Labour Force Survey	1976 – 2003	Declining membership
Performed voluntary work in past 12	ABS Survey of Voluntary	1995 – 2000	Increasing voluntary work
months	Work		
Performed regular voluntary work	ISSSA	1995 – 1999	Increasing voluntary work
Average hours of voluntary work	ISSSA	1995 – 1999	Increase in average hours
Voluntary and care activities	ABS Time Use Survey	1992 – 1997	Increasing time spent on
			volunteering and care
Participation rate in community	ABS Time Use Survey	1992 – 1997	Increasing participation
activities			
Active neighbouring	ISSSA	1989 – 2001	Remained constant
Live in same SLA as 5 years ago	ABS Census	1996 – 2001	Remained unchanged

TABLE 7.1 SUMMARY OF TRENDS FOR SELECTED SOCIAL CAPITAL ELEMENTS, AUSTRALIA

Source BTRE analysis of various studies and data sources.

7.2 SOCIAL CAPITAL AND THE SOCIO-DEMOGRAPHIC CHARACTERISTICS OF INDIVIDUALS

Chapter Two summarised the literature on the sources and determinants of social capital. A range of personal, family and household characteristics were identified as potential determinants of social capital, alongside resources, cultural and institutional conditions. This section presents empirical evidence on the extent to which key elements of social capital relate to the demographic, economic and social characteristics of *individual* Australians.³⁷ The analysis identifies the characteristics which appear to be most closely related to social capital. Any strong dependence of key elements of social capital on individual characteristics such as age and income will potentially influence the spatial patterns of social capital in Australia.

³⁷ The links between social capital and regional wellbeing are explored in Chapter Eleven.

7.2.1 Existing evidence for Australia

Onyx & Bullen (1997), in their study of five NSW communities, found that social capital was not generally correlated with demographic characteristics such as age, gender and language. Key exceptions were that women were less likely to feel safe than men, and people with more children tended to participate more in the local community.

Based on the AIFS' *Social Capital, Families and Citizenship Survey,* Stone & Hughes (2002) concluded that trust, reciprocity and the size of people's networks were related to a range of individual and family characteristics. Regression analysis was used to assess relationships with two summary scales:

- Trust and reciprocity: Being male, de-facto, separated or divorced, speaking a language other than English and poor health all have a significant negative relationship with trust and reciprocity, when other factors are controlled for. Being a home owner has a significant positive relationship with trust and reciprocity.
- Network size: Being de-facto or married, tertiary qualified or in excellent health all have a significant positive relationship with network size, while age has a significant negative relationship with network size.

While the above regressions did not control for income or financial wellbeing, Stone & Hughes (2001) concluded that self-reported financial wellbeing was strongly and positively correlated with trust, reciprocity and network size.

Evans & Kelley (2000) used logistic regression to predict whether respondents to ISSSA 1996 and 1999 regularly undertook voluntary work. Voluntary work increased strongly through the younger age categories, remained constant between the ages of 50 and 69, and declined slightly amongst older age groups. Labour force participants and those with minimal education were significantly less likely to volunteer, controlling for other influences. Department of Family and Community Services (2004) also used logistic regression to explore influences on voluntary work participation by income support customers. People aged 50 and over and those with dependent children were significantly more likely to do voluntary work, while people with a medical condition were significantly less likely to do voluntary work.

Evans & Kelley (2003) used logistic regression to predict belonging and participation in altruistic/community associations and political/economic associations using ISSSA data for 2001–02. Controlling for other influences, both types of group involvement rose strongly with age and peaked for the '66 and over' age group. The authors concluded that men are significantly more likely to be involved in political/economic associations, but there is no gender difference for altruistic/community associations. Educational attainment was one of the most important determinants of involvement in both types of

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associations. Full-time workers had a significantly higher participation in political/economic organisations and a relatively low participation in altruistic/community organisations. Marital status and family income did not have independent effects on group participation.

Baum et al (2000) used multivariate analysis to explore the links between social and civic participation and health. They concluded that social participation was strongly linked with health status (controlling for other influences), but civic participation was not significantly linked to an individual's health. Social participation declined with age and increased with socio-economic status. Multivariate analysis by Hogan & Owen (2000) suggests differences in educational attainment are the principal source of individual differences in the number of political actions engaged in during the previous 12 months.

Department for Victorian Communities (2004) found the unemployed, public housing tenants, sole parent households, and those with household income of less than \$20 000 were least likely to be able to raise \$2 000 in two days in an emergency. The Victorian study also examined demographic influences on the ability to get help from friends, family or neighbours when needed. People who spoke a language other than English at home, sole parent households, public housing tenants, those with only primary education and the unemployed were least able to obtain help when needed.

Hughes et al (1998) identified several correlations between social trust and demographic variables from the *Australian Community Survey*. People with poor health tended to have less confidence in societal institutions. This supported the broader conclusion that people who were less involved in society's power structures tended to be 'more careful with other people'. Those under 30 and over 70 were also found to have lower trust. In another study based on the *Australian Community Survey*, Leigh (2005) found that people with high levels of trust tended to be more educated and spend less time commuting.

Taken together, these studies certainly suggest that socio-demographic factors are an important influence on the social capital of individuals in Australia. However, different characteristics of individuals seem to be important for different elements of social capital. In particular, age, education and labour force status appear to be strongly related to a number of different aspects of social capital. The existing Australian literature is largely based on correlation and regression analysis, and provides few insights into causation.

7.2.2 New evidence for Australia

This section commences with some bivariate analysis of the extent to which the BTRE's social capital indicators relate to selected characteristics of individuals.³⁸ The bivariate analysis brings together information from a number of different data sources. However, because it looks at one characteristic at a time, without controlling for the influence of other characteristics, such analysis can potentially be misleading.

The majority of this section is based on the results of multivariate regression analysis. This type of analysis requires access to unit record data and so has only been undertaken for the social capital indicators which could be sourced from HILDA. The multivariate analysis explores the potential role of a broad array of socio-demographic characteristics of individuals. Location-related characteristics (i.e. where people live) are not examined until Chapter Nine.

7.2.2.1 Bivariate analysis

This subsection discusses the extent to which key indicators of social capital are related to an individual's age, sex, income and labour force status. While the bivariate analysis involves a much broader set of social capital indicators than the multivariate analysis, not every indicator was disaggregated by each demographic variable, due to limitations of data availability and reliability.

Age

Table 7.2 shows that age is positively related to participation in church or religious activities, caring responsibilities, satisfaction with family relationships, anticipated support from neighbours in a time of crisis and the capacity to raise \$2000 in one week for an emergency. With the exception of the 15–19 year age group, this relationship also holds for the integration into the community and neighbours helping each other out indicators. The volunteering rate tends to increase with age, but peaks for 65–74 year olds, with the 75 and over age group having a volunteering rate similar to the national average.

Not surprisingly, sporting participation declines with age, while labour force participation peaks between the ages of 35 and 44. The frequency of social contact is highest for the younger age groups (particularly 15–19 year olds) and is relatively low for individuals aged between 35 and 65.

There are also a couple of indicators where age does not seem to have a significant influence. Health barriers to social participation are relatively

³⁸ The characteristics are selected from those used to tabulate GSS social capital indicators in ABS (2004b). Adopting the GSS categories maximises the coverage of the sociodemographic analysis. For the HILDA indicators, the socio-demographic characteristics are defined to be consistent with the GSS categories.

constant across all age groups, apart from the oldest and youngest age groups. Similarly, feelings of loneliness are not particularly dependent on age.

Although not presented in Table 7.2, 10% of 18–24 year olds report that they feel either unsafe or very unsafe at home alone after dark, and this is the highest for any age category. Feelings of safety do not differ greatly across the remaining age categories (ABS 2004b).

Social capital indicator	15—19	20-24	25-34	35-44	45-54	55-64	65-74	75+	All
Norms:									
Donation rate, 2000 (%)	nr	*61.8	71.3	79.5	79.6	77.4	72.6	72.3	74.2
How commonly do neighbours help each other out in your neighbourhood ${}^{\textcircled{\text{\tiny @}}}$	59.7	55.4	59.9	64.1	65.3	66.4	66.6	67.7	63.2
Common purpose:									
Participation rate in church or religious activities (%)	nr	*19.7	19.4	24.6	24.1	26.6	27.1	25.8	23.4
Participation rate is sport or recreational physical activity (%)	nr	*73.0	72.6	68.1	62.4	59.2	^45.7	nr	64.0
Active membership rate (%)	49.3	38.1	34.4	35.8	36.9	41.7	49.8	40.5	39.3
Volunteering rate (%)	12.6	13.1	15.6	26.4	25.9	26.3	29.2	21.1	21.8
Proportion of carers in population, 2003 (%)	nr	*9.0	10.7	16.4	19.3	21.8	20.6	17.9	13.0
Satisfaction with family relationships [@]	76.9	79.6	79.3	78.4	81.2	84.7	88.8	92.6	81.5
Labour force participation rate (%)	51.5	79.8	80.2	80.7	79.0	50.6	^7.8	nr	63.0
Health barriers to social participation [®]	16.8	18.2	18.4	18.8	18.8	20.7	19.0	29.6	19.4
Network structure:									
Anticipated sources of support in time of crisis (%)	nr	*97.8	95.2	94.8	91.8	92.4	91.9	92.6	94.0
Anticipated support from family in a crisis (%)	nr	*82.9	87.0	82.6	77.6	81.8	82.6	81.5	82.4
Anticipated support from friend in a crisis (%)	nr	*81.5	72.3	71.1	66.3	60.0	46.2	39.8	66.1
Anticipated support from neighbour in a crisis (%)	nr	*25.4	26.3	36.5	38.0	39.9	37.5	40.7	34.1
Frequency of social contact (%)	76.5	70.5	64.7	57.6	53.6	56.7	58.5	59.6	61.1
Network transactions:									
Could ask someone for small favours (%)	nr	* 92 .8	93.8	94.6	92.6	93.8	92.6	91.0	93.3
Emotional & general support received from others [@]	75.3	74.7	74.2	72.0	74.4	74.3	75.4	75.6	74.1
Inability to obtain emotional & general support from others [®]	19.9	21.0	21.9	24.9	24.2	25.6	26.4	27.5	23.8
Capacity to raise \$2000 in one week for emergency@	43.8	52.9	63.1	66.4	71.9	74.2	76.5	76.4	66.0
Integration into the community [®]	65.1	61.8	64.0	67.2	68.7	70.3	72.9	72.7	67.4
Network types:									
I often feel very lonely [@]	28.0	32.6	30.1	29.8	30.3	29.1	29.1	30.1	29.9
Only get together socially once a month or less with friends or relatives (%)	6.2	9.4	13.8	22.8	28.4	25.1	23.1	21.7	19.9

TABLE 7.2 SELECTED SOCIAL CAPITAL INDICATORS DISAGGREGATED BY AGE GROUP, AUSTRALIA, 2001–02#

Note Results which are significantly different from the national average at the 5% level are highlighted in blue.

Significance testing was not relevant for the census-based labour force participation rate.

All indicators relate to 2001–02, except for the donation and carers indicators.

* This age grouping is 18–24 and not 20–24.

^ This age group is 65+, and not just those aged 65-74.

[®] These indicators are measured on a 0 to 100 summary scale — Further details are provided in Appendix I.

Source BTRE analysis of data from 2001 HILDA, 2001 Census of Population and Housing, 2002 GSS, 2003 SDAC and 2000 SVW.

Gender

As shown in Table 7.3, gender is not a significant influence for many of the social capital indictors. However, females are more likely to receive emotional and general support from others and have higher donation and volunteering rates than males. A considerably lower proportion of female job seekers use friends, relatives or company contacts to gain employment. Males have higher labour force participation and sporting participation rates, and are more likely to be active members of sporting, hobby or community-based associations. The gender differences in feelings of safety at home alone after dark are considerable. Three per cent of males report that they feel unsafe or very unsafe, compared to over 13% of females (ABS 2004b).

Labour force status

Table 7.4 shows selected social capital indicators disaggregated by an individual's labour force status. The unemployed rank poorly in terms of all of the support related indicators. For example, they have an extremely low capacity to raise \$2000 in an emergency and a significant proportion could not ask someone for small favours. The unemployed also have low integration in the community and tend to be somewhat dissatisfied with family relationships. However, they report relatively frequent social contact with friends or relatives who do not live with them.

The part-time employed are most likely to be volunteers. The full time employed have a particularly high capacity to raise \$2000 in an emergency and are less likely than other groups to report feelings of loneliness. They also have high sporting participation and low health barriers to social participation. However, the full time employed have relatively infrequent social contact and low participation in volunteering.³⁹

Retired individuals tend to be well integrated into the community and live in neighbourhoods where neighbours help each other out. While they have high volunteering and active membership rates, they are relatively unlikely to participate in sport and often have health barriers to social participation. They report high levels of satisfaction with family relationships and high financial support, but have infrequent social contact with friends or relatives who do not live with them and a relatively low level of anticipated support in a crisis.

³⁹ In the ABS' *Survey of Voluntary Work* and the *General Social Survey*, full time employed persons have a volunteering rate which is similar to the national average. The different results may arise from the fact that HILDA asks about voluntary work in a typical week while the ABS surveys relate to voluntary work over the course of a year. The difference could also be related to the absence of specific prompts in HILDA on voluntary work undertaken for professional, political, cultural or environmental organisations.

TABLE 7.3	SELECTED SOCIAL CAPITAL INDICATORS DISAGGREGATED BY GENDER,
	AUSTRALIA, 2001–02#

Social capital indicator	Male	Female	All
Norms:			
Donation rate, 2000 (%)	71.5	76.9	74.2
How commonly do neighbours help each other out in your neighbourhood? [@]	62.5	63.8	63.2
Common purpose:			
Participation rate is sport or recreational physical activity (%)	67.0	61.1	64.0
Active membership rate (%)	42.1	36.6	39.3
Volunteering rate (%)	19.5	24.0	21.8
Proportion of carers in population, 2003 (%)	12.0	14.1	13.0
Satisfaction with family relationships [®]	81.2	81 7	81.5
Trade union membership rate, 2003 (%)	24.4	21.9	23.6
Labour force participation rate (%)	24.1	21.0	63.0
Health barriers to social participation [®]	10.9	55.4 20.4	10.0
Network structure:	10.5	20.4	10.4
Anticipated sources of support in time of crisis (%)	02.2	047	04.0
Anticipated support from family in a crisis (%)	93.3	94.7	94.0 82.4
Anticipated support from friend in a crisis (%)	81.2	83.6	66 1
Anticipated support from neighbour in a crisis (%)	66.4	05.8 24.7	24.1
Frequency of social contact [®]	33.4	34.7	54.1 61.1
Notwork transactions:	60.0	62.1	01.1
Could ask someone for small favours (%)		<u> </u>	02.2
Emotional & general support received from others [@]	93.3	93.3	93.3
Inability to obtain emotional & general support from others [@]	70.9	77.3	74.1
Capacity to raise \$2000 in one week for emergency ^{$@$}	25.1	22.5	23.8
Integration into the community [®]	68.6	63.6	66.0
Proportion of successful job seekers using friends, relatives or company contacts	66.4	68.3	67.4
to gain employment, 2000 (%)	25.5	20.7	24.4
Network types:			
I often feel very lonely [®]	28.6	31.2	29.9
Only get together socially once a month or less with friends or relatives (%)	21.7	18.1	19.9

Note Results which are significantly different from the national average at the 5% level are highlighted in blue. Significance testing was not relevant for the census-based labour force participation rate. #All indicators relate to 2001–02 except where otherwise noted

#All indicators relate to 2001–02, except where otherwise noted. These indicators are measured on a 0 to 100 summary scale — Further details are provided in Appendix I. Source BTRE analysis of HILDA 2001 data and data from various ABS collections (as detailed in Appendix I).

Income

The 2002 ABS *General Social Survey* publication (ABS 2004b) uses quintile analysis to compare several support related indicators for different categories of equivalised gross household income. The results indicate that the level of support is positively related to income. Those with higher incomes generally perceive an increased ability to ask someone for a small favour and are more likely to report that they can obtain support in a crisis.

Only 5% of those in the highest income quintile report feeling unsafe or very unsafe at home alone after dark. For the lowest income quintile, almost 13% feel unsafe or very unsafe at home alone after dark.

TABLE 7.4SELECTED SOCIAL CAPITAL INDICATORS DISAGGREGATED BY LABOUR
FORCE STATUS, AUSTRALIA, 2001–02#

Social capital indicator	Empl	loyed		Not in labo		
	Full time	Part time	Unemployed	Retired•	All	
How commonly do neighbours help each other out in your neighbourhood? $^{\textcircled{@}}$	62.6	63.5	59.0	70.5	64.2	63.2
Participation rate in sport or recreational physical activity (%)	71.6	69.6	62.3	47.9	*54.7	64.0
Active membership rate (%)	38.1	43.1	34.4	45.0	39.4	39.3
Volunteering rate (%)	17.6	29.2	21.2	25.8	23.0	21.8
Proportion of carers in population, 2003 (%)	11.7	16.5	14.3	na	20.2	13.0
Trade union membership rate, 2000 (%)	25.6	16.9	nr	nr	nr	23.6
Satisfaction with family relationships [@]	80.4	79.6	75.5	88.4	84.5	81.5
Health barriers to social participation [®]	15.3	16.3	23.7	24.6	25.5	19.4
Anticipated sources of support in time of crisis (%)	95.4	95.8	91.1	91.3	*91.5	94.0
Frequency of social contact [@]	58.8	64.3	68.4	58.7	61.1	61.1
Could ask someone for small favours (%)	95.4	94.1	87.8	91.8	*88.1	93.3
Emotional & general support received from others [@]	73.5	76.1	70.8	74.5	74.3	74.1
Inability to obtain emotional & general support from others [@]	22.1	21.4	30.5	26.7	26.3	23.8
Capacity to raise \$2000 in one week for emergency [@]	73.5	63.5	35.3	74.3	61.9	66.0
Integration into the community [®]	66.6	67.8	62.3	71.3	68.7	67.4
I often feel very lonely [@]	28.1	29.1	36.7	30.1	31.8	29.9
Only get together socially once a month or less with friends or relatives (%)	22.0	15.6	13.0	23.4	20.5	19.9

Results which are significantly different from the national average at the 5% level are highlighted in blue. * Excludes retired persons.

All indicators relate to 2001-02, except the trade union and carers indicators.

These indicators are measured on a 0 to 100 summary scale — Further details are provided in Appendix I.
For the HILDA indicators, the retired category was identified using a different classification to the other labour force status categories, and may not be entirely consistent with those other categories.

Source BTRE analysis of HILDA 2001 data and data from various ABS collections (as detailed in Appendix I).

7.2.2.2 Multivariate analysis

Note

This section presents results from the multivariate regression analysis of the relationships between selected HILDA indicators of social capital and the sociodemographic characteristics of individuals.⁴⁰ Multivariate analysis has an advantage over the bivariate analysis in that it can identify which sociodemographic characteristics are of most importance to each social capital indicator. A wider range of individual social and demographic characteristics have been included in this analysis, covering characteristics such as transience, country of birth, level of proficiency in spoken English and family structure. The full set of socio-demographic variables is described in Appendix V.

In this section, when significant relationships are identified between aspects of social capital and the socio-demographic characteristics of individuals, there is generally insufficient evidence to draw inferences about causality.

⁴⁰ The regression analysis has been undertaken using 11 of the 12 HILDA social capital indicators. The 'health barriers to social participation' indicator was excluded from the analysis as it was considered primarily an indicator of health status, rather than social capital.

Interpreting the results

Two regression techniques (ordinary least squares and logistic regression) have been used in order to take account of the different constructs of each indicator. For the volunteering, active membership and social contact once a month or less indicators, logistic regression analysis has been used to model the probability of an individual having the relevant behavioural characteristic. Ordinary Least Squares (OLS) regression analysis has been used for the remaining indicators, even though it is recognised that some indicators are ordinal in nature.⁴¹

Both the logistic and OLS regression results are presented on a 'control person' basis. The results measure the predicted change in the social capital indicator if an individual has a particular socio-demographic characteristic, relative to the set of socio-demographic characteristics of the 'control person'. The characteristics of the control person are shown at the top of Table 7.5 and are roughly representative of the average for each of the continuous socio-demographic variables. For example, the control person is aged 45 years, which is roughly the average age of all individuals within scope of the HILDA survey.

To illustrate how results in Table 7.5 should be interpreted, consider the highlighted cell. The regression model predicts that a 60 year old person whose socio-demographic characteristics are otherwise identical to the control person will have a probability of being an active member which is 8 percentage points lower than the 45 year old control person. Specifically, the 60 year old has a predicted probability of active membership of 25.2%, compared to the control person's probability of 33.5%.

Table 7.5 only presents results for those socio-demographic variables which are statistically significant at the 5% level in any regression. The explanatory power of the regression models ranged from explaining just 5% of the variation in the 'how commonly do neighbours help each other out in your neighbourhood' indicator, to explaining 27% of the variation in the capacity to raise \$2000 indicator. Clearly, differences in the socio-demographic characteristics of individuals offer only a partial explanation of the differences across individuals in the behavioural and attitudinal indicators of social capital. The regression analysis has also been extended to include locational variables (see Chapter Nine), but the results for each of the social capital indicators proved to be qualitatively robust to this change in model specification.

The relative importance of the various socio-demographic variables differs considerably across the social capital indicators. Health status is the most

⁴¹ Results were initially produced using both ordinal logistic regression and OLS regression. The two sets of results were qualitatively similar and OLS was preferred as it enabled a clearer presentation of results. In previous studies where both methods produce similar results, researchers have chosen to present the OLS regression results, due to the complexity of interpreting and presenting ordinal logistic regression results (Headley & Wooden 2004).

dominant socio-demographic variable, being highly influential for nearly all of the social capital indicators. Labour force status, educational attainment, tenure, age and religiousness are influential for the majority of social capital indicators. All selected characteristics are statistically significant for at least three of the social capital indicator regressions.

Health status

Self-reported health status is statistically significant in all eleven regressions, and is the most important predictor for several of the social capital indicators. All the results for the support-related indicators suggest that a more healthy state is associated with higher levels of support. Relative to the control person (who is in good health), an individual in poor health is much more likely to report feelings of loneliness or an inability to obtain emotional and general support from others. Such individuals also tend to face difficulties raising \$2000 in one week for an emergency.

Health is a particularly strong influence on whether an individual is an active member of a sporting, hobby or community group. Being in excellent health (rather than good health) boosts the control person's estimated probability of active membership from 34% to 46%, while being in poor health is associated with a much lower probability of 23%. An individual with excellent health is also predicted to have higher levels of community integration and more frequent social contact than someone in good health.

Educational attainment

The level of educational attainment of individuals has a significant relationship with all indicators, except for 'satisfaction with family relationships'. However, the relationship is of reasonably small magnitude for some indicators, such as integration into the community and frequency of social contact. The most notable relationships are:

- Individuals who hold a bachelor degree or higher qualification are considerably more likely to be a volunteer and have a much higher capacity to raise \$2000 in an emergency than do non-degree holders.
- Individuals who have not completed Year 10 secondary education are less likely to be volunteers or active members, and also perform relatively poorly on a number of the support-related indicators.

TABLE 7.5TESTING THE RELATIONSHIP BETWEEN SOCIAL CAPITAL INDICATORS AND SELECTED SOCIO-DEMOGRAPHIC
CHARACTERISTICS OF INDIVIDUALS USING REGRESSION ANALYSIS, AUSTRALIA, 2001

Social capital indicator	Socio-demographic variables												
	Agen		Sex Labour force status		Tenure			Educational atta	Educational attainment		Health status		
Control person	45	45	Female	Employed full time	Employed full time	Employed full time	Home owner	Home owner	Home owner	Completed Year 10 or higher	No bachelor degree	Good health	Good health
Variable change from control person	60	30	Male	Employed part time	t Unemployed	Not in the labour force	Renter: from Govt	Renter: private	Other	Did not complete Year 10 or equivalent	Bachelor degree or higher	Excellent health	Poor health
Unit change (on 0–100 scale)													
Integration into the community	2	-2	-1	*	-2	*	-4	-2	*	1	-1	6	-6
Inability to obtain emotional & general support from others	0	-3	3	*	6	2	*	2	5	5	-3	-6	6
Emotional & general support received from others	1	1	-6	*	-2	*	*	*	*	*	-2	5	-5
Satisfaction with family relationships	3	0	*	-1	-3	*	-2	*	-2	*	*	4	-4
I often feel very lonely	-2	-2	-2	*	4	*	*	2	4	3	-3	-10	10
Frequency of social contact	-3	7	*	3	6	4	*	*	-3	-2	*	3	-3
Capacity to raise \$2000 in one week for emergency	8	-6	2	-6	-23	-9	-27	-13	-7	-7	10	9	-9
How commonly do neighbours help each other out in your neighbourhood?	3	-3	*	*	*	*	-5	-9	*	-3	*	4	-4
Percentage point change													
Volunteering rate [^]	4	-8	*	15	15	8	-5	-3	-5	-7	9	4	-4
Active membership rate [^]	-8	9	8	7	*	6	-6	-6	*	-7	4	12	-11
Only get together socially once a month or less with friends or relatives^	5	-9	2	-5	-7	-5	7	*	6	3	*	-5	5

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TABLE 7.5 CONTINUED

Social capital indicators	Socio-demographic variables												
	Family	structure		Household	characteristi	cs	Country of birth	Transience	English proficiency	Religiousness	i		Predicted
Control person	Has a partner	No kids	ls not a lone parent	Not a lone person household	Household income of \$60K	Household Income of \$60K	Born in Australia	Has not recently moved residence	Speaks English well	Religion moderately important in life	Religion moderately important in life	R-square	value of indicator for control
Variable change from control person	Has no partner	Has kids	Is a lone parent	ls a lone person household	Household income of \$120K	Household income of \$20K	Born overseas	Moved residence in last 5 years	Speaks English not well or not at all	Religion most important thing in life	Religion one of least important things in life		person
Unit change (on 0–100 scale)													
Integration into the community	*	1	-2	*	*	*	-1	-2	*	5	-5	12.7%	67.9
Inability to obtain emotional & general support from others	-5	3	*	*	-1	1	2	*	4	*	*	6.7%	25.7
Emotional & general support received from others	3	-2	*	*	1	0	-1	*	-4	3	-3	5.1%	74.1
Satisfaction with family relationships	8	*	-5	-2	*	*	*	—1	*	2	-2	12.9%	74.4
I often feel very lonely	-11	*	*	4	*	*	1	2	*	*	*	7.2%	40.2
Frequency of social contact	-2	-3	*	6	1	-1	-1	*	*	1	-1	10.5%	57.1
Capacity to raise \$2000 in one week for emergency	12	-5	-4	7	4	-3	-3	-1	-12	-1	1	26.7%	65.0
How commonly do neighbours help each other out in your neighbourhood?	3	2	*	4	*	*	-4	-1	-7	2	-2	4.7%	63.4
Percentage point change													
Volunteering rate [^]	*	8	*	*	-1	1	-6	-6	-7	9	-7	12.1%	21.6%
Active membership rate [^]	*	-2	*	6	3	-2	-10	-5	*	3	-3	7.9%	33.5%
Only get together socially once a month or less with friends or relatives^	*	6	*	-8	-1	1	*	*	*	-2	2	8.3%	23.4%

Note Table based on weighted multivariate regression analysis, using OLS regression except where otherwise noted. Details of socio-demographic variables are provided in Appendix V ⁿ Age and its square were entered into all regressions to allow for a non-linear relationship. The results reflect the combined influence of both variables on the relevant social capital indicator.

* The coefficient was not statistically significant at the 5% level.

^ Logistic regression analysis was used for these social capital indicators. The significance tests were based on the Wald test. The max-rescaled R-square is presented.

Source BTRE analysis of 2001 HILDA data.
Labour force status

Labour force status is a significant predictor of all of the HILDA indicators of social capital, except for 'how commonly do neighbours help each other out in your neighbourhood?' It is a particularly important predictor of volunteering for individuals. Relative to the control person who is employed full time, an individual who is employed part time has a 15 percentage point higher probability of being a volunteer. This is a major influence given the average probability of volunteering is 22%. Similarly, unemployed individuals have a 15 percentage point higher probability of volunteering is 8 percentage points for those not in the labour force. The estimated probability of active membership is higher for the part time employed and those not in the labour force than for full time employed individuals.

The capacity to raise \$2000 in an emergency is also heavily influenced by labour force status, and particularly by unemployment. The full time employed control person has a score of 65 on a scale of 0 (could not raise money) to 100 (could easily raise money), compared to a score of 42 for an otherwise identical unemployed person. Being unemployed is also associated with more difficulties obtaining emotional and general support, greater feelings of loneliness and less satisfying family relationships than being full time employed.

In comparison to the other labour force status categories, full time employment is associated with less frequent social contact and a greater probability of only getting together socially once a month or less with friends or relatives.

Age and gender

Age has a significant effect upon all of the HILDA indicators of social capital. There is a strong tendency for capacity to raise \$2000 and volunteering to increase with age, and 'only get together socially once a month or less with friends or relatives' follows a similar pattern. On the other hand, active membership and frequency of social contact tend to decline with age.

Gender generally has a significant, but reasonably modest, influence on the social capital indicators. Being male is predicted to increase the probability of active membership by 8 percentage points. Generally, males have lower levels of support than females.

Religion

The importance of religion in a person's life is significant in all regressions, apart from those for the feelings of loneliness and inability to obtain emotional and general support indicators. Its influence is greatest on the

volunteering and integration into the community indicators. The probability of being a volunteer increases strongly with the importance of religion in a person's life. Similarly, integration into the community is markedly higher for those who rate religion as being very important to their life.

Tenure

Tenure is a significant influence on all of the social capital indicators, except for 'emotional and general support received from others'. Living in public rental housing is the single largest influence on the capacity to raise \$2000 in an emergency — the home owner control person has a score of 65 on a scale of 0 (could not raise money) to 100 (could easily raise money), compared to a score of 38 for an otherwise identical person who lives in public housing. Living in public rental housing also increases the probability of only getting together with friends or relatives once a month or less.

In comparison to home ownership, living in either public or private rental housing is associated with a lower probability of being a volunteer or active member, lower integration into the community and neighbours being less likely to help each other out in the local neighbourhood. This suggests that home ownership has a positive influence on various forms of community involvement, which is consistent with the theories of Glaeser (2001).

Country of birth and English proficiency

Country of birth has a significant influence on most of the indicators of social capital. Being born overseas is associated with a considerably lower probability of active membership and volunteering than being born in Australia, as well as a lower level of neighbours helping each other out.

Those with poor English proficiency perform relatively poorly on the indicators of financial and emotional support. A lack of English proficiency is also associated with a lower probability of being a volunteer and a tendency for neighbours not to help each other out in the local neighbourhood.

These two variables can be quite influential in combination. For example, while the probability of the Australian born control person being a volunteer is 22%, for an otherwise equivalent overseas born person who does not speak English the predicted probability is just 10%.

Other relationships

While household income is statistically significant in seven of the social capital regressions, it is generally of only minor importance. Not surprisingly, those living in high income households have a greater capacity to raise \$2000 in an emergency. Living in a high income household also increases the probability of being an active member of a sporting, hobby or community group.

Three family structure variables have been included in the regression analysis:

- Being a sole parent is associated with lower satisfaction with family relationships and a reduced capacity to raise \$2000 in an emergency.
- Being partnered is associated with an increased capacity to raise \$2000 in an emergency, more satisfying family relationships and reduced feelings of loneliness.
- Having children increases the probability of volunteering, but tends to reduce the frequency of social contact and the capacity to raise \$2000 in an emergency.

People who live alone have more frequent social contact than those who live with others, and are more likely to be active members. Living alone is also associated with a greater capacity to raise \$2000 in an emergency.

Individuals who have moved address in the last 5 years have a lower probability of being an active member or volunteer.

Discussion

Overall, there is no doubt that socio-demographic characteristics make a statistically significant contribution to explaining variation in the different social capital indicators. Nevertheless, the great majority of variation is left unexplained in each of the social capital indicator regressions. Individuals with identical socio-demographic characteristics vary considerably in their social capital behaviours (e.g. volunteering) and attitudes (e.g. feelings of loneliness).

Identification of the socio-demographic characteristics which are most important to particular indicators of social capital can help to explain regional differences in these indicators. For example, based on the results of Table 7.5, possible reasons for a region having a relatively high capacity to raise \$2000 in an emergency include a high home ownership rate or a low unemployment rate. Chapter 11 investigates these regional relationships in more depth.

Note that the possibility of reverse causation or bi-directional causation cannot be ruled out for many of the socio-demographic characteristics. Only for age, gender and country of birth can we confidently rule out the possibility that causality flows from the social capital indicator to the individual's characteristic. Other characteristics, such as health and labour force status, can potentially be influenced by an individual's norms and networks.

To the extent that these socio-demographic characteristics are determinants of social capital (rather than outcomes), policies intended to influence the socio-demographic characteristic will also potentially have flow-on effects on social

capital. Health is an obvious area where governments need to be aware of potential interactions between policies and the social capital resources of Australians. The regression results also suggest that policies intended to influence educational attainment, labour force status, English proficiency, tenure⁴² and transience⁴³ may also influence social capital and/or be influenced by social capital. While the causality of these links is generally unclear, both potential causal paths are of relevance to government policy.

7.3 IN SUMMARY

There is only limited time-series data available to assess trends in Australian social capital, making it difficult to draw an overall conclusion as to whether social capital is growing or declining in Australia. However, there is reasonably strong evidence of a declining trend for trust and church attendance, and an increasing trend for voluntary work in recent years.

The BTRE's analysis is consistent with the existing literature in finding that the social and demographic characteristics of individuals make a statistically significant contribution to explaining variation in key elements of social capital. Nevertheless, the great majority of variation across individuals is left unexplained. Individuals with identical socio-demographic characteristics vary considerably in their social capital behaviours and attitudes.

Moreover, different characteristics of individuals seem to be important for different elements of social capital. Health status is the most dominant sociodemographic variable, being highly influential for nearly all of the social capital indicators. Labour force status, educational attainment, tenure, age and religiousness are important for the majority of social capital indicators. Identification of the socio-demographic characteristics which are most important to particular indicators of social capital can help to explain regional differences in these indicators.

While the analysis identifies those characteristics of individuals which are most closely related to key elements of social capital, it cannot distinguish whether they are determinants or outcomes of social capital.

⁴² Examples of government policies intended to influence tenure include first home ownership grants and provision of public housing. Table 7.5 shows that home ownership is associated with greater volunteering, active membership and neighbourhood reciprocity for individuals than renting. Longitudinal HILDA analysis would provide more convincing evidence of whether individuals who shift from renting to ownership tend to become significantly more involved in the community over time.

⁴³ Population growth targets are a part of government policy in some states, including Victoria and South Australia. These targets are unlikely to be met through natural increase, and instead require the attraction of new residents (i.e. increased transience), which may negatively impact on integration into the community, volunteering and active membership.

CHAPTER 8 RELATIONSHIPS BETWEEN DIFFERENT ELEMENTS OF SOCIAL CAPITAL

The multidimensional nature of social capital, and the importance of reflecting this in measurement and analysis, has been a major theme of this report. This chapter focuses on the relationship between different elements of social capital, and explores the extent to which these different elements can be seen as reflecting one or more underlying dimensions of social capital. It brings together evidence from existing studies and also presents new evidence for Australia using the BTRE's suite-of-indicators.

The relationships between different elements of social capital can be investigated at the scale of the individual or at a more aggregated scale, such as regions. For example, the focus could be on answering either:

- Do individuals with higher levels of reported trust have a higher probability of engaging in voluntary work? Or
- Do regions with higher average levels of trust have higher volunteering rates?

The extent to which two elements of social capital are related for individuals is an important contributor to the extent to which the elements are related across regions, but other factors (such as the characteristics of regional populations) also play a role. This study is primarily interested in understanding the extent to which the different elements of social capital are related across regions. Since understanding relationships between the elements for individuals is fundamental to understanding the relationships for regions, this chapter investigates the two issues in turn.

The chapter also explores two techniques for producing summary measures of social capital, namely principal components analysis (Section 8.2.3) and cluster analysis (Section 8.3).

8.1 RELATIONSHIPS FOR INDIVIDUALS

8.1.1 Existing evidence for Australia

Numerous empirical studies have explored relationships between different elements of social capital for individuals. The AIFS' *Families, Social Capital and Citizenship Survey* has a strong focus on norms and network size and was designed to support individual-level analysis of relationships between the different dimensions of social capital. Using data from this survey, Stone & Hughes (2001a) investigated the empirical nature of different dimensions of social capital, and analysed how these dimensions related to one another. The main findings are summarised in Box 8.1.

In a follow-up study, Stone & Hughes (2002) separately examined relationships in the informal, generalised and institutional realms. In the *informal realm*, while the norms of trust and reciprocity were positively associated, there was little relationship between these norms and aspects of network structure such as the size and diversity of informal networks. In the *generalised realm*, the norms of trust and reciprocity were again closely related, but norms and network size were basically unrelated to one another. Similarly, in the *institutional realm*, there was little overall relationship between personal ties to institutions and levels of institutional trust.Stone & Hughes (2002) used factor analysis to identify groups of indicators which related closely to one another. The following two reliable groupings were identified which cut across network type:

- Norms of trust and reciprocity (covers the informal, generalised and institutional realms); and
- Network size (including number of informal and institutional ties and number of group memberships).

Stone & Hughes (2002) concluded that

'we do not find support for the idea that we can readily measure social capital using one index. Rather, if anything, results of analysis suggest we can think about composite measures of key dimensions of social capital, that cross-cut the many spheres of informal, general and institutional life.' (p23)

These two studies provide considerable insight into the extent to which trust, reciprocity and network size are related across the different social realms. Trust and reciprocity tend to be closely related, but norms are generally unrelated to network characteristics, such as size, density and diversity. These findings should be borne in mind when interpreting the BTRE's set of regional social capital indicators, which is less comprehensive in its coverage of trust and reciprocity than the AIFS research, but has more extensive coverage of social, economic and community participation and social support.

BOX 8.1 RELATIONSHIPS BETWEEN KEY DIMENSIONS OF SOCIAL CAPITAL

- Four main types of trust were identified: trust in family within the household, trust of other familiars (friends, workmates, other family), trust in people more generally, and trust in institutions. Reciprocity also operated differently in the different social realms.
- Evidence was mixed as to whether trust in one realm generates trust in another realm. The authors concluded the findings supported the idea of 'a ripple out effect for trust, rather than a transference of one type of trust into another' (p35).
- The level of trust and the level of reciprocity operating in each network type were very closely associated. The correlation was strongest for family within the household (correlation=0.98) and weakest for friendship networks (0.58).
- People with large family networks had larger friendship networks. People with large networks of friends, neighbours and workmates were more likely to belong to lots of groups and have broad institutional ties.
- People with large families within the household reported higher reciprocity and trust of family members. The number of neighbours a person knows was significantly correlated with trust and reciprocity in the local area. However, network size was not related to trust and reciprocity within friendship, work and other family networks.
- The ethnic and educational diversity of networks was not strongly linked to trust or reciprocity.
- Overlapping family and friendship networks (i.e. family members know each other's close friends) were associated with significantly higher trust and reciprocity in both types of network.

Source: Stone & Hughes (2001a)

The remainder of this section summarises the findings of Australian studies which explore the extent to which norms and network size are related to other aspects of social capital, such as community participation and network transactions.

Stone, Gray & Hughes (2003) analysed the link between norms, network structure and successful job search methods. The authors found little relationship between trust and reciprocity and the search method used to find employment. What mattered more were the structural characteristics of networks, particularly having an educationally diverse network.

Onyx & Bullen (2000) analysed inter-relationships between different elements of social capital. They identified eight summary factors for social capital, namely: participation in the local community, neighbourhood connections, family and friend connections, work connections, proactivity in a social context, feelings of trust and safety, tolerance of diversity and value of life. All eight factors were positively related to one another. The authors found that

people who had high levels of participation in the local community⁴⁴ were also likely to have high levels of trust and strong connections with family and friends. However, participation in the community was only weakly related to tolerance of diversity. In contrast to Stone & Hughes (2002), Onyx & Bullen (2000) found the eight factors had a common underlying pattern, and a social capital summary factor could be meaningfully derived.

Stimson et al (2003) developed four social capital summary scales, reflecting informal structures, formal structures, informal norms and formal norms. The correlations between these scales were generally significant, but relatively modest (correlation coefficients ranged from 0.09 to 0.26). Thus, the four scales represent reasonably distinct facets of social capital, and a high score on one facet is unlikely to be a good predictor of high scores on other facets.

Department for Victorian Communities (2004) analysed 11 community strength indicators using data from the *Victorian Population Health Survey* (VPHS). People who participated in the community⁴⁵ were more likely to feel safe walking down their streets at night, reported greater acceptance of diversity, and were more likely to feel they had opportunities to have a real say on issues that were important to them. They had more friends in the local area and had generally lived in the area for a longer period. Participants were also more likely to be able to get help from friends, family or neighbours, and had a greater ability to raise \$2000 in two days in an emergency. In this study, people who could not get help from family, friends or neighbours tended to have fewer friends in the local area, were less likely to feel they had opportunities to have a say and were less tolerant of diversity.

Hughes & Black (2003), using data from the 1998 *Australian Community Survey*, found that people whose close friends knew each other were significantly more likely to be able to obtain financial assistance from friends, but having friends in the *local* area did not influence whether assistance could be obtained.

In Tasmania, the Department of Health and Human Services (2001) found that just 39% of those with no close friends could raise \$2000 in an emergency, compared to 48% of those with one or two close friends and 69% of those with 10 or more close friends. Tasmanians who spent time with family, even if only once every 3 to 6 months, were more likely to be able to raise \$2000 than those who did not. Thus, frequency of contact was less of an issue than actually being in contact. These results point to the financial support indicators

⁴⁴ The identified forms of participation are volunteering, active group membership, attending community events, committee member for local group, joined a local community action or taken part in local community project.

⁴⁵ The identified forms of participation are volunteering, membership of an organised group and attending community events.

operating not merely as a measure of socio-economic status, but also reflecting the size and strength of family and friendship networks.

Taken together, these Australian studies provide support for the idea that individuals with high levels of trust tend to participate more fully in the community. Another consistent finding is that people with more extensive informal networks tend to participate more in the community and are more likely to be able to obtain support from others when needed.

8.1.2 New evidence for Australia

This section provides new evidence regarding relationships between different elements of social capital for Australians, using the BTRE's set of regional social capital indicators. Investigation of the relationships between social capital indicators for individuals has only been undertaken using HILDA, due to the availability of unit record data. While HILDA is a strong source of participation and social support indicators, it does not provide data on norms.

The analysis is based on simple bivariate correlations, and does not control for the influence of other factors. Table 8.1 is a correlation matrix for the 17 indicators of social capital that can be derived from HILDA. For five of the social capital indicators, HILDA is not the preferred source for the *regional* indicator, but it does provide reliable information at the national scale. These five indicators are included to allow a more complete exploration of relationships between different social capital elements. Since more than 13 000 individuals are surveyed, the majority of pairwise correlations are statistically significant, but the magnitude of the correlation is often minor.

The analysis of Table 8.1 initially focuses on the 12 social capital indicators for which HILDA is the preferred source of regional information. For these 12 indicators, the statistically significant relationships are all in the anticipated direction. Four of the 12 indicators are expected to detract from social capital – specifically indicator 5 which represents a barrier to participation, indicator 8 which relates to a lack of support, indicator 11 which measures feelings of loneliness and indicator 12 which relates to infrequent social contact. As expected, these four indicators are consistently negatively related to the other eight indicators (and positively related amongst themselves). Correlations between the other eight indicators are consistently positive.

The strongest correlation is between indicators 6 and 12 (correlation = -0.82), which is not surprising since both are derived from the same underlying question on the frequency of social contact. The other particularly strong relationship is between feelings of loneliness and the inability to obtain emotional and general support from others (-0.48).

Social capital indicator	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Volunteering	1.00																
2. How commonly do neighbours	0.10	1.00															
help each other out in your																	
neighbourhood?																	
3. Active membership	0.32	0.10	1.00														
Satisfaction with family	0.02	0.12	0.05	1.00													
relationships																	
Health barriers to social	-0.04	-0.09	-0.12	-0.19	1.00												
participation																	
Frequency of social contact	0.04	0.06	0.19	0.03	-0.11	1.00											
Emotional & general support	0.04	0.13	0.07	0.26	-0.17	0.20	1.00										
received from others																	
8. Inability to obtain emotional &	-0.04	-0.14	-0.10	-0.21	0.28	-0.20	-0.29	1.00									
general support from others																	
9. Capacity to raise \$2000 in one	0.08	0.11	0.11	0.16	-0.21	-0.01*	0.10	-0.18	1.00								
week for emergency																	
10. Integration into the community	0.22	0.34	0.18	0.23	-0.14	0.08	0.21	-0.15	0.13	1.00							
 I often feel very lonely 	-0.03	-0.12	-0.09	-0.25	0.30	-0.11	-0.24	0.48	-0.17	-0.17	1.00						
12. Only get together socially once	-0.04	-0.06	-0.14	-0.04	0.09	-0.82	-0.17	0.16	-0.02*	-0.07	0.10	1.00					
a month or less with friends or																	
relatives																	
Labour force participation^	-0.02*	-0.03	0.00*	-0.12	-0.17	0.00*	-0.01*	-0.07	0.08	-0.06	-0.04	-0.01*	1.00				
14. Trade union membership[^]	0.01*	0.02*	0.01*	0.01*	0.01*	-0.05	0.00*	0.00*	0.04	0.04	-0.02*	0.03	na	1.00			
15. Same address as 5 years ago [^]	0.11	0.09	0.09	0.11	-0.03	-0.04	0.01*	0.00*	0.15	0.15	-0.04	0.03	-0.13	0.07	1.00		
Language barriers[^]	-0.03	-0.05	-0.05	0.02*	0.09	-0.02*	-0.03	0.05	-0.09	0.00*	-0.03	0.01*	-0.11	0.00*	-0.02*	1.00	
17. Carer^	0.12	0.03	0.01*	0.01*	0.05	0.00*	-0.01*	0.02*	0.02*	0.04	-0.02*	-0.01*	-0.04	0.02*	0.09	0.01*	1.00

TABLE 8.1 CORRELATION COEFFICIENTS ACROSS INDIVIDUALS FOR SOCIAL CAPITAL INDICATORS, AUSTRALIA, 2001

Note All correlation coefficients are statistically significant at 1% significance level, except where asterisked (*). A correlation coefficient has not been derived between union membership and labour force participation, since union membership is only asked of those in paid employment, and the two indicators are related by definition. ^ These indicators can be derived from HILDA, but HILDA is not the preferred source for the regional indicator. The HILDA-derived indicators are sufficiently reliable at the national scale, if not at the regional scale. Labour force participation, trade union membership and language barriers are defined consistently with the preferred ABS sources. HILDA mobility data relates to a change of *address* in the last 5 years, rather than a change of SLA. HILDA carers data relates to whether in a typical week a person spent time caring for a disabled spouse or disabled adult relative or caring for elderly parents or parents-in-law, and is roughly equivalent to the ABS definition of carers. See Appendix I for details.

Source BTRE analysis of HILDA 2001 unit record data.

Other relationships evident from Table 8.1 include:46

- Volunteering is strongly positively related to active membership of sporting, hobby or community-based groups and integration into the community.
- Integration into the community is strongly linked to the other social capital indicators, particularly neighbours helping each other out, satisfaction with family relationships, volunteering and the extent to which emotional and general support is received.
- A high level of satisfaction with family relationships is associated with higher levels of emotional and general support received from others and higher levels of integration into the community. Satisfying family relationships are associated with lower levels of perceived loneliness and inability to obtain support.
- People with health barriers are more likely to feel lonely or be unable to obtain emotional and general support. They have a generally lower capacity to raise \$2000 in an emergency.
- Frequency of social contact is positively related to one's ability to receive emotional and general support from others.
- The indicators of ability and inability to obtain emotional and general support from others are negatively related across individuals.

One of the strongest associations in Table 8.1 is between volunteering and group involvement — two of the most commonly used indicators of social capital. Figure 8.1 shows that 54% of Australians are neither a volunteer nor an active member, while 15% are both volunteers and active members. Over 30% of Australians are involved in one activity and not the other, so that volunteering is only a partial predictor of active membership (and vice versa). Nationally, the volunteering rate is 11% for people who are not active members, and rises to 38% for active members. The active membership rate is 31% for non-volunteers and 69% for volunteers.

For the five additional HILDA-derived indicators (for which HILDA is not the preferred source of the regional indicator), many of the pairwise correlations are statistically insignificant. Union membership is completely unrelated to most of the other social capital indicators, and the few relationships which are statistically significant are of relatively minor importance. Similarly, having caring responsibilities is unrelated to most of the other social capital indicators

⁴⁶ The discussion focuses on indicator pairs with a correlation coefficient of at least 20%.

the main exception is volunteering, to which it is positively related. Table 8.1
 provides little evidence to suggest caring is acting as a barrier to participation.⁴⁷



FIGURE 8.1 VOLUNTEERS AND ACTIVE MEMBERS AS SHARE OF AUSTRALIAN POPULATION AGED 15 AND OVER, 2001

Source BTRE analysis of HILDA 2001 unit record data.

Labour force participants are less likely to experience health or language barriers, tend to have less satisfying family relationships and are less likely to have lived at the same address over the past 5 years.

People who have stayed at the same address over the last 5 years are more likely to be volunteers, have more satisfying family relationships and a greater capacity to raise \$2000 in an emergency. People who have lived in the same place for an extended period of time also tend to be more integrated into the local community (see Table 8.2). These links between residential mobility and other social capital indicators are promising because they suggest census mobility data may serve as a useful proxy for particular aspects of social capital at a small area level. However, further analysis of *regional* linkages is required to assess whether the relationships are sufficiently strong to support its usage as a small area proxy.

Overall, the findings are highly consistent with theory and expectations. Volunteering, active membership and integration into the community are all quite closely related to one another for individuals.⁴⁸ The social support

⁴⁷ Department of Family and Community Services (2003) found that for income support customers, caring responsibilities acted as a significant barrier to voluntary work, but not as a barrier to labour force participation.

⁴⁸ The ABS *Survey of Voluntary Work* 2000 suggests that volunteering is also linked to donating, with volunteers having a higher donation rate (84%) than non-volunteers (70%).

indicators are also linked to one another, as well as to perceived loneliness and satisfaction with family relationships. The analysis also supports the validity of the health barriers and language barriers indicators which have significant negative relationships with measures of social, community and labour force participation. Section 8.2.2 will explore whether these relationships are also evident at the regional scale.

TABLE 8.2RELATIONSHIP BETWEEN INTEGRATION INTO THE COMMUNITY AND YEAR
MOVED TO CURRENT ADDRESS, AUSTRALIA, 2001

Year moved to current addre	ess	Mean 'integration into the community' score
This year	2001	61.9
Last year	2000	64.7
Two years ago	1999	66.9
Three to five years ago	1996–1998	67.0
Six to ten years ago	1991–1995	68.9
Eleven to twenty years ago	1981–1990	69.7
More than twenty years ago	Before 1981	71.6
Total	nr	67.4

Note Many changes of address occur within the same community, so a person who has only recently moved to their current address may still report a reasonably high level of integration into the community.

Source BTRE analysis of HILDA 2001 unit record data.

8.1.3 Summary of relationships for individuals

In a key Australian study, Stone & Hughes (2002) conclude that social capital cannot be adequately captured using a single summary measure and it is more appropriate to think about composite measures of key dimensions of social capital. While the close relationship between trust and reciprocity suggests it is appropriate to consider a composite measure of social norms, these norms are generally unrelated to the characteristics of an individual's network, such as size, density and diversity. Both norms and network characteristics are related to other key dimensions of social capital, such as community participation.

Analysis of the BTRE's social capital indicators provides further evidence of the multifaceted nature of social capital, with relatively few indicators being highly correlated across individuals. Knowing that an individual is a volunteer, for example, is not particularly useful in predicting whether they have frequent social contact or satisfying family relationships, and a summary measure of social capital needs to reflect each of these dimensions (and many more).

8.2 **RELATIONSHIPS FOR REGIONS**

The previous section identified a number of significant relationships between different elements of social capital across individuals, and this section explores whether these relationships transfer to the regional scale. In exploring relationships at a regional scale, we are particularly interested in establishing whether regions which rank highly in terms of one aspect of social capital tend to rank highly across the board, or whether Australia's regions tend to have

more diverse and multidimensional social capital profiles. We are also interested in identifying sets of indicators which tend to be closely related across Australia's regions, and exploring whether meaningful summary factors can be developed representing particular dimensions of social capital.

8.2.1 Existing evidence

While there was considerable Australian evidence on inter-relationships between different elements of social capital for individuals, there is little Australian evidence on relationships across regions. To give a more complete picture, evidence from selected international studies is included in this section.

Vinson (2004) analysed social cohesion in 277 Victorian postcodes using three indicators for 2001 and 2002:

- Participation in organised recreation and sports groups;
- Do you help out a local group as a volunteer?; and
- Can you get help from friends when you need it?

Across the Victorian postcodes, the volunteering and informal help indicators had a 95% correlation. The informal help and organised recreation indicators had a 58% correlation, while volunteering and organised recreation had a 47% correlation across postcodes. All three pairwise correlations were statistically significant at the 1% level.

There have been a number of Australian studies which compare a set of social capital indicators across a small number of communities (e.g. Onyx & Bullen 2000, Department for Victorian Communities 2004, Stimson et al 2003). None of the above studies identified a community which consistently scored significantly above or below average across all social capital dimensions. For example, Onyx & Bullen (2000) reported that West Wyalong has the highest score on the general social capital factor out of five NSW communities, but the lowest score with regard to tolerance of diversity.

A more extensive study by Department for Victorian Communities (2005) presented information on 15 community strength indicators⁴⁹ for 79 LGAs and concluded that 'every LGA has strengths and no single area has low scores on all indicators.' Taken together, these results suggest that social capital is rarely uniformly high or low in communities, but instead tends to display a more complex, multidimensional pattern.

Turning to the international evidence, Beugelsdijk & van Schaik (2001) look at generalised trust, group membership and active group membership across 54

⁴⁹ The set of community strength indicators included measures of volunteering, group membership, capacity to raise \$2000, feelings of safety and attendance at community events.

regions within 7 European countries. Active group membership is defined as being a member *and* doing voluntary work for the group. The authors find that active group membership and generalised trust have only a modest and statistically insignificant correlation across regions (correlation=0.21). However, group membership (covering both active and non-active members) is significantly correlated with generalised trust across regions (0.46).

In the USA, the *Social Capital Benchmark Survey* (SCBS) was run across 40 communities, including major cities as well as predominantly rural areas (Saguaro Seminar 2001). The survey identified 11 dimensions of social capital for each of these communities.⁵⁰ Many of these social capital dimensions were not significantly correlated across communities but the strongest relationships are summarised below:

- Informal socialising was not strongly linked to the other dimensions.
- Communities with high social trust tended to have high levels of interracial trust (correlation = 0.78) and civic leadership activities (0.58). Social trust was moderately correlated with participation in conventional politics (0.41), giving and volunteering (0.36) and associational involvement (0.26).⁵¹
- Communities with a high rate of faith-based engagement tended to have high rates of giving and volunteering (0.80), lower participation in protest politics (-0.65) and less diverse friendships (-0.53).
- Involvement in civic leadership and associations are strongly correlated across communities (0.64). Both types of involvement are significantly and positively correlated with giving and volunteering.

Both international studies provide only tentative support for a positive association between trust and volunteering/group membership across regions.

8.2.2 New evidence for Australia

This section provides new evidence on the inter-relationships between different elements of social capital across Australia's regions. While correlation analysis for individuals could only be undertaken for indicators derived from the same underlying data source, correlation analysis at the regional scale can assess the relationships between indicators from different data sources (so long as output

⁵⁰ They were: social trust, inter-racial trust, diversity of friendships, conventional political participation, protest politics participation, informal socialising, giving and volunteering, civic leadership, associational involvement, faith-based engagement and equality of civic engagement across the community.

⁵¹ The correlation between social trust and associational involvement is only significant at the 10% level, and the correlation between social trust and giving and volunteering is significant at the 5% level. All other reported correlations across the 40 communities are significant at the 1% level.

is available for a consistent set of regions). The section concentrates on relationships between the social capital indicators across the 69 BTRE defined regions. This is complemented by some analysis of correlations across the state remoteness classes.

BTRE defined regions

Table 8.3 presents the correlation matrix for the 15 social capital indicators which are available across the 69 BTRE defined regions. Compared to the correlation matrix for individuals (Table 8.1), the correlations in Table 8.3 are generally of larger magnitude. Since there are only 69 regional observations, a correlation coefficient needs to be greater than 30% for the relationship between two indicators to be statistically significant at the 1% significance level.

The strongest correlation is between indicators 6 and 12 (-0.89), which are both derived from the same underlying question on the frequency of social contact. These two indicators are also very strongly correlated across individuals. Neighbours are more likely to help each other out in regions where infrequent social contact is relatively common. Otherwise, the two frequency indicators are not very closely linked to the other social capital indicators at the regional scale – a similar result to the SCBS of 40 communities in the USA.

The correlation analysis identifies a very strong positive association between the following four indicators at a regional scale:

- Volunteering;
- Active membership;
- Neighbours helping each other out in the local neighbourhood; and
- Integration into the community.

The relationship between volunteering and active membership is illustrated in Figure 8.2. All four indicators are significantly correlated across individuals, as well as regions. The strong quantitative association suggests they may be tapping into a single underlying dimension of social capital. Conceptually, each of the four indicators can be viewed as reflecting a different aspect of involvement in the community.

Integration into the community is also significantly associated with a region's satisfaction with family relationships and the proportion of the regional population who live in the same SLA as they did 5 years ago. Figure 8.3 illustrates the latter relationship across the 69 regions. The reasonably large variation in community integration scores for regions with a similar level of geographic mobility, suggests the census mobility indicator is unlikely to be useful as a small area proxy for community integration.

HILDA Indicator	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Volunteering rate	1.00														
2. How commonly do neighbours help each other out in your neighbourhood?	0.57	1.00													
3. Active membership rate	0.68	0.49	1.00												
4. Satisfaction with family relationships	0.31	0.38	0.07	1.00											
5. Health barriers to social participation	-0.26	-0.23	-0.32	-0.22	1.00										
6. Frequency of social contact	-0.14	-0.28	0.04	-0.10	-0.07	1.00									
7. Emotional & general support received from others	0.13	0.18	0.04	0.41	-0.14	0.23	1.00								
8. Inability to obtain emotional & general support from others	0.23	0.18	0.03	0.09	0.48	-0.20	-0.27	1.00							
9. Capacity to raise \$2000 in one week for emergency	0.10	0.02	0.23	-0.02	-0.54	0.11	0.10	-0.56	1.00						
10. Integration into the community	0.66	0.70	0.51	0.61	-0.27	-0.08	0.28	0.14	0.09	1.00					
11. I often feel very lonely	-0.10	-0.19	-0.21	-0.20	0.55	-0.12	-0.42	0.59	-0.42	-0.15	1.00				
12. Only get together socially once a month or less with friends/relatives	0.28	0.34	0.11	0.12	0.06	-0.89	-0.13	0.23	-0.12	0.16	0.16	1.00			
13. Labour force participation rate	-0.13	-0.43	-0.09	-0.22	-0.14	0.25	-0.09	-0.26	0.26	-0.35	-0.01	-0.17	1.00		
14. Language barriers	-0.48	-0.41	-0.46	-0.22	0.41	0.14	-0.14	0.22	-0.20	-0.34	0.33	-0.28	0.00	1.00	
15. Proportion who live in same SLA as 5 years ago	0.28	0.39	0.08	0.45	0.05	0.02	0.15	0.20	-0.12	0.47	0.04	-0.06	-0.32	0.14	1.00

TABLE 8.3 CORRELATION COEFFICIENTS FOR SOCIAL CAPITAL INDICATORS ACROSS THE 69 BTRE DEFINED REGIONS, 2001

Note Correlation coefficients of more than 0.30 are statistically significant at the 1% significance level. Correlation coefficients of less than 0.20 are statistically insignificant at the 10% level.

Source BTRE analysis of HILDA 2001 unit record data and data from 2001 Census of Population and Housing.





Source BTRE analysis of HILDA 2001 unit record data.



FIGURE 8.3 CORRELATION BETWEEN INTEGRATION INTO THE COMMUNITY AND RESIDENTIAL MOBILITY ACROSS THE 69 BTRE DEFINED REGIONS, 2001

Source BTRE analysis of HILDA 2001 unit record data and data from 2001 Census of Population and Housing.

Satisfaction with family relationships is correlated with geographic mobility and neighbours helping each other out across the 69 regions. Not surprisingly, satisfying family relationships are also associated with a high receipt of emotional and general support from others.

The following four indicators are closely linked across regions:

- Inability to obtain emotional and general support from others;
- Capacity to raise \$2000 in an emergency;
- I often feel very lonely; and
- Health barriers to social participation.

The first two indicators directly relate to obtaining support, while feelings of loneliness and health barriers are expected to limit one's ability to obtain support. Regions with a high rate of loneliness tend to have higher health barriers, a higher than average score on the 'inability to obtain emotional and general support from others' indicator, and a lower capacity to raise \$2000 in an emergency. The financial support indicator is negatively related to health barriers and the inability to obtain support from others. A fifth support-related indicator, 'emotional and general support received from others', is negatively linked to feelings of loneliness across the BTRE defined regions. The support-related indicators are significantly correlated across individuals, as well as regions.

Vinson (2004) reported a very strong correlation between volunteering and informal help across Victorian postcodes — this finding is not replicated across the more aggregated BTRE defined regions.

The regional correlation analysis is in many ways consistent with the correlation analysis for individuals. The key findings of the regional correlation analysis are as follows:

- A set of four indicators has been identified which relate to involvement in the local community and are closely linked to one another;
- Another set of four closely linked indicators relating to ability to receive support has been identified, and this set of indicators is quite distinct from the first set;
- The frequency of social contact indicators are not closely related to the other social capital indicators; and
- Not all of the social capital indicators fit neatly into one of the above groupings. For example, satisfaction with family relationships is closely linked to integration into the community, but is also strongly associated with the ability to obtain emotional and general support from others.

State remoteness classes

Twenty-eight of the 33 regional social capital indicators are available for the 18 state remoteness classes. For the GSS indicators, this is the most detailed spatial disaggregation at which correlations between indicators can be analysed. If two indicators are highly dependent on remoteness, then it is likely they will have a reasonably high correlation coefficient across the state remoteness classes, even if there is no link between the indicators for individuals. This makes it difficult to draw firm conclusions about the extent to which different aspects of social capital are spatially related to one another. Consequently, only a broad overview is provided, highlighting the most significant and relevant correlations.⁵² Since regional correlation analysis has already been undertaken for the census and HILDA indicators at a more spatially disaggregated level, the following analysis focuses on the GSS indicators.

Correlation analysis for state remoteness classes found that:

- The indicator of trust (feelings of safety at home alone after dark) is positively correlated with volunteering (0.52), integration into the community (0.51) and neighbours helping each other out (0.53).
- Despite considerable methodological and definitional differences, the HILDA and GSS indicators which fit within the 'network frequency/ intensity and communication mode' element of the ABS Framework are reasonably closely linked. The GSS face to face contact is positively related to the GSS telephone, mail or e-mail contact (0.69) and e-mail or

⁵² Due to the relatively small number of regional observations, a correlation coefficient needs to be greater than 56% to be significant at the 1% level, or greater than 38% to be significant at the 10% level.

chat site usage (0.58) indicators, and the HILDA frequency of social contact indicator (0.52).

- The two Internet-related indicators⁵³ are almost perfectly correlated across state remoteness classes, and are dominated by spatial differences in access to and usage of the Internet. While selected as measures of (i) usage of internet to communicate, and (ii) usage of internet to access information, they do not shed much light on regional differences in these particular uses of the Internet.
- The GSS indicators of support from family, friends and neighbours are unrelated to one another.
- The HILDA and GSS indicators within the 'physical/financial assistance, emotional support and encouragement' element of the ABS Framework are largely unrelated to one another and appear to measure quite different aspects of support. The most likely reason for the absence of a relationship is that household members are a major source of support for individuals, and while the HILDA indicators capture support from household members, the GSS indicators specifically exclude household members as a source of support in a crisis.

8.2.3 Summary measures of social capital in regions

The previous section identified a number of potential groupings of social capital indicators across the 69 BTRE defined regions. This section briefly describes the results of principal components analysis, a technique commonly used to reduce large sets of indicators into one or more summary measures of social capital. Principal components analysis has been applied at the regional scale to the 15 HILDA and census-based indicators for the purposes of data reduction. A full statistical report is presented in Appendix VI.

Principal components analysis identifies two summary scales which should be of value as overall measures of the general support and community involvement facets of social capital for the 69 BTRE defined regions. Table 8.4 provides information on these summary scales. The two scales show a substantial degree of internal consistency with alpha scores above 0.80 for both scales, and item-total correlations reveal that both scales are strongly unidimensional.

The first summary scale provides a general measure of support within regions. It includes two direct indicators of the ability to obtain support, together with indicators reflecting isolation and health barriers, which would be expected to be associated with a reduced ability to obtain support.

⁵³ The two internet related indicators are 'usage of e-mail or chat sites in last 12 months' and 'used internet to access government services over past 12 months'.

The second summary scale includes a number of different aspects of involvement in the community (i.e. volunteering, active membership, how commonly do neighbours help each other out, integration into the community). It also includes an indicator of English proficiency, and there are at least two potential interpretations of why English proficiency would be associated with community involvement. A lack of English proficiency could serve as a barrier to community involvement.⁵⁴ Alternatively, the correlation could reflect the concentration of those with poor English proficiency in the largest cities, which are generally characterised by relatively low levels of community involvement.

Scales and scale items	Standardised alpha	Standardised item-total correlation
1 – General support	0.815	
Capacity to raise \$2000 in one week for an emergency		0.608
Health barriers to social participation (reverse coded)		0.634
I often feel very lonely (reverse coded)		0.630
Inability to obtain emotional & general support from others (reverse coded)		0.663
2 – Community involvement	0.849	
Active membership rate		0.667
How commonly do neighbours help each other out in your neighbourhood?		0.677
Volunteering rate		0.760
Language barriers (reverse coded)		0.505
Integration into the community		0.691

TABLE 8.4 RELIABILITY TESTING OF GENERAL SUPPORT AND COMMUNITY INVOLVEMENT SCALES, 2001

Source BTRE analysis of HILDA 2001 unit record data and data from 2001 Census of Population and Housing.

To explore the relationship between these two facets of social capital, standardised scores (i.e. estimates of the scores regions would have received on the components had they been measured directly) have been calculated for both components using the regression approach. There is a rather small positive correlation between general support and community involvement.⁵⁵ Chapter Ten presents regional analysis based on the standardised scores for general support and community involvement.

The results of the principal components analysis confirm that social capital is a multifaceted concept and should be conceptualised and measured in multidimensional terms. The analysis highlights two particular facets of social capital (general support and community involvement) which are empirically quite distinct from one another at the regional scale. However, it is worth

⁵⁴ ABS (2004b) reports that the volunteering rate in 2002 was just 11% for those who were not proficient in English, compared to the overall volunteering rate of 34%. This suggests language barriers may play an important role in restricting this form of community involvement.

⁵⁵ Correlation = 0.21, significance level = 0.077

reiterating that other conceptually important elements of social capital, such as economic participation and frequency of social contact, are largely unrelated to general support and community involvement across the 69 regions. Consequently, reliance on one or two summary measures cannot provide a comprehensive picture of social capital in Australia's regions.

8.2.4 Summary of relationships for regions

There have been several Australian studies which compare a set of social capital indicators across a number of communities, and none of these studies identify a community which consistently scores above or below average across all social capital dimensions. Social capital is rarely uniformly high or low in communities, and instead tends to display a more complex, multidimensional pattern.

Analysis of the BTRE's social capital indicators at the regional scale identifies two summary measures, capturing the key social capital dimensions of community involvement and general support. These two facets of social capital are empirically quite distinct from one another, and from other relevant indicators of social capital, such as frequency of social contact and satisfaction with family relationships.

8.3 A TYPOLOGY-BASED APPROACH

An alternative approach to summarising the information contained within a suite-of-indicators is to classify individuals into social capital 'types', based on each individual's set of social capital indicators. While the purpose of principal components and factor analysis is to develop a grouping of indicators, with typology-based approaches the aim is to develop a grouping of respondents.

Cluster analysis is a technique that can be used to group individuals according to the similarity of their responses to social capital questions. Cluster analysis has been applied to the 2001 HILDA data in an attempt to identify sub-groups of individuals who have a distinctive profile in terms of the social capital indicators, and to provide an improved understanding of the distribution of social capital across individuals. By classifying each individual into a specific cluster (or 'type'), the technique provides a typology-based summary measure of social capital which highlights the multi-faceted nature of the concept.

The distribution of social capital across individuals is of interest because of the potential linkages between limited access to social capital resources and broader socio-economic disadvantage. Cluster analysis enables us to identify whether there is a significant subgroup of people who perform poorly against all (or most) of the social capital indicators, and so are subject to multiple disadvantages with respect to different dimensions of social capital.

We may also be interested in knowing how common it was for individuals to report high levels of community involvement *and* high levels of support, and whether such individuals tended to be particularly concentrated in particular age categories or geographic regions. Further, there may be important subgroups of the population who do not perform consistently well or poorly against all of the social capital indicators, but instead have particular strengths and weaknesses with respect to social capital (e.g. they have high levels of support but infrequent social contact). By identifying distinctive and significant groupings of individuals, cluster analysis can help answer these questions.

Stone & Hughes (2002) applied cluster analysis to the AIFS *Families, Social Capital and Citizenship Survey* and concluded that the technique was a meaningful method of summarising social capital data. While the approach adopted in this report is broadly similar to that of Stone & Hughes (2002), the cluster analysis is based on a less comprehensive set of social capital indicators. Stone & Hughes (2002) focused on the socio-demographic characteristics of their clusters. Our focus is on using cluster analysis to shed light on the distribution of social capital within different States, remoteness classes, urban centre size categories and regions.

Appendix VII details the methodology by which 11 indicators of social capital have been used to group individuals into six distinct social capital clusters.

Table 8.5 presents the indicator profiles for each of the six clusters. It lists the average value of each social capital indicator for each cluster. The univariate F ratios are highly significant for all indicators, meaning that for each indicator there is a significant difference between its average value for at least two of the six clusters.⁵⁶ Using these averages, Box 8.2 briefly describes each of the six social capital clusters.

Since Section 7.2 has already established a significant link between the social capital indicators and the socio-demographic characteristics of individuals, it is expected that the clusters will differ considerably in terms of age, gender, educational attainment and other characteristics. Table 8.6 profiles the six clusters in terms of key social and demographic characteristics, providing some insight into the sorts of individuals who are lacking in key elements of social capital (cluster 2) or rich in social capital (cluster 6).

While each of the clusters differ in terms of their socio-demographic characteristics, the profile of cluster 3 differs most markedly from the composition of the Australian population. Only 10% of individuals in this cluster are in the labour force, while 48% are aged over 55.

⁵⁶ Additional pairwise comparisons among means using the Tukey Honestly Significantly Different (HSD) test are listed in Appendix VII.

	Av		National					
Indicator	1	2	3	4	5	6	F ratio*	average
Capacity to raise \$2000 in one week for emergency	70.7	45.4	56.7	75.0	71.6	75.4	184.1	67.3
l often feel very lonely^ Inability to obtain emotional & general	71.4	33.0	70.8	77.6	79.3	74.8	442.4	70.6
support from others^	72.5	42.8	77.5	84.3	85.3	80.9	702.1	76.7
Active membership rate	5.7	30.6	32.1	1.1	100.0	72.0	2129.5	40.8
Integration into the community How commonly do neighbours help each	61.6	57.4	68.7	67.2	68.8	77.3	277.2	68.4
other out in your neighbourhood?	60.8	51.3	66.2	61.8	65.5	72.2	100.8	64.4
Volunteering rate	1.6	18.6	0.0	0.5	0.0	100.0	19488.8	24.4
Labour force participation rate	74.3	80.6	9.7	96.5	99.6	64.7	2002.3	67.5
Frequency of social contact Emotional & general support received	41.6	51.5	65.4	63.6	68.6	63.2	247.8	61.1
from others	52.4	56.5	80.2	81.7	79.1	77.9	599.0	74.6
Satisfaction with family relationships	84.2	61.5	87.9	79.9	81.9	83.9	417.7	81.3
Sample	1097	1093	2264	2339	1493	2373	nr	10659

TABLE 8.5PROFILE OF SIX SOCIAL CAPITAL CLUSTERS FOR INDIVIDUALS,
AUSTRALIA, 2001

Note * All of the F-ratios are statistically significant at the 1% confidence level.

^ This item is reverse coded.

Source HILDA and 2001 Census of Population and Housing

Cluster 5 has quite a distinctive youthful profile, which is not surprising given the high rate of active membership of sporting, hobby and community groups and the frequent social contact of individuals in this cluster.

The 'social capital rich' cluster 6 and the two limited social capital clusters (1 and 2) have a less distinctive socio-demographic composition. However, clusters 1 and 2 both have an over-representation of males, the 35 to 54 age group and the full time employed, which provides some insight into the sorts of individuals who are most likely to have limited social and community connections and find it difficult to obtain support from their networks. On the other hand, the social capital rich tend to be highly educated, female and home owners. While 21% of the population have been classified as 'social capital rich', only 11% of 15 to 24 year olds have been classified to this cluster.

In summary, cluster analysis has been applied to the 2001 HILDA data to identify sub-groups of individuals who have a distinctive profile in terms of the social capital indicators. This led to the categorisation of individuals into six common social capital types. One of the clusters is richly endowed with social capital (cluster 6), two involve limited access to social capital resources (clusters 1 and 2), while the remaining three clusters are strong in some elements of social capital and weaker in other elements. The six social capital clusters also possess reasonably distinct social and demographic characteristics. Chapters 9 and 10 explore the extent to which these six social capital clusters are concentrated in particular States, remoteness classes, urban centre size classes and regions. The aim is to move beyond a simple focus on the average level of social capital within Australia's regions to a broader analysis of the distribution of social capital within those regions.

BOX 8.2 DESCRIPTION OF THE SIX SOCIAL CAPITAL CLUSTERS

High support, High involvement in the community - Cluster 6

This is the largest cluster and includes 22% of observations. This cluster has the highest values for neighbours helping each other out, integration into the community and volunteering. Everyone in this cluster has reported they undertake voluntary work in a typical week. The active membership rate is also very high at 72%. Measures of emotional and financial support are above average, as is satisfaction with family relationships and frequency of social contact. This cluster has no evident weaknesses with respect to the 11 social capital indicators. Individuals in the cluster appear to be social capital rich, with high levels of participation, connectedness and support.

High support, Active members and socialisers – Cluster 5

This is the fourth largest cluster, and includes just over 14% of observations. All individuals in this cluster are active members and the labour force participation rate is also close to 100%. Like cluster 6, this cluster performs better than average against nearly all of the social capital indicators. However, no-one in cluster 5 is a volunteer. Cluster 5 performs very well against the support-related indicators and has the highest score on the frequency of social contact indicator.

High support, Not volunteers or active members - Cluster 4

This is the second largest cluster and includes nearly 22% of observations. This cluster has very high values for each of the support-related indicators, but relatively low scores against the community involvement indicators. The volunteering and active membership rates are close to zero, while the cluster also has a low 'neighbours helping each other out' score. This group reported an above-average frequency of social contact and a below-average satisfaction with family relationships. Nearly all members of this cluster are in the labour force.

Strong family bonds, Not volunteers, Low labour force participation - Cluster 3

This is the third largest cluster and includes over 21% of observations. It has the highest satisfaction with family relationships of the six clusters, and very low volunteering and labour force participation rates. Individuals in this cluster also have a high frequency of social contact and a low capacity to raise \$2000 in an emergency. Overall, the other support and community involvement indicators are neither above nor below average.

Lonely, Limited emotional and financial support, Weak family and community bonds - Cluster 2

This is the smallest cluster and includes just over 11% of observations. Its most extreme characteristic is very frequent feelings of loneliness. Individuals in this cluster also have the most dissatisfying family relationships and the lowest capacity to raise \$2000 of all the clusters. This cluster also reported infrequent social contact, low levels of emotional and general support and below-average rates of volunteering and active membership. The integration into community and neighbours helping each other out indicators were lowest in cluster 2. The only indicator which was above-average for this cluster was the labour force participation rate. Individuals in this cluster appear to be lacking in social capital, with low levels of connectedness and support.

Limited emotional support, social contact and community involvement – Cluster 1

This is the second smallest cluster and includes just over 11% of observations. Individuals in this cluster report a low level of emotional and general support from others, and have the least frequent social contact of all the clusters. They report low community integration and a low rate of neighbours helping each other out, and are rarely active members or volunteers. However, individuals in this cluster report an above-average level of satisfaction with family relationships. Like cluster 2, individuals in this cluster report limited support, little community involvement and infrequent social contact, but not to quite the same extent. Despite strong family bonds, individuals in this cluster appear to have limited connections and support.

Proportion of cluster's population (%)	1. Limited emotional support, social contact & community involvement	2. Lonely, Limited support, Weak family & community bonds	3. Strong family bonds, Not volunteers, Low labour force participation	4. High support, Not volunteers or active members	5. High support, Active members & socialisers	6. High support, High involvement in the community	AUSTRALIA
			Age group				
15–19	4.0	7.7	13.1	7.4	13.2	4.8	8.8
20–24	6.0	10.0	7.1	11.9	13.3	4.2	8.9
25–34	17.9	21.1	12.1	24.5	26.1	13.0	19.0
35–44	22.9	25.5	9.9	23.7	19.5	23.7	19.4
45–54	23.5	20.0	9.7	21.9	17.6	22.3	17.5
55–64	12.6	10.7	16.0	8.6	8.6	15.1	12.0
65–74	6.8	4.0	18.2	1.7	1.6	11.5	8.3
75+	6.4	1.0	13.8	0.4	0.1	5.4	6.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			Gender				
Female	40.8	44.2	61.4	48.1	38.7	55.2	50.5
Male	59.2	55.8	38.6	51.9	61.3	44.8	49.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		Lat	our force status	٨			
Full time employed	58.1	47.6	4.9	68.1	66.5	36.4	42.7
Part time employed	13.1	24.1	3.4	23.9	28.0	24.0	18.1
Unemployed	3.1	8.9	1.3	4.8	5.1	3.4	4.4
Not in the labour force	25.7	19.4	90.4	3.2	0.4	36.2	34.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		Educ	ational attainme	nt*			
Bachelor degree or higher qualification	20.8	16.2	7.2	22.5	23.4	26.8	18.4
Diploma or advanced diploma	8.6	7.6	6.2	9.2	8.9	11.2	8.4
Skilled vocational qualification	20.3	19.8	16.0	19.1	20.3	16.5	17.6
Basic vocational and/or compulsory secondary	50.3	56.4	70.5	49.3	47.5	45.5	55.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		I	Housing tenure				
Owner or with mortgage	77.6	61.8	73.4	72.7	76.4	82.7	71.7
Government rental	2.8	5.0	7.2	2.4	2.0	2.4	4.3
Private rental	16.3	27.4	16.0	22.5	19.1	10.9	20.4
Other tenure	3.2	5.8	3.3	2.4	2.5	4.0	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 8.6 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF INDIVIDUALS IN THE SIX SOCIAL CAPITAL CLUSTERS, AUSTRALIA, 2001

Note ^ Labour force participation was one of eleven indicators inputted into the cluster analysis. The labour force participation indicator only distinguishes between participants and non-participants, while the labour force status variable also distinguishes between the full time employed, part time employed and unemployed. * The educational attainment categories are based on the Australian Qualifications Framework. See BTRE 2003b for further information.

Source BTRE analysis of HILDA 2001 unit record data.

8.4 IN SUMMARY

This chapter highlights the multifaceted nature of social capital. The evidence from Australian empirical studies is that social capital is rarely uniformly high or low in communities, but instead tends to display a more complex, multidimensional pattern. Whether the focus is on the social capital resources of individuals or regions, the available evidence does not support the use a single indicator (such as generalised trust or volunteering) to measure social capital.

While indicators of trust and reciprocity tend to be closely related, norms are not generally related to network characteristics, such as size, density and diversity. However, there is evidence that individuals with high levels of trust tend to participate more fully in the community. Volunteering, active membership and integration into the community are all quite closely related to one another at the individual and regional scales. Perceived isolation, emotional and general support, health barriers and financial support are also quite closely linked to one another at both the individual and regional scales.

The analysis suggests it is more appropriate to think about composite measures of key dimensions of social capital, rather than an overall summary measure. For the 69 BTRE defined regions, principal components analysis has been used to develop such measures. The resulting two composite measures, which represent the key dimensions of 'community involvement' and 'general support', are empirically quite distinct from one another – a high score on community involvement is unlikely to be a good predictor of high scores on the general support measure (or vice versa). Other conceptually important elements of social capital, such as frequency of social contact, are largely unrelated to general support and community involvement across regions. Consequently, reliance on only these two composite measures cannot provide a comprehensive picture of social capital in Australia's regions.

The chapter also presented an alternative approach to summarising the information contained within the suite-of-indicators – classifying individuals into social capital 'types' using cluster analysis. Such a summary measure reflects the multi-dimensional nature of social capital, and can provide insights into the distribution of social capital within Australia's regions.

CHAPTER 9 SOCIAL CAPITAL BY STATE/TERRITORY, REMOTENESS AND URBAN CENTRE SIZE

In this chapter, the BTRE's set of 33 social capital indicators is used to analyse the spatial dimensions of social capital in Australia. The analysis is undertaken at the following geographic scales:⁵⁷

- States and Territories;
- National and state remoteness classes; and
- Urban centre size categories.

At each of these scales, the suite-of-indicators is used to identify those aspects of social capital in which a particular region has a relative strength or weakness, and explore the distribution of social capital within regions.

This suite-of-indicators analysis for 2001–02 presents a broad-ranging *snapshot* of the spatial dimensions of social capital in Australia. However, it has not been possible to analyse social capital *trends* for States, remoteness classes or urban centre size classes.

9.1 EXISTING AUSTRALIAN EVIDENCE

Before presenting analysis based on BTRE's suite-of-indicators, it is worth reviewing existing research which sheds light on how social capital is spatially distributed within Australia. The international evidence, which was reviewed in Section 6.2, pointed to community involvement generally being lower in large urban centres.

There have been several Australian studies which have compared social capital across a number of communities or regions (e.g. Onyx & Bullen 1997, Department for Victorian Communities 2004, Vinson 2004, Stimson et al 2003). It can be difficult to draw broader conclusions from studies which compare a relatively small number of communities. However, after comparing social capital in two Sydney communities and three NSW regional communities, Onyx & Bullen (2000) noted that 'elements of social capital are generally higher in rural than urban areas'. This pattern was particularly evident for trust and

⁵⁷ Section 5.4 provides an overview of the regional classifications used in this study.

safety, neighbourhood connections and participation in the local community (e.g. volunteering, active membership, attendance at community events).

This finding is consistent with Stimson et al (2003), which developed social capital scales for five SLAs. The study found that the small town of Boonah in Queensland was the strongest community on the social and institutional capital domain, followed by Eaglehawk (which is part of the regional city of Bendigo in Victoria). Both had a strength in 'formal structures' (e.g. high participation in the local community), while Boonah also had a strength in formal norms (e.g. generalised trust). However, Boonah was the weakest of the five communities with respect to tolerance of diversity. Auburn (in Sydney) and Zillmere (in Brisbane) were assessed as having relatively limited social capital, and were both weak on community spirit, place attachment and feelings of safety. The inner Melbourne suburb of Richmond was less extreme — it showed a strong tolerance of diversity but limited formal reciprocity.

Vinson (2004) used three indicators representing volunteering, organised recreation and informal help to measure social cohesion in Victoria. Table 9.1 summarises the social cohesion results for Victorian postcodes and shows a very clear pattern. The low cohesion postcodes are almost exclusively located within Greater Melbourne, while the high social cohesion postcodes are concentrated in regional Victoria. This difference was statistically significant.

Social cohesion	Total number of	Greater Mel	bourne*	Rest of Victoria		
	postcodes	Number	Share	Number	Share	
Low	83	79	48%	4	4%	
Medium	120	72	43%	48	43%	
High	74	15	9%	59	53%	
Total	277	166	100%	111	100%	

TABLE 9.1 LOCATION OF LOW, MEDIUM AND HIGH SOCIAL COHESION POSTCODES, VICTORIA, 2001/2002

Note The social cohesion score is based on volunteering, informal help and organised recreation participation in the postcode. Victorian postcodes with a sample of less than 10 respondents for any of the three contributing items were excluded from the analysis.

* Includes Geelong, Melton, Sunbury, Healesville and other communities within a short distance of Melbourne.

Source Reproduced from Vinson (2004) Table 5.2.

Department for Victorian Communities (2005) analysed 15 community strength indicators for 79 LGAs and concluded that rural areas generally scored higher than the metropolitan areas on all indicators.⁵⁸ Another Victorian study by Department of Human Services (2003) reported that metropolitan residents had significantly smaller social networks than other Victorian residents.

⁵⁸ An exception to this general pattern is the indicator, 'feel multiculturalism makes life in the area better'. The areas which are least accepting of this statement are concentrated in regional Victoria.

A social capital index developed for WA was somewhat lower for residents of the Perth metropolitan area than for other WA residents (Department of Local Government and Regional Development 2003).

Black & Hughes (2000) analysed the 1998 Australian Community Survey and reported that:

- Only 20% of metropolitan residents responded that most of their social acquaintances knew one another, compared to 28% in non-metropolitan centres of more than 2000 persons and 50% in towns of less than 2000 people.
- Only 7% of metropolitan residents knew their neighbours well enough to know many of their personal concerns, compared with 10% in non-metropolitan centres of more than 2000 persons and 20% in towns of less than 2000 people.
- Residents of small towns and rural areas tend to have higher trust in local people than metropolitan residents, but they do not express higher levels of trust in 'most Australians'.
- Within metropolitan areas, trust and openheartedness towards locals and most Australians were lower in socio-economically disadvantaged suburbs than in advantaged suburbs.
- Involvement in voluntary groups is relatively high in small towns and rural areas and lower in metropolitan areas.

Stone & Hughes (2001b) use data from the AIFS' *Families, Social Capital and Citizenship Survey* to explore differences in social capital between capital cities, other major urban centres (population of greater than 80 000) and the rest of Australia (which is labelled 'rural and remote'). Compared to the national average, rural and remote residents were more likely to know more of their neighbours, reported significantly higher trust of local people, and reported higher reciprocity amongst local people and people in general.

The authors were particularly interested in exploring whether rural and remote areas were characterised by bonding social capital and insufficient bridging social capital, as earlier Australian research had suggested. Involvement in civic groups and organisations is one possible means through which bridging ties can be developed. Stone & Hughes (2001b) found no evidence that rural and remote residents were more likely to participate in groups and organisations. However, the groups rural and remote residents belonged to were more likely to be ethnically and culturally homogenous, which may limit the extent to which group memberships can foster bridging ties. Rural and remote residents were also less tolerant of diversity than urban residents. Compared to Australians as a whole, rural and remote residents were more likely to have personal ties to the police and media, and less likely to have ties to tertiary educational institutions and big business. The authors concluded that 'on

average regional Australian communities are characterised by higher stocks of bonding than bridging or linking forms of social capital' and the deficit of cross-cutting connections may undermine the ability of communities to achieve sustainability.

Stone & Hughes (2001a) used multivariate regression analysis to test the relationships between their summary measures of social capital and selected socio-demographic characteristics of individuals. Each of the regression models included a variable which measured whether the person lived in a rural or remote area (i.e. outside a 'major urban centre' as previously defined). Living in a rural or remote area had a positive, but statistically *insignificant*, relationship with the overall measures of 'trust and reciprocity' and 'ties or connections'. However, living in rural or remote areas was significantly negatively related to confidence in institutions and significantly positively related to trust and reciprocity in the local area.

Young & Byles (2001) use data from the *Australian Longitudinal Study on Women's Health* for 1999 to examine community belonging for women aged between 73 and 78. They found that the extent to which neighbours helped each other out and the extent to which women got involved with local issues both declined as the size of the urban centre increased. The extent to which women felt they had access to help when it was needed was not particularly dependent on the size of the urban centre in which they lived.

A recent study by Cummins et al (2005) used the *Australian Unity Wellbeing Index* surveys to explore variation in key aspects of wellbeing across Australia's capital cities. Community connectedness was found to be particularly low in Perth, but high in Darwin and Hobart.

In summary, the existing research points to social capital generally being greater outside Australia's capital cities, particularly in terms of the strength and quality of neighbourhood connections. However, these areas are generally less accepting of diversity than the capital cities.

Of course, areas outside Australia's capital cities include very large urban centres such as Newcastle, as well as regional centres, small towns and rural areas. There is relatively little evidence as to whether the previously noted characteristics are generally shared by all of these different types of communities. What evidence does exist suggests that the larger urban centres (outside of the capital cities) tend to be quite similar to the national average with respect to most aspects of social capital. It is the rural areas and very small towns which are most characterised by strong neighbourhood connections and high levels of community involvement.

Furthermore, while there have been several state-specific studies of social capital, survey results are not generally comparable, and little is known about differences in social capital across Australia's States and Territories.

9.2 DOES PLACE MATTER?

Differences in social capital indicators across states, remoteness classes and urban centre size categories may flow wholly or in part from differences in the socio-demographic characteristics of populations. For example, Section 7.2 concluded that volunteering is highly dependent on age, so that if one State has a much older age structure than the others, this may be reflected in a higher volunteering rate. While spatial differences which are attributable to the sociodemographic composition of the population are still of interest, it is also important to identify whether place has a more fundamental influence on social capital in Australia. The aims of this section are to establish:

- whether an individual's place of residence is a significant predictor of key social capital elements, once socio-demographic characteristics are controlled for.
- which (if any) geographical classification is most useful for describing spatial differences in social capital within Australia.

These issues are addressed through adding several geographic variables to the regression models for selected HILDA social capital indicators which were presented in Section 7.2. Appendix V details the socio-demographic variables included in these regressions. The relevant geographical variables are:

- State/Territory of residence: NSW is the reference state;
- Remoteness class: Major cities are the reference class. Remote and very remote areas are combined into a single category; and
- Urban centre size: Urban centres with a population of 1 million or more are the reference category.

For each of the social capital indicators in Table 9.2, a test is undertaken of whether the data supports the restricted regression model (the regression with socio-demographic variables but *no geographic variables*) or the unrestricted regression model (the regression with both geographic variables and socio-demographic variables).

That is, in the following regression model,

 $SK_i = a + B_j X_{ij} + c_k S_{ik} + d_r R_{ir} + e_m US_{im} + u_i$

where $SK_i = social capital indicator for individual i=1 ... N (N = total sample size)$

 X_{ij} = socio-demographic variable j for individual i

 B_j = Coefficient on j'th socio-demographic variable

 S_{ik} = State/Territory variable k for individual i

 c_k = Coefficient on k'th State/Territory variable

 R_{ir} = Remoteness class variable r for individual i

 d_r = Coefficient on r'th remoteness class variable US_{im} = Urban centre size variable m for individual i e_m = Coefficient on m'th urban centre size variable u_i = residual for individual i a = constant

we are testing the:

Null hypothesis that $c_1 = c_2 = \ldots = c_k = d_1 = d_2 = d_3 = e_1 = e_2 \ldots = e_m = 0$ and hence $SK_i = a + B_j X_{ij} + e_i$

against the alternate hypothesis that these parameter restrictions do not apply .

Table 9.2 summarises the results of this test for each indicator. A significance level of 1% or less is required to confidently reject the null hypothesis and conclude that the geographic variables make a significant contribution to explaining variation across individuals in the relevant social capital indicator, after controlling for the influence of socio-demographic characteristics.

Based on these results, we can conclude that after controlling for the influence of socio-demographic characteristics, place of residence does make a significant contribution to explaining the variation across individuals in:

- Active membership;
- Voluntary work;
- Frequency of social contact *and* social contact once a month or less;
- How commonly do neighbours help each other out in neighbourhood?;
- Satisfaction with family relationships;
- Capacity to raise \$2000 in one week for an emergency; and
- Integration into the community.

However, place of residence does not appear to be a significant predictor of feelings of loneliness or inability to obtain emotional and general support from others. This does not imply that these two indicators do not vary across States, remoteness classes or urban centre size categories, just that any observed variation is likely to reflect differences in the socio-demographic characteristics of the population. For the 'emotional and general support received from others' indicator, the evidence as to the importance of place is inconclusive.

TABLE 9.2TESTING THE ABILITY OF GEOGRAPHIC VARIABLES TO SIGNIFICANTLY
EXPLAIN VARIATION IN THE SOCIAL CAPITAL INDICATORS ACROSS
INDIVIDUALS, AUSTRALIA, 2001

	State/ Territory	Remoteness	Urban centre	All
	variables	class	size	geographic
Social capital indicator		variables	variables	variables
Indicators for which logistic regress	sion was used^			
Active membership	14.0*	15.5***	23.6***	126.8***
Undertake voluntary work	14.4**	7.5*	27.7***	131.7***
Social contact once a month or less	32.0***	8.0**	37.0***	75.2***
Chi-square critical value (1%)	18.5	11.3	20.1	34.8
Indicators for which ordinary least s	squares regressio	on was used		
How commonly do neighbours help	7.7***	1.7	20.0***	21.9***
each other out in neighbourhood?				
Satisfaction with family relationships	1.4	2.2*	0.3	2.0***
Frequency of social contact	8.5***	0.5	5.8***	5.2***
Inability to obtain emotional & general	0.2	0.3	0.6	0.4
support from others				
Emotional & general support received	1.2	0.2	1.2	1.6*
from others				
Capacity to raise \$2000 in one week	4.6***	5.6***	2.7***	4.1***
for emergency				
Integration into the community	7.1***	14.0***	5.9***	24.9***
I often feel very lonely	0.7	1.4	1.1	1.0
F-test critical value (1%)	2.6	3.8	2.5	1.9

Note Section 7.2 presents the results of regressions which relate the social capital indicators to a range of sociodemographic characteristics of individuals. These test statistics are based on a simple extension of these logistic and ordinary least squares regressions to also include variables measuring the State/Territory, urban centre size category and remoteness class in which the individual lives.

*** = the test statistic was significant at the 1% level (i.e. the geographic variables make a significant

contribution to explaining variation in the social capital indicator).

** = the test statistic was significant at the 5% level, but not at the 1% level.

* = the test statistic was significant at the 10% level, but not at the 5% level.

[^] For these three social capital indicators, a likelihood ratio test was used to test the overall significance of the geographic variables, while Wald tests were used to test the significance of the State, remoteness and urban centre size subsets. Simple F-tests were used to test the restrictions in the other regressions.

Source BTRE analysis of HILDA 2001 unit record data.

Overall, the results point to an individual's place of residence being a significant influence for many, but certainly not all, aspects of social capital.⁵⁹ Apart from financial support, the support-related indicators are much less dependent on place than are the indicators of community involvement.

In addition, for each regression three separate tests have been undertaken of:

- (a) the joint significance of the set of seven State/Territory variables;
- (b) the joint significance of the set of three remoteness class variables; and
- (c) the joint significance of the set of eight urban centre size variables.

⁵⁹ A significant relationship could occur between place of residence and a social capital element because:

(a) an individual's place of residence is a determinant of that social capital element,

(c) the social capital element is a determinant of place of residence (via mobility).

Option (c) is relatively unlikely because mobility over the last 5 years has been controlled for in the regressions. However, options (a) and (b) both offer plausible explanations.

⁽b) place of residence is correlated with an unmeasured factor which is closely linked to the social capital element, and/or
The results of these three tests are also reported in Table 9.2. All three sets of geographic variables are significant for integration into the community and capacity to raise \$2000 in an emergency. However, typically only one or two of the geographic classifications are significant for the other social capital indicators. Overall, it is the urban centre size classification which is most useful in explaining variation across the social capital indicators. The remoteness and State/Territory classifications are of value in predicting some of the social capital indicators, but are insignificant in many of the regressions.

Table 9.3 lists the geographic variables that were significant at the 1% level in each social capital indicator regression and assesses their relative influence.

Remoteness only has an important influence on active membership and integration into the community. However, its influence on active membership is of extremely large magnitude. The control person (who is a 45 year old female living in Sydney)⁶⁰ has an estimated probability of active membership of 29%. A person with otherwise identical characteristics, who instead lives in a rural area in remote and very remote NSW has an estimated probability of active membership of 53% – a 24 percentage point rise.

State/Territory of residence has a significant influence on several of the social capital indicators. Its influence is of a relatively large magnitude for the neighbourhood reciprocity and financial support indicators. An individual living in the ACT or NT is predicted to have a score on the neighbours helping each other out indicator which is between 9 and 10 percentage points lower than a NSW resident, holding all other socio-demographic characteristics constant. Living in the ACT has a substantial positive influence on an individual's predicted capacity to raise \$2000, while living in Tasmania has a substantial negative influence.

For each of the social capital indicators in Table 9.3, one or more of the urban centre size variables are significant. Living in a rural area, locality or small town⁶¹ has a major positive influence on the extent to which neighbours help each other out. In fact, living in a rural area has a greater influence on the extent to which neighbours help each other out than any of the socio-demographic variables. Living in a rural area, locality or small town also have a positive, but smaller, influence on integration into the community. Living in a rural area or small town has a significant positive influence on the probability of undertaking voluntary work.

Living in a rural area also has a major negative influence on the frequency with which individuals get together with friends or relatives who do not live with

⁶⁰ Table 7.5 lists the full set of socio-demographic characteristics for the control person.

⁶¹ In this analysis, the term 'rural area' is used to refer to the 'rural balance' category, while the term 'small town' is used to refer to the 'urban centre of 1000–4999 persons' category.

them. The probability of the control person (the 45 year old female from Sydney) having social contact once a month or less is 22%, but that rises to 35% if the person instead lives in a rural area. The only socio-demographic variable to have a greater influence on this social capital indicator is age. Living in a town of between 5000 and 19999 persons also boosts the probability of social contact only occurring once a month or less.

So, in response to the questions posed at the beginning of this section, the answers would appear to be:

- In Australia, an individual's place of residence does have a significant influence on many, but not all, aspects of social capital. This influence is not a mere reflection of the different social and demographic characteristics of regional populations, but instead reflects a more fundamental spatial influence on these aspects of social capital.
- The support-related indicators (with the exception of the financial support measure) are less dependent on place than the indicators of community involvement.
- The urban centre size classification has a more widespread influence on the social capital indicators, than either the State/Territory or the remoteness classifications.
- Individuals who live in rural areas, localities and the smallest towns differ significantly from individuals who live in larger urban centres with respect to many of the social capital indicators. Thus, for social capital, it is rurality (and small town status) that most often matter, rather than urban centre size more generally there are few significant differences between cities with more than 1 million population and the various urban centre size categories from 5000 population upwards.

Since it has been established that an individual's place of residence does have an important influence on many aspects of social capital, it is now worth taking a more detailed look at the nature of social capital in each State and Territory, remoteness class and urban centre size category. The analysis of States and Territories and remoteness classes is based on a considerably larger set of social capital indicators than were assessed in this section, and so provides a more complete picture of social capital. However, the analysis in the remainder of this chapter does not control for the influence of socio-demographic characteristics. Therefore, observed differences in feelings of safety across States, or observed differences in network mode across remoteness classes, may simply reflect differences in the socio-demographic make-up of the population.

Social capital	Geographic variable	Influence of place of residence (relative to				
indicator		living in Sydney NSW), controlling for socio- demographic characteristics of individuals				
Active membership	Remote and very remote	Increases probability by 17.3 percentage points				
(%)^	Urban centre of 1000–4999 persons	Increases probability by 8.6 percentage points				
	Urban centre of 250 000–999 999 persons	Increases probability by 6.2 percentage points				
Undertake voluntary	Rural balance	Increases probability by 7.8 percentage points				
work (%) [^]	Urban centre of 1000–4999 persons	Increases probability by 8.0 percentage points				
Social contact once a	Queensland	Increases probability by 3.4 percentage points				
month or less (%) [^]	Rural balance	Increases probability by 12.4 percentage points				
	Urban centre of 5000–19999 persons	Increases probability by 9.9 percentage points				
How commonly do	Victoria	Reduces score by 2.8 points				
neighbours help each	Queensland	Reduces score by 2.0 points				
neighbourhood?	South Australia	Reduces score by 5.1 points				
(0-100 scale: 0=never	Northern Territory	Reduces score by 9.7 points				
happens, 100=very	Australian Capital Territory	Reduces score by 9.2 points				
common)	Rural balance	Increases score by 11.0 points				
	Locality (200–999 persons)	Increases score by 7.6 points				
	Urban centre of 1000–4999 persons	Increases score by 7.5 points				
Frequency of social	Victoria	Increases score by 2.7 points				
contact	South Australia	Increases score by 2.6 points				
than once every 3	Western Australia	Increases score by 3.3 points				
months, 100=every day)	Rural balance	Reduces score by 3.9 points				
Capacity to raise \$2000	Tasmania	Reduces score by 6.1 points				
in one week for an	Australian Capital Territory	Increases score by 7.1 points				
scale: 0=could not raise	Locality (200–999 persons)	Reduces score by 7.5 points				
money, 100=could easily raise money)	Urban centre of 250 000–999 999 persons	Reduces score by 3.7 points				
Integration into the	Queensland	Reduces score by 2.0 points				
community	Western Australia	Reduces score by 1.9 points				
100=verv strong)	Inner regional	Increases score by 2.2 points				
, 0,	Outer regional	Increases score by 5.0 points				
	Remote and very remote	Increases score by 5.8 points				
	Rural balance	Increases score by 4.2 points				
	Locality (200–999 persons)	Increases score by 4.2 points				
	Urban centre of 1000–4999 persons	Increases score by 4.2 points				

TABLE 9.3GEOGRAPHIC VARIABLES WHICH EXPLAIN VARIATION IN THE SOCIAL
CAPITAL INDICATORS ACROSS INDIVIDUALS, AUSTRALIA, 2001

Note The table only lists geographic variables which were statistically significant at the 1% level in the social capital indicator regressions which controlled for the influence of a range of socio-demographic characteristics of individuals (see Appendix V for details of the control variables). The following HILDA indicators of social capital were omitted from the table as none of the geographic variables was significant at the 1% level: Satisfaction with family relationships, Inability to obtain emotional and general support from others, Emotional and general support from others, Emotional and general support received from the table of the geographic variables is determined based on a control person (as defined in Table 7.5, but with the additional characteristic of being a resident of Sydney). The estimated influence of the geographic variables proved reasonably robust to the specification of the control person. All other results are based on ordinary least squares regression.

Source BTRE analysis of HILDA 2001 unit record data.

9.3 STATES AND TERRITORIES

All 33 of BTRE's regional social capital indicators are available at the State/ Territory scale. Table 9.4 presents the State/Territory estimates for each of the indicators, organised according to the ABS Framework. State and Territory estimates which differ significantly from the national average are highlighted in blue. Since the underlying data sources typically exclude sparsely populated areas from their coverage, estimates for the NT should be used with caution.

Appendix I contains details of the conceptual basis, data source and derivation of each indicator. While all indicators have a minimum possible value of zero and a maximum possible value of 100, the indicators take two distinct forms:

- Percentage of the population with a particular characteristic (e.g. volunteering rate, anticipated source of support in a crisis).
- Scaled indicators, which have been constructed as summary measures when the source variable is not dichotomous, but instead consists of multiple possible responses. The attitudinal measures typically take this form. For example, the extent to which neighbours helped each other out was originally measured on a 5 part scale (never happens, very rare, not common, fairly common, very common) which was converted to a 0 to 100 scale with equal intervals. The key information is whether the regional value is significantly higher or lower than the national average, rather than its actual magnitude.

For most of the indicators, a higher value is expected to be associated with improved social capital, holding other factors constant. However, there are some indicators for which a higher value is expected to be associated with lower social capital (i.e. the indicators measure the absence, rather than the presence, of social capital). The relevant indicators are 'Inability to obtain emotional and general support from others', the two measures of isolation and the indicators of barriers to participation.

Some of the indicators do not vary significantly across Australia's States and Territories — examples include health barriers, volunteering, feelings of loneliness, and ability to obtain emotional and general support from others. For most of the indicators, at least one State or Territory differs significantly from the national average. While the three larger States tend to follow the national average quite closely, the two Territories differ markedly from the national average for most of the social capital indicators.

The following discussion focuses on estimates which are significantly different from the national average, and these are referred to as the State's particular strengths or weaknesses.

In the context of social capital, NSW has several strengths relative to Australia as a whole, including high levels of community integration and neighbours helping each other out. Weaknesses include a low donation rate, a low rate of weekly face to face contact and the inability of many residents to obtain emotional and general support from others.

Amongst Victoria's strengths in terms of the social capital indicators are it's higher than average donation rate, high level of community integration and the overall frequency of social contact for Victorians. From Table 9.3 we know that Victorians continue to have relatively frequent social contact when social and demographic characteristics are controlled for. Relative to other Australians, Victorians are less likely to anticipate that they could obtain support from friends in a crisis.

Queensland is broadly comparable to the national average with respect to most of the social capital indicators. Queensland residents have significantly less frequent social contact than the rest of Australia and a relatively low capacity to raise \$2000 in an emergency. However, these results can be attributed to the socio-demographic characteristics of the population (e.g. age, income, mobility). On the other hand, Queensland's relatively low levels of integration into the community and high incidence of infrequent social contact cannot be attributed to such characteristics (see Table 9.3).

South Australia has a very mixed profile across the social capital indicators. South Australia's particular strengths lie in the relatively high ability of residents to obtain support from family outside the household in a crisis and to ask someone outside the household for small favours. South Australia also has a relatively high level of face to face contact with family and friends and a high donation rate. On the other hand, South Australians score poorly on the feelings of safety indicator, have low participation in sports and the labour force, and are less likely to report that neighbours help each other out. The low sports and labour force participation and the high carers rate would be partly attributable to the older age profile of South Australians. However, the low rate of neighbours helping each other out continues to be evident after sociodemographic characteristics are controlled for (see Table 9.3).

Relative to Australia as a whole, Western Australia has particular strengths in its high donation rate, high sports participation and the frequency of social contact of its residents. In addition, a relatively high proportion of Western Australians anticipate they could obtain support from friends in a crisis or could ask someone outside the household for small favours. Western Australians score poorly on the feelings of safety indicator and also have a low level of integration into the community. The high frequency of social contact and the low integration into the community cannot be attributed to the sociodemographic composition of the state's population.

TABLE 9.4 COMPARISON OF SOCIAL CAPITAL INDICATORS ACROSS AUSTRALIA'S STATES AND TERRITORIES, 2001–02 $^{\#}$

Indicator	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUST
Norms:									
Feelings of safety at home alone after dark $^{@}$	78.8	79.0	79.4	76.3	76.3	79.7	77.3	82.1	78.6
Donation rate, 2000 (%)	69.0	76.5	74.9	78.7	79.6	75.6	74.8	83.5	74.2
How commonly do neighbours help each other out in your neighbourhood? [®]	65.0	62.3	63.3	60.6	62.7	64.7	53.7^	56.0	63.2
Common purpose:									
Participation rate in church/religious activities (%) Participation rate in sport or recreational physical	25.7	22.1	22.7	23.4	21.6	17.0	17.3	25.9	23.4
$\begin{array}{c} \text{Active membership rate } (0) \\ \end{array}$	01.3	04.3	02.7	59.4	10.2	02.2	12.3	11.0	20.2
Active membership rate (%)	39.5	05 2	30.4 04 7	40.4	40.0	06.1	96 1	49.0	39.3
Voter turnout at rederat election (%)	94.7 21.6	95.Z	94.7	95.5	94.0	90.1	20 00	95.0 27.2	94.9 21.0
Properties of service in population 2002 (%)	21.0	22.9	20.4	22.9	19.4	22.9	20.9"	21.2	21.0
Proportion of carers in population, 2003 (%)	11.4	14.1	14.3	14.8	12.7	14.8	na	10.8	13.0
Satisfaction with family relationships	81.8	81.0	81.0	81.5	81.0	83.2	82.0	71.0	81.5
Labour force participation rate" (%)	64.8	64.6	65.2	60.5	64.8	59.0	67.1	71.9	63.0
Trade union membership rate, 2003 (%)	24.3	22.8	23.9	25.1	20.2	30.1	22.2	24.2	23.6
I ransport barriers	7.9	6.5	5.7	5.1	5.9	5.5	5.6	3.6	6.6
Health barriers to social participation [®]	20.1	18.8	19.1	20.1	18.3	20.3	21.8^	17.3	19.4
Language barriers* (%)	3.0	3.2	0.8	1.7	1.4	0.3	0.9	1.4	2.2
Network structure:									
Anticipated source of support in a crisis (%)	93.2	93.4	94.8	95.3	95.0	96.0	94.1	96.5	94.0
Anticipated support from family in a crisis (%)	80.7	83.8	82.8	85.9	81.1	83.2	73.9	85.4	82.4
Anticipated support from friend in a crisis (%)	64.8	63.5	65.9	67.1	73.8	68.7	77.3	78.5	66.1
Anticipated support from neighbour in a crisis (%)	35.7	32.8	31.7	34.5	35.0	36.7	28.1	39.1	34.1
Frequency of social contact [@] Face to face contact with family or friend in last week	60.3	62.4	58.7	61.9	63.2	62.9	59.7^	61.3	61.1
(%) Telephone, email or mail contact with family or friend in last week (%)	81.5 90.7	83.8 90 3	82.7 90.0	88.0	88.9	87.3 90.3	84.2 88.6	89.4 94.5	83.8 90.5
Lisage of e-mail or chat sites in last year (%)	46.8	15.8	11 0	/3.7	52.6	38.2	56 1	69.7	46.8
Droportion living in same SLA as 5 years age* (%)	76.0	74.4	62.0	72.9	70.0	79.9	60.1	50.8	72.4
Notwork transactions:	70.9	/4.4	02.9	72.0	70.9	70.0	00.1	59.0	72.4
Could ask someone for small favours (%)	02.4	02.2	04.2	05.4	05.2	05.2	04.2	05.4	02.2
Inability to obtain emotional and general support from others [@]	92.4 23.8	92.2 23.5	94.3 24.4	23.6	23.5	24.9	94.3 25.4^	21.0	23.8
Emotional and general support received from others @	74.0	74.5	73.8	74.0	74.3	75.8	76.9^	70.9	74.1
Capacity to raise \$2000 in one week for emergency @	66.4	67.6	62.9	64.7	67.4	58.7	70.9^	75.2	66.0
Integration into the community [@]	68 1	68.4	65.8	67.2	65.5	67.6	68.7^	63.3	67.4
Used internet to access government services over past 12 months (%)	20.1	18.9	22.5	18.8	24.7	18.6	25.6	35.5	20.8
Proportion of successful jobseekers using friends, relatives, contacts to gain job, 2000 (%)	23.7	24.1	25.3	23.9	25.7	25.7	27.4	22.0	24.4
Network types:									
Only get together socially once a month or less with friends or relatives (%)	20.2	18 2	23.2	18.6	17.5	19.0	26.6^	20.7	19.9
l often feel verv lonelv [@]	30.2	29.7	30.4	29.2	29.4	29.9	31 1^	28.8	29.9
Note Indicators may contribute to more than	one part	t of the A	BS Fram	ework. bi	ut for the	purpose	s of this t	able hav	 /e

Indicators may contribute to more than one part of the ABS Framework, but for the purposes of this table have been listed against only one category. Indicators which are significantly different from the national average at the 5% significance level are highlighted in blue. # All indicators relate to 2001–02, apart from those for donation, caring, job search and union membership.

* Significance testing was not relevant for these indicators, which were derived from non-survey data sources.

[^] These estimates are based on a sample of less than 100 individuals and should be used with caution. [®] These indicators are measured on a 0 to 100 summary scale — Further details are provided in Appendix I.

BTRE analysis of data from various sources — a full listing of data sources is provided in Appendix I. Source

In terms of the social capital indicators, Tasmania's strengths include a high proportion of residents anticipating they could obtain support in a crisis and could ask someone outside the household for help with small favours. A high proportion of Tasmanians also have weekly face to face contact with friends or relatives who do not live with them. Tasmanians have low rates of labour force and religious participation and a limited capacity to raise \$2000 in an emergency. The limited financial support available to Tasmanians is still evident when socio-demographic characteristics, such as household income and labour force participation, are controlled for. This suggests the low capacity of Tasmanians to raise \$2000 in an emergency relates not just to one's own economic resources, but to the economic resources of those you know and the strength and diversity of network ties. Tasmania also has a particularly high proportion of its residents who are union members and carers.

The NT has a mixed profile in terms of the social capital indicators. Strengths include high rates of sports and labour force participation, high active membership rates, high usage of the internet for communication and obtaining information, and an above-average level of anticipated support from friends in a crisis. Weaknesses include low voter turnout and a relatively low proportion of residents who anticipate support from family (outside the household) or neighbours in a crisis. Many of these differences flow from the relatively youthful age structure of Territorians. The indicators are generally not representative of the more remote parts of the NT.

Finally, residents of the ACT have high levels of face to face and telephone contact with people outside the household, as well as high rates of internet usage. The ACT has an above-average proportion of its population who anticipate support from family, friends and neighbours in a crisis or can ask someone for small favours. ACT residents also have a strong capacity to raise \$2000 in an emergency, which is still evident when socio-demographic characteristics (such as household income) are controlled for. Relative to the national average, the ACT also has high sports and labour force participation, a high donation rate and a high active membership rate. However, it has relatively low levels of integration into the community and satisfaction with family relationships. ACT residents report a significantly lower tendency for neighbours to help each other out than other Australians, and this result continues to hold when socio-demographic characteristics are controlled for.

None of the States or Territories rank uniformly high or low across all of the social capital indicators. Rather, they tend to have particular strengths and weaknesses, which often reflect the socio-demographic characteristics of the local population.

The analysis has focused on average scores against each indicator for each of the States and Territories. However, population averages can hide important differences in the distribution of social capital within a State or Territory. Section 8.3 describes the process by which cluster analysis has been used to identify six distinct groupings of individuals in terms of the selected HILDA social capital indicators. Examining the relative importance of these six clusters within each of the States and the ACT provides some insight into the distribution of social capital in each place (see Figure 9.1).⁶² The cluster distribution in Victoria is almost identical to the national distribution, while the ACT differs markedly from the national distribution.

Cluster 2 consists of individuals with limited access to social capital resources. Cluster 1 consists of individuals who have limited access to some social capital resources (e.g. emotional support, social contact, community involvement), but reasonable levels of financial support, good quality family relationships and above-average labour force participation. In comparison to Australia as a whole, cluster 2 is over-represented in Queensland, while cluster 1 is overrepresented in Queensland and the ACT. Taken together, the two low social capital clusters are most prominent in Queensland and least prominent in South Australia and Tasmania.

Cluster 3 is characterised by strong family bonds, but minimal participation in volunteering or the labour force. This cluster is under-represented in the ACT and somewhat over-represented in South Australia. Cluster 4 consists of those with high general support, who are not active members or volunteers — it is quite evenly distributed across Australia's States. Cluster 5 is characterised by high levels of emotional and financial support, active membership and frequent social contact, but individuals in this cluster do not volunteer. Cluster 5 is over-represented in the ACT and under-represented in Tasmania, reflecting the relatively youthful ACT population and the older age structure of Tasmania.

Of the six clusters, it is cluster 6 which best reflects individuals who are rich in social capital resources. The cluster is characterised by high financial and emotional support, integration into the community, neighbours helping each other out, volunteering and active membership, as well as reasonably frequent social contact and satisfying family relationships. Cluster 6 is most prominent in the ACT and least prominent in Queensland and Western Australia.

Queensland has a relatively low share of its population in the social capital rich cluster, and a relatively high share of its population with limited social capital resources (i.e. low participation coupled with limited access to support). This confirms the earlier finding, based on a broader set of social capital indicators, that Queenslanders are less well endowed in several aspects of social capital than Australians as a whole (note that the result can be partly attributed to the social and demographic characteristics of Queensland's population). In contrast, both Tasmania and South Australia have relatively few residents with limited access to social capital resources, and above-average proportions of residents who are rich in social capital resources.

⁶² The NT had insufficient sample to be included in the analysis.





Source BTRE analysis of HILDA 2001 unit record data.

9.4 **REMOTENESS CLASSES**

This section explores the extent to which social capital is dependent on remoteness. Twenty-eight of the BTRE's 33 regional social capital indicators are available on a remoteness class basis. The first part of the section analyses the influence of remoteness at a national scale, while the second part presents results for State remoteness classes.

9.4.1 National remoteness classes

Table 9.5 presents remoteness class estimates for the 28 social capital indicators, organised according to the ABS Framework. Estimates which differ significantly from the national average are highlighted in blue. Both HILDA and the GSS exclude the most sparsely populated parts of Australia from their coverage, and so results will not be fully representative of 'remote and very remote' Australia. Output from the GSS could only be obtained for a combined 'outer regional, remote and very remote' category. This is not ideal, since the socio-demographic characteristics of residents of outer regional Australia differ significantly from the characteristics of remote residents in many respects (BTRE 2004a).

Some of the indicators do not vary significantly with remoteness – examples include health barriers, transport barriers, feelings of loneliness and the indicators of anticipated support in a crisis. Others depend quite strongly and systematically on remoteness, namely the active membership rate, the volunteering rate and the two internet-related indicators.

Since the major cities class accounts for roughly two-thirds of Australia's population, it tends to resemble the national average in many respects. While the major cities class differs significantly from the national average for only 7 indicators, the 'outer regional, remote and very remote' category is significantly different from the national average for 14 of the social capital indicators.

The active membership, volunteering, neighbours helping each other out and integration into the community indicators are significantly lower in the major cities, and significantly higher than the national average in inner regional and 'outer regional, remote and very remote' Australia. Similarly, the sole trust indicator in the study (feelings of safety at home alone after dark) points to generalised trust being significantly greater outside Australia's major cities.

The indicators which relate to frequency and mode of social contact show a distinctly different pattern. Relative to the national average, face to face, telephone and e-mail communication are all significantly less common in 'outer regional, remote and very remote' Australia. A relatively high proportion of the population of 'outer regional, remote and very remote' Australia only have social contact once a month or less. In contrast, the major cities have a low proportion of the population in this category. This set of indicators point to remoteness having detrimental effects in terms of social isolation. However, the regression results in Table 9.3 show that it is rurality that has significant negative effects on social isolation.⁶³ Since a relatively high proportion of the 'outer regional, remote and very remote' class would be categorised as rural, the remoteness class results simply reflect the effects of rurality.

The study also includes a number of support-related indicators, most of which do not vary significantly with remoteness. There is some evidence that outer regional residents tend to have difficulty obtaining emotional and financial support when needed, but this does not appear to be the case for residents of 'inner regional' or 'remote and very remote' Australia.

⁶³ Note that reasonably large urban centres (e.g. Alice Springs) can be classified as 'remote' within the ABS Remoteness Structure. The Major Cities remoteness class includes rural areas and small localities which are located a short distance from the major cities. Therefore the ABS Remoteness Structure and the urban centre size classification are quite distinct geographic classifications, and can capture quite different spatial patterns.

TABLE 9.5 COMPARISON OF SOCIAL CAPITAL INDICATORS ACROSS NATIONAL REMOTENESS CLASSES, AUSTRALIA, 2001–02

		Outer regional, remote & very remote								
Indicators	Major	Inner	Total	Outer	Remote &	Australia				
Norms:	011100	regional	Total	regional	very remoten	/ luoti uliu				
Feelings of safety at home alone after dark [@] How commonly do neighbours help each other out in	77.4	81.1	81.3	na	na	78.6				
your neighbourhood? [@]	60.3	68.2	67.3	67.3	67.2	63.2				
Common purpose:										
Participation rate in church or religious activities (%)	25.0	19.5	20.7	na	na	23.4				
Participation rate in sport or physical activity (%)	65.0	64.7	57.3	na	na	64.0				
Active membership rate (%)	37.0	41.8	46.0	44.0	60.1	39.3				
Volunteering rate (%)	19.3	25.4	27.5	27.2	29.4	21.8				
Proportion of carers in population, 2003 (%)	12.5	14.6	13.0	na	na	13.0				
Satisfaction with family relationships [@]	80.9	82.1	82.8	82.8	83.3	81.5				
Labour force participation rate* (%)	64.0	59.5	63.0	62.3	65.9	63.0				
Transport barriers [@]	6.8	5.5	6.7	na	na	6.6				
Health barriers to social participation [@]	19.7	18.5	19.8	20.2	16.4	19.4				
Language barriers* (%)	3.2	0.3	0.4	0.5	0.3	2.2				
Network structure:										
Anticipated source of support in a crisis (%)	94.0	94.3	93.6	na	na	94.0				
Anticipated support from family in a crisis (%)	83.0	82.2	79.5	na	na	82.4				
Anticipated support from friend in a crisis (%)	66.2	65.4	66.8	na	na	66.1				
Anticipated support from neighbour in a crisis (%)	33.2	37.0	34.1	na	na	34.1				
Frequency of social contact [®] Face to face contact with family or friend in last week	61.7	59.9	60.0	59.8	61.4	61.1				
(%) Telephone, email & mail contact with family or friend	84.5	83.6	80.5	na	na	83.8				
in last week (%)	91.6	89.0	86.8	na	na	90.5				
Usage of e-mail or chat sites in last 12 months (%) Proportion who live in same SLA as they did 5 years	51.1	39.4	33.9	na	na 70.0	46.8				
	/1.8	73.2	73.8	74.1	72.9	72.4				
		o 4 -								
Could ask someone for small favours (%) Inability to obtain emotional & general support from	92.7	94.5	94.8	na 25 5	na	93.3				
Others -	23.3	24.4	20.0	20.0	23.0	23.0				
Emotional & general support received from others	/ 3.8	74.8	74.7	74.0	75.0	74.1				
Capacity to raise \$2000 in week for emergency	66.7	66.2	62.2	60.4	75.1	66.0				
Used internet to access government services over past 12 months (%)	65.5 22.9	69.8 17.9	72.1	72.1 na	71.5 na	67.4 20.8				
Network types:										
Only get together socially once a month or less with										
friends or relatives (%)	18.5	21.2	24.1	24.3	22.4	19.9				
l often feel very lonely [@]	30.1	28.9	31.0	31.1	30.0	29.9				
Note Indicators may contribute to more than o	ne part of	the ABS Fr	amework, but	for the purpo	oses of this table	have				

Indicators may contribute to more than one part of the ABS Framework, but for the purposes of this table have been listed against only one category. Indicators which are significantly different from the national average at the 5% significance level are highlighted in blue.

Results are not likely to be representative of the most sparsely populated parts of Australia, nor of remote indigenous communities.

* Significance testing was not relevant for these indicators, which were derived from non-survey data sources. [®] These indicators are measured on a 0 to 100 summary scale — Further details are provided in Appendix I.

Source BTRE analysis of data from various sources — a full listing of data sources is provided in Appendix I.

In terms of the social capital indicators, the strengths of the 'major cities' class lie in the low proportion of residents with infrequent social contact and the high usage of the internet for communication and obtaining information. Relative to Australia as a whole, weaknesses include low volunteering, low active membership, neighbours not tending to help each other out and relatively weak integration into the community. None of the support-related indicators differ significantly from the national average.

Inner regional Australia has strengths in high levels of perceived safety, high rates of neighbours helping each other out, high volunteering and active membership, and strong integration into the community.⁶⁴ However, inner regional Australia has relatively low religious and labour force participation.

'Outer regional, remote and very remote' Australia has the same basic strengths as inner regional Australia, but also reports particularly satisfying family relationships and an above-average ability to ask someone outside the household for small favours. Weaknesses include low sports participation and a limited ability to raise \$2000 in an emergency. The proportion of residents reporting face-to-face, telephone, mail or e-mail communication with family or friends who do not live with them is significantly below the national average, and the rate of internet usage is particularly low. Residents of 'outer regional, remote and very remote' Australia are also more likely than other Australians to go without social contact for an extended period.

Assessment of strengths and weaknesses for the 'outer regional' and 'remote and very remote' classes is restricted by the absence of GSS data and limitations in the coverage of the survey data. The most notable difference between the two remoteness classes is the much lower capacity to raise \$2000 for an emergency in outer regional Australia. While remote and very remote Australia appears to rank highly in some aspects of social capital, the results are probably overly positive since the underlying data are not representative of Australia's most sparsely populated areas or remote indigenous communities.⁶⁵

Overall, based on these 28 indicators, the major cities class would appear to have a relatively low average level of social capital, while inner regional Australia appears to have a relatively high average level of social capital. The situation for 'outer regional, remote and very remote' Australia is more complex, with high levels of trust, reciprocity and community involvement offset to some degree by social isolation.

⁶⁴ The high levels of volunteering and neighbours helping each other out can be attributed to the socio-demographic characteristics of the population, but the strong integration into the community is still evident when these characteristics are controlled for (see Table 9.3).

⁶⁵ ABS (2005) provides some information on the social, sporting and cultural participation of those living in remote indigenous communities.

Figure 9.2 shows the proportion of the population of each remoteness class who belong to each of the six social capital clusters. The cluster distribution for 'outer regional, remote and very remote' Australia differs markedly from the national distribution.

Clusters 1 and 2 consist of individuals with quite limited access to social capital resources. Individuals in cluster 3 report high satisfaction with family relationships, good support, but no volunteering and minimal labour force participation. Individuals in cluster 5 report high support and frequent social contact and are active members. Individuals in these four clusters are spread fairly evenly across the national remoteness classes.

Cluster 4 is characterised by above-average support, but an absence of active membership and volunteering. It is under-represented in 'outer regional, remote and very remote' Australia and over-represented in the major cities.



FIGURE 9.2 DISTRIBUTION OF POPULATION ACROSS SIX SOCIAL CAPITAL CLUSTERS, NATIONAL REMOTENESS CLASSES, 2001

Source BTRE analysis of HILDA 2001 unit record data.

It is cluster 6 which best reflects individuals who are rich in social capital resources, with high levels of participation, connectedness and support. Cluster 6 is the single largest cluster for the inner regional and 'outer regional, remote

and very remote' classes, but only the third largest cluster in the major cities. The distribution of social capital in the major cities is quite typical in other respects. This suggests that the major cities have a low average level of social capital because relatively few individuals who are rich in social capital resources live in the major cities.

Both the average amount of social capital and the distribution of social capital differ significantly across Australia's remoteness classes. The evidence points to Australia's major cities being somewhat lacking in key elements of social capital, namely volunteering, active membership, community integration and neighbours helping each other out. This finding is consistent with the results of previous Australian studies (see Section 9.1). While inner regional and outer regional Australia both outperform the major cities with respect to key elements of social capital, the two remoteness classes have different strengths and weaknesses, and it is not possible to draw an overall conclusion as to whether one class has higher social capital than the other. Remote and very remote Australia appears to rank highly in some aspects of social capital, but data availability and quality is limited.

9.4.2 State remoteness classes

This overall link between social capital and remoteness may not operate consistently within all States. This section uses the same 28 indicators to provide a picture of how social capital is related to remoteness in NSW, Victoria, Queensland, SA and WA. Remoteness class data are not sufficiently reliable for Tasmania, ACT and the NT, which have been excluded from the analysis.

For each of the social capital indicators, Table 9.6 identifies whether each state remoteness class estimate is significantly higher or lower than the national average. The health barriers indicator and the HILDA emotional and general support indicators do not vary significantly across state remoteness classes.

Most indicators appear to vary more systematically with remoteness than with State.⁶⁶ Across all five States, the following indicators are consistently equal to or below the national average for major cities and equal to or above the national average for inner regional and 'outer regional, remote and very remote' areas:

- Feelings of safety at home alone after dark;
- How commonly do neighbours help each other out in neighbourhood?
- Volunteering rate;

⁶⁶ The only indicator which differs markedly across States, but is relatively homogenous for remoteness classes within each State, is the mobility indicator. Mobility is consistently high in Queensland and WA and much lower in NSW and Victoria. The same pattern occurs if mobility is measured based on change of address, rather than change of SLA, so the result cannot be attributed to the relatively large number of SLA's in Queensland and WA.

- Active membership rate; and
- Integration into the community.

In each State, the three communication mode indicators are consistently equal to or above the national average for major cities, and consistently equal to or below the national average for the other remoteness classes (with the sole exception of WA 'outer regional, remote and very remote').

Other indicators show a much more mixed pattern. For example, no single state or remoteness class performs particularly well or poorly in terms of the support-related indicators.

While the strengths and weaknesses of the national remoteness classes have a tendency to flow through to the state remoteness classes, each state remoteness class has some unique strengths and weaknesses. Table 9.7 summarises the strengths and weaknesses of each state remoteness class in terms of the BTRE's set of social capital indicators. It focuses on estimates which are significantly different from the *national average for the relevant remoteness class*, and these are referred to as strengths or weaknesses.

The barriers to participation (e.g. language, health, transport, caring responsibilities⁶⁷) and mobility indicators are not direct measures of social capital in their own right. The indicators were originally selected to explore their potential relationships with participation, and this study is only interested in barriers and mobility to the extent that they can help explain variation in the other social capital indicators. For example, we wish to *explore* whether poor English proficiency acts as a significant barrier to participation, rather than *assuming* it is a weakness in the social capital context.⁶⁸ For these reasons, the assessment of strengths and weaknesses in Table 9.7 excludes the barriers to participation and mobility indicators.

The previous section found that Australia's major cities class has relatively low levels of volunteering, active membership and neighbourhood connections. Table 9.6 confirms that these are also general characteristics of the major cities classes in each of the States. Table 9.7 shows that, in comparison to the major cities average, integration into the community and neighbourhood connections are relatively strong in NSW's major cities and relatively weak in Queensland's major cities. However, there are no statistically significant differences in volunteering or active membership across the major cities.

⁶⁷ Caring responsibilities act both as a potential barrier to participation and as a form of community support. Therefore, in the context of social capital, the carers indicator does not have a straightforward interpretation as either a strength or weakness.

⁶⁸ Chapter Eight provides some evidence that poor English proficiency and poor health are associated with lower rates of participation.

TABLE 9.6 COMPARISON OF SOCIAL CAPITAL INDICATORS FOR STATE REMOTENESS CLASSES TO NATIONAL ESTIMATES, 2001–02

	Major cities				Inner regional					Outer regional, remote & very remote					
Indicators	NSW	VIC	, QLD	SA	WA	NSW	VIC	QLD	SA	WA	NSW	VIC	QLD	SA	WA
Norms: Feelings of safety at home alone after dark How commonly do neighbours help	-			L	L	Н			-				Н	-	
each other out in neighbourhood?		L	L	L		Н	Н	Н	Н		Н			Н	Н
<u>Common purpose:</u> Participation rate in church or religious activities Participation rate in sport or recreational physical activity	Н		Н		н			L	L	н	L			L	Н
Active membership rate	L	L				Н	Н				Н			Н	Н
Volunteering rate	L		L		L		н		Н		Н			н	
Proportion of carers, 2003 (%)	L		Н	н	L		н	Н		Н					Н
Satisfaction with family relationships							н								
Labour force participation rate*				L		L		L			L		н	L	Н
Transport barriers				L											
Health barriers															
Language barriers*	н	Н						L							
<u>Network structure:</u> Anticipated source of support in a crisis			Н											Н	
Anticipated support from family in a															
Anticipated support from friend in a			п	н			н			L		н		н	
crisis		L			Н					Н	L				Н
Anticipated support from neighbour			1							ц					
Frequency of social contact		ч	L		н	ı.				н		н			
Face to face contact with family or						L		-							
friend in last week				Н	Н						L				Н
family or friend in last week Usage of e-mail or chat sites in last	I			Н	Н	L					L				L
12 months	Н		Н		Н	L	L	L			L	L	L	L	
they did 5 years ago*	н		L			н	н	L		L	н	н	L	н	L
Network transactions:			_					_		_			_		_
Could ask for small favours Inability to obtain emotional & general support from others Emotional & general support received from others		L	Н	Η	Н		Н							Η	Н
Capacity to raise \$2000 in one week															
for emergency			L						Н		L		L	L	
Integration into the community Used internet to access government			L H	L	L H	Н	H		Н		Н	Н	н	Н	Н
Network types:							-				-		-	-	
Only get together socially once a month or less with friends, relatives		L			L					L	н		Н		Н
I often feel very lonely						L									

Indicators may contribute to more than one part of the ABS Framework, but for the purposes of this table have been listed against only one category. Results for 'outer regional, remote and very remote' Australia are not likely to be representative of the most Note

sparsely populated parts of Australia, nor of remote indigenous communities. H means the estimate is significantly above the national average.

L means the estimate is significantly below the national average.

Significance testing was undertaken for the survey-based indicators at the 5% significance level.

* Significance testing was not relevant for these indicators. Instead, for the census-based indicators, an estimate has been rated as H (L) if it is more than 2 percentage points above (below) the national average.

Source BTRE analysis of data from various sources — a full listing of data sources is provided in Appendix I.

Perceived safety is significantly below the remoteness class average in SA and WA's major cities, but major cities in these two States perform relatively well in terms of capacity to obtain support and weekly face-to-face communication. While the information is not presented in the table, the Adelaide and Perth SDs also have donation rates which significantly exceed the national average, while Sydney's donation rate is significantly below the national average.⁶⁹

The inner regional remoteness class is considerably more homogenous across States than the other two classes. Inner regional Victoria stands out as having numerous strengths in terms of social capital and no identified weaknesses. Inner regional WA differs most from the remoteness class average, with its strengths in relatively frequent social contact and high support from friends occurring in conjunction with limited support from family.

Of the five State 'outer regional, remote and very remote' classes, the Victorian class stands out as being particularly advantaged in many aspects of social capital. This may be because the disadvantages of remoteness have little impact on the Victorian data, since there are few truly remote parts of Victoria.

Figure 9.3 illustrates how the population of each State remoteness class is distributed across the six social capital clusters. Clusters 1 and 2 contain individuals with relatively limited access to social capital resources. Together, these two clusters account for a relatively high proportion of the population of each of Queensland's remoteness classes. However, these clusters are underrepresented in SA and NSW's 'outer regional, remote and very remote' areas and in SA and WA's inner regional areas.

Cluster 3 (strong family bonds, not volunteers, low labour force participation) is over-represented in SA's major cities and 'outer regional, remote and very remote' Victoria, and considerably under-represented in 'outer regional, remote and very remote' WA. Cluster 4 (high support, not volunteers or active members) is under-represented in the 'outer regional, remote and very remote' areas of each State apart from Queensland. Cluster 4 is particularly prominent in inner regional WA, where cluster 5 (high support, active members and socialisers) is relatively unimportant. Cluster 5 is most prominent in 'outer regional, remote and very remote' WA.

For individuals in cluster 6, high support is accompanied by high rates of volunteering, active membership, neighbours helping each other out and community integration. This social capital rich cluster accounts for a relatively low share of the population in each of the major cities classes. It has above-average prominence in the 'outer regional, remote and very remote' areas of all States except Queensland, as well as in Inner regional SA and Victoria.

⁶⁹ Donation rates are not available by remoteness, only by capital city/State balance.

TABLE 9.7 STRENGTHS AND WEAKNESSES OF EACH STATE REMOTENESS CLASS IN TERMS OF SOCIAL CAPITAL INDICATORS, 2001–02

class	relative to national average for remoteness class	Weaknesses in terms of social capital indicators, s relative to national average for remoteness class
Major cities		
NSW	High integration into the community High rate of neighbours helping each other out	None identified
VIC	High integration into the community	Low anticipated support from friends in a crisis
QLD	High anticipated support in a crisis High anticipated support from family in a crisis	Low anticipated support from neighbours in a crisis Low frequency of social contact Low capacity to raise \$2000 in emergency Low integration into the community High rate of only getting together socially once month or less with friends or relatives
SA	High anticipated support in a crisis High anticipated support from family in a crisis High rate of face-to-face communication High capacity to ask someone for small favours	Low perceived safety Low rate of neighbours helping each other out Low labour force participation
WA	High participation in sports & physical activities High anticipated support from friends in a crisis High frequency of social contact High rate of face-to-face communication High usage of Internet to communicate High usage of Internet to access services High capacity to ask someone for small favours	Low perceived safety
Inner regiona	al	
NSW	High integration into the community	None identified
VIC	High volunteering High labour force participation High anticipated support from family in a crisis High integration into the community	None identified
QLD	None identified	Low integration into the community
SA	High integration into the community	Low participation in sports & physical activities
WA	High participation in sports & physical activities High anticipated support from friends in a crisis High frequency of social contact Low share of people only getting together sociall once a month or less with friends or relatives	Low anticipated support from family in a crisis
Outer region	al, remote & very remote	
NSW	High rate of neighbours helping each other out	Low participation in sports & physical activities Low labour force participation Low anticipated support from friends in a crisis Low rate of face-to-face communication Low usage of Internet to access services
VIC	High participation in church & religious activities High anticipated support from family in a crisis High frequency of social contact High integration into the community Low share of people only getting together sociall once a month or less with friends or relatives	None identified
QLD	High labour force participation	Low volunteering Low active membership
SA	High anticipated support in a crisis High anticipated support from family in a crisis	Low labour force participation
WA	High participation in sports & physical activities High labour force participation High usage of Internet to communicate High rate of face-to-face communication	None identified
Note	The identified strengths and weaknesses for each state renational remoteness class average at the 5% level. Indica barriers, caring barriers and geographic mobility were not labour force participation rate, identified strengths and weak from the national remoteness class average. Results for 'outer regional, remote and very remote' Austra sparsely populated parts of Australia, nor of remote indige	moteness class are significantly different from the tors of health barriers, language barriers, transport assessed as strengths or weaknesses. For the aknesses are at least 2 percentage points different alia are not likely to be representative of the most nous communities.







Source BTRE analysis of HILDA 2001 unit record data.

Queensland's major cities have above-average representation of those with limited social capital and below-average representation of the social capital rich. In contrast, NSW and SA's 'outer regional, remote and very remote' areas and inner regional SA have a social capital distribution which is skewed towards the social capital rich, with under-representation of the limited social capital clusters.

In summary, bringing the national and state remoteness class results together leads to the following conclusions:

• The nature of social capital varies with remoteness, as does the distribution of social capital resources across individuals.

- Australia's major cities are somewhat deficient in key elements of social capital, such as volunteering, active membership and neighbourhood connections. In particular, Queensland's major cities appear deficient in several key elements of social capital, although residents do report strong support from family. The available indicators point to the major cities remoteness class having a relatively low average level of social capital because of a shortage of social capital rich individuals, rather than a surplus of individuals who are deficient in social capital.
- The analysis suggests that social capital is generally greater in 'inner regional' and 'outer regional, remote and very remote' areas. Social capital rich individuals are over-represented in the outer regional, remote and very remote areas of all States except Queensland, as well as in inner regional Victoria and SA.

9.5 URBAN CENTRE SIZE

The relatively low level of social capital in Australia's major cities raises the possibility that urban centre size may be an important influence on social capital in the Australian context. This section explores the extent to which key aspects of social capital depend on urban centre size. It is solely based on indicators derived from HILDA and the census, as the other data sources are not available on an urban centre size basis.

Table 9.8 presents the indicator estimates for each of the urban centre size categories. Estimates which differ significantly from the national average are highlighted in blue. In the urban centre size classification, the term 'rural' has a very specific meaning — it refers to people who do *not* live within a population cluster of 200 or more people. Rural residents differ significantly from the national average with respect to nearly all of the social capital indicators.

The following four indicators⁷⁰ follow a similar pattern with respect to urban centre size:

- Volunteering rate;
- Active membership rate;
- Integration into the community; and
- How commonly do neighbours help each other out in neighbourhood?

⁷⁰ The phrase 'community involvement' refers to the four indicators in combination.

Indicators	Rural balance	200– 999	1000– 4999	5000- 19999	20000– 49999	50000- 99999	100000– 249999	250000- 999999	1 million or more	Australia	
<u>Network qualities:</u> How commonly do neighbours help each other out in your								24.0			
neighbourhood?	74.6	/1.4	71.5	66.7	61.2	60.8	60.6	61.6	60.0	63.2	
Active membership rate (%)	45.4	40.6	47.7	44.5	41.6	38.6	39.0	43.3	36.0	39.3	
Volunteering rate (%) Satisfaction with family	31.4	26.6	31.3	23.8	21.4	22.6	19.7	20.0	19.0	21.8	
relationships [@]	83.1	82.5	82.8	82.6	80.9	82.1	81.8	80.4	81.0	81.5	
Labour force participation*(%)	66.4	56.6	57.4	57.7	60.8	63.0	59.1	62.0	64.5	63.0	
Health barriers [@]	16.9	20.1	20.1	20.8	20.7	17.9	17.5	19.7	19.6	19.4	
Language barriers* (%)	0.3	0.2	0.3	0.4	0.4	0.5	1.3	0.9	3.7	2.2	
Network structure:											
Frequency of social contact [@] Proportion who live at same	56.3	60.3	61.9	60.5	61.8	61.8	64.2	61.1	61.7	61.1	
address as 5 years ago*^ (%)	62.7	59.5	55.0	53.3	49.6	49.9	53.0	50.3	55.6	55.3	
<u>Network transactions:</u> Inability to obtain emotional & general support from others [®] Emotional & general support	23.8	26.9	26.0	25.3	23.3	24.7	23.4	23.6	23.3	23.8	
received from others [@] Capacity to raise \$2000 in one	74.3	75.6	75.5	74.5	75.0	75.5	75.6	72.1	73.8	74.1	
week for emergency [@]	69.9	60.2	64.4	61.4	66.2	61.8	62.4	65.2	66.9	66.0	
Integration into the community®	73.0	72.4	73.4	70.3	68.3	68.1	65.5	64.7	65.5	67.4	
<u>Network types:</u> Only get together socially once a month or less with friends or		00.0		00.4	10.0	40.0	45.0	04.5	10.4	40.0	
relatives (%)	26.9	20.6	20.3	23.1	19.9	19.6	15.9	21.5	18.1	19.9	
Loften feel verv lonelv [@]	27.3	31.2	29.7	30.6	30.3	29 5	28.2	30.8	30.3	29.9	

TABLE 9.8 COMPARISON OF SOCIAL CAPITAL INDICATORS ACROSS URBAN CENTRE SIZE CATEGORIES, 2001

Note Results should not be considered representative of the most sparsely populated parts of Australia. Indicators may contribute to more than one part of the ABS Framework, but for the purposes of this table have been listed against only one category. Indicators which are significantly different from the national average at the 5% significance level are highlighted in blue.

* Significance testing was not relevant for these indicators, which were derived from the census.

^ The 'same SLA as 5 years ago' indicator wasn't readily available on this geographic basis, so 'same

address as 5 years ago' was used as an indicator of mobility.

[®] These indicators are measured on a 0 to 100 summary scale — Further details are provided in Appendix I.

Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001.

The community involvement indicators are all significantly lower than the national average in the five major metropolitan centres (population of 1 million or more), significantly higher than the national average in rural areas and generally also higher (if not always significantly higher) in towns with a population of less than 20 000. The extent to which 'neighbours help each other out' declines most systematically with urban centre size, peaking in rural areas and dropping off quite rapidly as urban centre size increases. However, apart from the 'community involvement' indicators, the social capital indicators do not display a general tendency to increase or decline with urban centre size.

Rural Australia outperforms the national average with respect to most of the social capital indicators. Community involvement, satisfaction with family relationships, labour force participation and capacity to raise \$2000 are all well above average. However, residents of rural areas have less frequent social contact than other Australians. The relatively high proportion of rural residents

who only socially get together once a month or less with friends and relatives is not reflected in higher feelings of loneliness. In fact, rural residents report feeling less lonely than other Australians, and this can probably be put down to strong family bonds. From Table 9.3 it is evident that the higher community involvement and lower social frequency of rural residents is not simply due to the socio-demographic characteristics of rural populations (e.g. age structure).

In terms of the social capital indicators, localities (population of 200–999) have particular strengths in neighbours helping each other out and integration into the community. Weaknesses include low labour force participation and an inability to obtain financial and emotional support from others when needed. Small towns (population of 1000–4999) tend to have high community involvement and low labour force participation, but otherwise resemble the national average. Volunteering starts to drop off for urban centres of more than 5000 people, but other aspects of community involvement remain significantly above average in centres with a population of between 5000 and 19999.

The major metropolitan centres (population of more than 1 million) are characterised by low community involvement and relatively few residents only getting together socially with friends or relatives once a month or less. The smaller metropolitan centres (population of 100 000 to 999 999) share in low levels of integration into the community, but do not differ significantly from the national average with respect to the other community involvement indicators.

The main finding is that rural areas and, to a lesser extent, localities and small towns, display very high community involvement. At the other extreme, the major metropolitan centres display relatively low community involvement. For urban centres with populations of between 20 000 and 1 million, community involvement is not particularly dependent on urban centre size. Other key aspects of social capital, such as frequency of social contact and ability to obtain support when needed, exhibit no systematic tendency to rise or fall with urban centre size.

The preceding analysis is based on the population average scores for each social capital indicator, which can hide marked differences in the distribution of social capital across individuals. Figure 9.4 illustrates how the population of each urban centre size category is distributed across the six social capital clusters.

Clusters 1 and 2 consist of those who have quite limited social capital resources. Taken together, these two clusters are under-represented in rural areas, localities and the smallest urban centres. In comparison to the national distribution, the limited social capital clusters are over-represented in urban centres with between 20 000 and 99 999 or 250 000 and 999 999 residents.

Cluster 3 is characterised by strong family bonds, but no volunteering and minimal labour force participation - it is particularly prominent in localities and the smaller urban centres. However, clusters 4 (high support, not active

members or volunteers) and 5 (high support, active members and socialisers) are under-represented in localities and the smaller urban centres.

Cluster 6 is made up of individuals who generally have high financial and emotional support as well as high community involvement. This cluster is particularly prominent in rural areas, and is also reasonably prominent in localities and the smallest urban centres. The cluster is under-represented in urban centres with between 100 000 and 249 999 residents and the major metropolitan centres. Overall, there is a tendency for the population share of cluster 6 to decline as urban centre size rises.

Rural areas, localities and the smallest urban centres (population of 1000 to 4999) have relatively few people who have limited social capital and high representation of the social capital rich. In contrast, urban centres with between 20 000 and 49 999 residents have a social capital distribution which is skewed towards those with limited social capital and in which the social capital rich are not well represented. While the major metropolitan centres have a low proportion of people who are rich in social capital, representation of those with limited social capital average.



FIGURE 9.4 DISTRIBUTION OF POPULATION ACROSS SIX SOCIAL CAPITAL CLUSTERS, URBAN CENTRE SIZE CATEGORIES, 2001

NoteResults should not be considered representative of the most sparsely populated parts of Australia.SourceBTRE analysis of HILDA 2001 unit record data.

6. High support, High involvement in the community

5. High support, Active members & socialisers

Overall, the social capital indicators do not systematically rise or fall with the size of the urban centre. However, the major metropolitan centres are characterised by relatively low levels of community involvement in comparison to rural areas, localities and the smallest urban centres. Rural areas stand out as being particularly well placed in terms of community involvement, but they also have relatively infrequent social contact. Localities and small towns also have strengths in community involvement, but have low labour force participation rates. While the present study does not include indicators of bridging ties, previous Australian research suggests rural and small town communities in Australia may be lacking in this respect (Stone & Hughes 2001b). In particular, several Australian studies have reported evidence of a low tolerance of diversity in some small communities. Examples include Onyx & Bullen (2000) for West Wyalong in NSW and Stimson et al (2003) for Boonah LGA in Queensland.

9.6 IN SUMMARY

This chapter provides a snapshot of how key social capital elements are distributed across Australia's States and Territories, remoteness classes and urban centre size categories in 2001–02. The observed spatial variation in the social capital elements is not simply due to the different social and demographic characteristics of populations, but reflects a more fundamental influence of place on social capital.

A key finding is that the urban centre size classification has a more widespread influence on the social capital indicators, than either the State/Territory or remoteness classifications. More specifically, individuals who live in rural areas, localities and the smallest towns differ significantly from individuals who live in larger urban centres with respect to many of the social capital indicators.

The study is consistent with previous Australian research in finding that social capital is generally lower within Australia's major cities, particularly in terms of the strength and quality of neighbourhood connections. The larger non-metropolitan centres (population of between 20000 and 99999) resemble the national average for most elements of social capital. Rural areas and small towns are characterised by strong neighbourhood connections and high levels of community involvement. Rural areas are also characterised by infrequent social contact.

Importantly, some of the social capital indicators do not appear particularly dependent on State/Territory, remoteness, rurality or urban centre size. The support-related indicators (with the exception of the financial support measure) are less dependent on place than indicators of community involvement.

CHAPTER 10 SOCIAL CAPITAL BY REGION

This section analyses the HILDA and census-based indicators of social capital for the 69 BTRE defined regions. The coverage of the different elements of social capital was somewhat limited due to ABS' *General Social Survey* not being available at this scale. Nevertheless, the HILDA and census-based indicators do provide good coverage of social, economic and community participation, neighbourhood connections, isolation and ability to obtain support.

Appendix III maps the BTRE defined regions, which typically align with one or more SSDs in Australia's five major cities, and with one or more SDs in other parts of Australia. The regions were developed based on reliability considerations and so do not cover all of Australia – the excluded areas are Central Metropolitan Perth SSD and the Pilbara, Kimberley, Upper Great Southern and South Eastern SDs in WA; Far West NSW; North West, Central West and South West QLD; and Southern and Mersey-Lyell SDs in Tasmania.⁷¹

The BTRE defined regions have relatively small samples (average sample size = 198). Consequently, the regional HILDA indicator estimates which form the basis of this chapter are considerably less reliable⁷² than the estimates presented in the previous chapter for state remoteness classes and urban centre size categories. For this reason, when analysing the survey-based indicators at a regional scale, the estimated RSE has been taken into account to determine whether the regional estimate is *significantly* different from the national average.

The regional analysis of social capital in this chapter is undertaken at a relatively aggregated scale, particularly outside the major cities. Current data availability does not permit a nationwide small area analysis of social capital. Since there is considerable interest in understanding the nature of social capital in particular local government areas, towns or neighbourhoods, Appendix IX

⁷¹ These regions have been excluded because they did not meet the reliability criteria spelt out in Appendix III. Exclusion from this BTRE study cannot be used to infer the presence or absence of a HILDA sample in these regions.

⁷² The majority of the 828 regional HILDA indicator estimates are reasonably reliable in that they have an estimated RSE of 10% or less. However, 36% of the regional estimates have an estimated RSE of between 10% and 25%, while 2% have an estimated RSE in excess of 25%.

contains information on social capital indicators and potential proxies that are available at a small area level.

10.1 SUITE-OF-INDICATORS

Only one of the 69 regions does not differ significantly from the national average for any of the 15 indicators (i.e. Southern Adelaide). Table 10.1 focuses on those regional estimates which are significantly different from the national average and highlights the regions which have the highest and lowest values for each of the social capital indicators in 2001.

Overall, it is those aspects of social capital relating to community and neighbourhood connections which vary most across regions. More than one third of the regions differ significantly from the national average for the 'integration into the community' and 'how commonly do neighbours help each other out in your neighbourhood' indicators. The active membership rate also varies considerably across regions. Capacity to raise \$2000 in an emergency differs from the national average for 20 of the 69 regions, which is not surprising given that the average level of economic resources differs markedly across Australia's regions (BTRE 2005).

The following social capital indicators only differ significantly from the national average for a handful of the 69 regions:

- Satisfaction with family relationships;
- Inability to obtain emotional and general support from others;
- Emotional and general support received from others; and
- I often feel very lonely.

The State/Territory, remoteness class and urban centre size analyses also identified few significant variations in these four indicators. In general, whether a person can obtain emotional and general support from others is not closely related to where the person lives. This contrasts with the capacity to obtain *financial* support which is strongly dependent on place of residence.

Feelings of loneliness are generally not closely tied to the place in which a person lived. While it might be expected that people who live in physically isolated locations may be more likely to feel lonely, only one of the three regions with a high rate of loneliness could be considered remote (Northern & North West NSW).

TABLE 10.1 INDICATOR SUMMARY FOR 69 BTRE DEFINED REGIONS, 2001

No. regions Of regions which significantly differ from national average at 5						
indicator	average	different	Highest		Lowest	
How commonly do neighbours help each other out? [@]	63.2	25	Goulburn & Ovens-Murray VIC Moreton SD Bal QLD South Eastern NSW	75.2 74.6 74.3	Eastern Suburbs Sydney Eastern Adelaide Northern QLD	50.8 51.7 53.3
Active membership rate (%)	39.3	18	Northern Territory Gippsland & East Gippsland VIC Goulburn & Ovens-Murray VIC	56.4 51.3 51.0	Fairfield-Liverpool NSW Blacktown NSW Outer Western & Northern Melb.	23.3 23.7 26.2
Volunteering rate (%)	21.8	11	Western District VIC Gippsland & East Gippsland VIC Yorke, Northern & Eyre SA	39.1 37.4 34.5	South East Metropolitan Perth Boroondara City VIC Inner Western & Inner Sydney	11.6 13.0 13.3
Satisfaction with family relationships [®]	81.5	5	Goulburn & Ovens-Murray VIC Outer South Western Sydney Central Highlands VIC	86.3 85.4 85.0	Inner Melbourne Canberra	75.7 77.8
Labour force participation rate* (%)	63.0	nr	Canberra Inner Melbourne Midlands & Central WA	71.9 70.7 69.5	Mid-North Coast NSW Wide Bay-Burnett QLD Richmond-Tweed	51.1 52.9 53.3
Health barriers to social participation [@]	19.4	9	Northern Adelaide Blacktown NSW	26.3 26.2	Central Highlands VIC Northern Beaches & Central North Sydney	12.0 13.5
			Fairfield-Liverpool NSW	25.7	Boroondara City VIC	14.8
Language barriers* (%)	2.2	nr	Fairfield-Liverpool NSW Canterbury-Bankstown NSW Western Melbourne	12.2 10.1 8.0	Western District VIC Hunter (excl Newcastle) Eastern Adelaide	0.1 0.1 0.1
Frequency of social contact [@]	61.1	7	Inner Melbourne Mallee-Wimmera VIC Greater Hobart	69.5 68.2 67.7	Moreton SD Bal QLD Wide Bay-Burnett QLD Outer South Western Sydney	48.4 53.3 55.1
Proportion who live at same address as 5 years ago* (%)	72.4	nr	Mallee-Wimmera VIC Canterbury-Bankstown NSW Illawarra NSW	82.3 82.1 81.8	Gold Coast LGA Inner Melbourne Sunshine Coast QLD	52.7 54.0 56.7
Inability to obtain emotional & general support from	23.8	5	Fairfield-Liverpool NSW	32.0 29.7	Northern Beaches & Central North Sydney Southern Melbourne	19.2 19.9
others [@]			Yorke, Northern & Eyre SA	29.3		
Emotional & general support received from others [@]	74.1	3	None identified		Central Western Sydney Lower Northern Sydney Northern Adelaide	65.5 68.9 69.8
Capacity to raise	66.0	20	Northern Beaches & Central	80.4	Yorke, Northern & Eyre SA	50.5
\$2000 in one week in an emergency [@]			North Sydney Mornington Peninsula VIC Lower Northern Sydney	79.3 78.0	Fairfield-Liverpool NSW Northern & North West NSW	51.5 51.6
Integration into the community [@]	67.4	31	Yorke, Northern & Eyre SA Goulburn & Ovens-Murray VIC Hunter (excl Newcastle)	79.0 76.9 75.7	Logan City LGA QLD South East Metropolitan Perth South Eastern Outer Melbourne	58.9 61.3 61.7
Only get together socially once a month or less with friends/relatives (%)	19.9	8	Moreton SD Bal QLD Wide Bay-Burnett QLD Mid-North Coast NSW	35.6 30.7 27.2	Inner Melbourne Greater Hobart Eastern Suburbs Sydney	9.4 11.5 11.9
l often feel very lonely [@]	29.9	4	Gippsland & East Gippsland VIC Blacktown NSW Northern & North West NSW	40.3 39.0 35.5	Northern Beaches & Central North Sydney	24.4

Note Results are not representative of sparsely populated areas or remote indigenous communities.

* Significance testing was not relevant for these indicators, which were derived from the census.
 @ These indicators are measured on a 0 to 100 summary scale — Further details are provided in Appendix I.

BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001. Source

Similarly, few significant regional differences have been identified for the reported level of satisfaction with family relationships. The two regions with relatively low satisfaction with family relationships (Canberra and Inner Melbourne) are both characterised by relatively mobile and young populations and a high labour force participation rate. In both regions, residents are relatively dissatisfied with their relationship with their parents.

A number of regions feature numerous times in Table 10.1. Fairfield-Liverpool in Sydney's western suburbs appears to be deficient in several aspects of social capital. In contrast, the Goulburn and Ovens-Murray region of Victoria and the Northern Beaches and Central North region of Sydney both have multiple strengths in terms of the social capital indicators. It is not unusual for a region to possess multiple advantages with respect to social capital, but also be lacking in other aspects of social capital. An example is the Gippsland and East Gippsland region in Victoria, which has strengths in high volunteering and active membership, but a significant weakness in the form of the inability of many residents to obtain support from others when needed.

Table 10.2 presents a more rigorous assessment of regions which possess multiple disadvantages or advantages in terms of the BTRE's set of social capital indicators. For the same reasons noted previously (with respect to Table 9.7), the analysis drops the health barriers, language barriers and mobility indicators, leaving a total of 12 indicators.

Table 10.2 focuses on estimates which are significantly different from the national average, and these are referred to as the region's particular strengths or weaknesses. A clear judgement about the region's social capital is really only possible when a region has strengths but no weaknesses or weaknesses but no strengths. For regions such as Gippsland and East Gippsland, an assessment of whether the average level of social capital is higher or lower than the national average requires an implicit judgement about the relative importance of the strengths and weaknesses. The table does not include regions which have both strengths and weaknesses in terms of the social capital indicators.

The regions identified as having multiple strengths are predominantly nonmetropolitan, although Southern Melbourne and Northern Beaches and Central North Sydney are exceptions. The strengths of the non-metropolitan regions typically revolve around different forms of community involvement, with high levels of active membership and integration into the community being particularly common. The Goulburn and Ovens-Murray region of Victoria is characterised by high rates of active membership, volunteering and neighbours helping each other out, as well as relatively strong integration into the community and satisfying family relationships. The Midlands and Central region of WA has strengths in high rates of active membership, neighbours helping each other out and labour force participation, as well as a high level of integration into the community. In contrast, Northern Beaches and Central North Sydney does not have any strengths in community involvement – it has relatively low proportions of people who are socially isolated or have difficulty obtaining emotional or financial support. Similarly, Southern Melbourne's strengths lie in its high capacity to raise \$2000 in an emergency and the low proportion of residents who have difficulty obtaining support.

TABLE 10.2 REGIONS WITH MULTIPLE STRENGTHS OR WEAKNESSES IN TERMS OF SOCIAL CAPITAL INDICATORS, 2001

Regions with multiple strengths	Regions with multiple weaknesses
2 strengths, no weaknesses	2 weaknesses, no strengths
Southern Melbourne VIC	Central West Sydney NSW
Western District VIC	Moreland & Northern Middle Melbourne VIC
Mallee-Wimmera VIC	Western Melbourne VIC
Mackay QLD	Greater Dandenong & Frankston VIC
Northern Territory*	Brisbane SD Bal QLD
	Gold Coast LGA QLD
	Western Adelaide SA
3 strengths, no weaknesses	3 weaknesses, no strengths
Murray & Murrumbidgee NSW	Blacktown NSW
South Eastern NSW	Sunshine Coast QLD
	Wide-Bay Burnett QLD
4 strengths, no weaknesses	4 weaknesses, no strengths
Midlands & Central WA	Fairfield-Liverpool NSW
5 strengths, no weaknesses	5 weaknesses, no strengths
Goulburn & Ovens-Murray VIC	Northern Adelaide SA
Northern Beaches & Central North Sydney NSW	

Note The table only lists regions which had 2 or more strengths and no weaknesses or 2 or more weaknesses and no strengths. Indicators of health barriers, language barriers and geographic mobility were not assessed as strengths or weaknesses. The identified strengths and weaknesses for each region are significantly different from the national average at the 5% probability level. For the labour force participation rate, a regional strength or weakness must be at least 2 percentage points different from the national average.
* NT results should be interpreted with caution due to sparsely populated areas being excluded from the scope of HILDA. When a more extensive array of indicators is used to assess social capital (see Table 9.4) a number of weaknesses are also apparent.

Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001.

The regions with multiple weaknesses are predominantly in the major metropolitan centres. The most common weaknesses for this set of regions are a low labour force participation rate and a low capacity to raise \$2000 in an emergency. In both Fairfield-Liverpool and Northern Adelaide, the weaknesses cut across a number of aspects of social capital. Both have relatively low economic participation and a low capacity to raise \$2000. Fairfield-Liverpool has additional weaknesses in low active membership and the inability of many residents to obtain emotional and general support when needed. Northern Adelaide has additional weaknesses in relatively weak connections with neighbours and the broader community as well as low receipt of emotional and general support from others.

Table 10.3 presents results for all 69 of the BTRE defined regions against the 15 census and HILDA based indicators. It only highlights regional results which differ significantly from the national average.

TABLE 10.3 COMPARISON OF SOCIAL CAPITAL INDICATORS FOR 69 BTRE DEFINED REGIONS TO NATIONAL ESTIMATES, 2001–02

	How often do	Activo		Satisfaction	Labour		
	help each	membership	Volunteering	with family	participation	Health	Language
REGION	other out?	rate		relationships	rate*	barriers	barriers*
SYDNEY SD		NEW SU	UTH WALES				
Blacktown						н	
Canterbury-Bankstown					1		н
Central Western							 H
Eastern Suburbs	1				н		
Fairfield-l iverpool		1			1	Н	H
Gosford-Wyong	н	н					
Inner Western & Inner Sydney	L	L	L		н	Н	Н
Lower Northern					Н		
Northern Beaches & Central North					н	1	
Outer South Western				н	н		
Outer Western					н		
St George-Sutherland		L			Н		
REST OF NSW							
Central West	Н				L		L
Hunter (excl Newcastle)					 L		L
Illawarra	Н	Н			L		
Mid-North Coast	Н				L		L
Murray & Murrumbidgee		Н	Н				
Newcastle					L		
Northern & North West	Н				L		L
Richmond-Tweed	Н				L		L
South Eastern	н	Н					
		VIC	TORIA				
MELBOURNE SD							
Boroondara City	L		L		Н	L	
Eastern Middle						L	
Eastern Outer					Н		
Greater Dandenong & Frankston					L		Н
Inner Melbourne	L			L	Н		Н
Moreland & Northern Middle		L			L		Н
Mornington Peninsula [@]					L		
Outer Western & Northern		L			Н		
South Eastern Outer		L			Н		
Southern							
Western	L						Н
Yarra Ranges Shire Pt A					Н		
REST OF VICTORIA							
Barwon					L		
Central Highlands [@]				Н	L	L	L
Gippsland & East Gippsland	Н	Н	Н		L		
Goulburn & Ovens-Murray	Н	Н	Н	Н			
Loddon	Н				L		L
Mallee-Wimmera							
Western District			Н				L

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TABLE 10.3 CONTINUED

REGION	Frequency of social contact	Proportion who live in same SLA as 5 years ago*	Inability to obtain emotional & general support	Ability to receive emotional & general support	Capacity to raise \$2000	Integration into the community	Social contact once a month or less	l often feel very lonely
		NEV	V SOUTH WA	LES				
SYDNEY SD								
Blacktown		Н			L			H
Canterbury-Bankstown		Н						
Central Western		Н		L				
Eastern Suburbs							L	
Fairfield-Liverpool		Н	Н		L			
Gosford-Wyong		Н						
Inner Western & Inner Sydney		L				L		
Lower Northern		L		L	Н			
Northern Beaches & Central North		Н	L		Н		L	L
Outer South Western	L	Н						
Outer Western		Н						
St George-Sutherland		Н			Н	Н		
REST OF NSW								
Central West		Н				Н		
Hunter (excl Newcastle)		Н				Н		
Illawarra		Н						
Mid-North Coast	L	Н				Н	Н	
Murray & Murrumbidgee		Н				Н		
Newcastle		Н						
Northern & North West		Н			L	Н		Н
Richmond-Tweed						Н		
South Eastern		Н				Н		
			VICTORIA					
MELBOURNE SD								
Boroondara City		L			Н			
Eastern Middle		Н			Н			
Eastern Outer								
Greater Dandenong & Frankston		Н			L			
Inner Melbourne	Н	L				L	L	
Moreland & Northern Middle		Н						
Mornington Peninsula [@]					Н	Н		
Outer Western & Northern		Н						
South Eastern Outer		L				L		
Southern			L		Н			
Western		Н			L			
Yarra Ranges Shire Pt A		Н						
REST OF VICTORIA								
Barwon		Н						
Central Highlands [®]						Н		
Gippsland & East Gippsland		Н	Н			Н		Н
Goulburn & Ovens-Murrav		Н				Н		
Loddon								
Mallee-Wimmera	Н	Н				Н		
Western District		н				н		

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TABLE 10.3 CONTINUED

REGION	How often do neighbours help each other out?	Active membership rate	Volunteering rate	Satisfaction with family relationships	Labour force participation rate*	Health barriers	Language barriers*
		Q	UEENSLAND	•			
BRISBANE & MORETON	SDs						
Brisbane City LGA			L		Н		
Brisbane SD Bal							
Gold Coast LGA			L				
Logan City LGA	L				Н		
Sunshine Coast		L			L		L
Moreton SD Bal	Н				L		L
REST OF QUEENSLAND							
Darling Downs							L
Far North					Н		
Fitzroy							L
Mackay					Н		L
Northern	L				Н		
Wide Bay-Burnett					L		L
		SOU	TH AUSTRALI,	4			
ADELAIDE SD							
Eastern	L				Н		L
Northern	L				L	Н	
Southern							
Western			L		L		Н
REST OF SA							
Outer Adelaide							L
South East & Murraylands							
Yorke, Northern & Eyre		Н	Н		L		
		WEST	ERN AUSTRAL	.IA			
PERTH SD							
East Metropolitan					Н		
North Metropolitan	L				Н		
South East Metropolitan	L		L				
South West Metropolitan						L	
REST OF WA							
Midlands & Central	Н	Н			Н		L
South West & Lower Great	н						
			TASMANIA				
Greater Hobart					l		
Northern							L
		NORTH	ERN TERRITO	DRY			
Northern Territory [@]		Н			Н		
			ACT				
Canberra	I	н		I	Н		
					CONTINU	ED OVE	RPAGE

TABLE 10.3 CONTINUED

REGION	Frequency of social contact	Proportion who live in same SLA as 5 years ago*	Inability to obtain emotional & general support	Ability to receive emotional & general support	Capacity to raise \$2000	Integration into the community	Social contact once a month or less	l often feel very lonely
			QUEENSLA	ND				
BRISBANE & MORE	TON SDs							
Brisbane City LGA		L				L		
Brisbane SD Bal		L			L	L		
Gold Coast LGA		L				L		
Logan City LGA		L			L	L		
Sunshine Coast		L			L			
Moreton SD Bal	L	L					Н	
REST OF QUEENSL	AND							
Darling Downs		L						
Far North		L						
Fitzroy								
Mackay						Н		
Northern		L						
Wide Bay-Burnett	L						Н	
		SC	OUTH AUSTR	RALIA				
ADELAIDE SD								
Eastern		L			Н			
Northern				L	L	L		
Southern								
Western								
REST OF SA								
Outer Adelaide						Н		
South East & Murrayl	ands	Н						
Yorke, Northern & Ey	re	Н	Н		L	Н		
		WE	STERN AUS	TRALIA				
PERTH SD								
East Metropolitan								
North Metropolitan						L		
South East Metropolit	tan					L	L	
South West Metropoli	itan				Н	L		
REST OF WA								
Midlands & Central		L				Н		
South West & Lower	Great							
			TASMANI	4				
Greater Hobart	Н	Н		-			L	
Northern		Н				Н		
		NOR	THERN TER	RITORY				
Northern Territory [@]								
Hordioni Fondory			ACT					
Canherra			,,		н			
Note Indicat remote H mea L mea Signific * Signi estima	ors sourced from HIL indigenous commun ns the estimate is signs the estimate is sign cance testing was und ficance testing was no te has been rated as	DA should no ities. nificantly abou nificantly below dertaken for th ot relevant for H (L) if it is mo	t be considered we the nationa w the nationa ie survey-bas these indicat ore than 2 pe	ed representat al average. I average. ed indicators a ors. Instead, fo rcentage point	ive of spars at the 5% si or the censis s above (be	sely populated ignificance lev us-based indic elow) the natic	el. cators, an	3.

[®] These regions have a HILDA sample of less than 100 individuals, and results should be used with caution.

Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001.

Sydney's regions differ in their strengths and weaknesses in terms of the social capital indicators. Gosford-Wyong is the only part of the Sydney SD which has relatively high rates of active membership and neighbours helping each other out. Volunteering rates are similar to the national average for all Sydney regions except Inner Western and Inner Sydney, which has relatively few volunteers and low integration into the community. In contrast, St George-Sutherland has relatively high integration into the community. Outer South Western Sydney has a distinctive social capital profile, due to residents reporting a particularly high satisfaction with family relationships and relatively infrequent social contact with friends or relatives who do not live with them. The social capital indicators also highlight difficulties obtaining support and/or feelings of loneliness as being significant issues in Sydney's west, specifically in Blacktown, Fairfield-Liverpool and Central Western Sydney.

NSW regions located outside the Sydney SD tend to be quite similar in their strengths and weaknesses. All regions are either roughly equal to or above the national average in terms of active membership, neighbours helping each other out and integration into the community. Only the Newcastle and Illawarra regions (which both include a large urban centre) does not have an above-average level of integration into the community. Nearly all regions have labour force participation rates which are below the national average. The Murray and Murrumbidgee region is the only NSW region with a volunteering rate significantly above the national average. Residents of the Mid North Coast have infrequent social contact, while residents of the Northern and North West region are relatively likely to feel lonely and have a low capacity to raise \$2000.

A number of Melbourne's sub-regions rate poorly in terms of neighbours helping each other out, integration into the community or active membership. The Mornington Peninsula is the only region within the Melbourne SD with an above-average level of integration into the community. Inner Melbourne stands out due to its relatively low satisfaction with family relationships, frequent social contact and low integration into the community. While the Western Melbourne and Greater Dandenong and Frankston regions have a relatively low capacity to raise \$2000 in an emergency, none of Melbourne's regions have a weakness in isolation or obtaining emotional support. On the other hand, Southern Melbourne has a particularly low proportion of residents who report an inability to obtain emotional and general support from others, and the region also has a strong capacity to raise \$2000 in an emergency.

As was the case for NSW, Victorian regions located outside the Melbourne SD are quite similar in their social capital strengths and weaknesses. All regions are either roughly equal to or above the national average in terms of the active membership, volunteering, neighbours helping each other out and integration into the community indicators. All regions also have labour force participation rates which are roughly equal to or below the national average. While only one of the NSW regions has an above-average volunteering rate, three Victorian

regions have high volunteering rates. Residents of Central Highlands and Goulburn and Ovens-Murray report high levels of satisfaction with family relationships, while Mallee-Wimmera residents report very frequent social contact. The social capital indicators also identify difficulties obtaining support and feelings of loneliness as being issues for the Gippsland and East Gippsland region of Victoria.

The BTRE defined regions located within the Brisbane and Moreton SDs of Queensland all have very transient populations. The Brisbane City and Gold Coast LGAs both have below-average volunteering rates and low integration into the community, while the Sunshine Coast has low active membership. The Sunshine Coast, Logan City and Brisbane SD Balance regions all have a low capacity to raise \$2000 in an emergency, but there are no evident weaknesses with regard to ability to obtain emotional or general support from others.

The Far North, Northern and Darling Downs regions of Queensland also have relatively transient populations. The Northern region has a low rate of neighbours helping each other out and the Mackay region has a high level of integration into the community. Wide-Bay Burnett is distinguished by relatively infrequent social contact (Chapter 12 provides further analysis of this region's results). Queensland's regions do not generally have the high community involvement which is evident in several Victorian and NSW non-metropolitan regions.

Within Adelaide, only Western Adelaide has a below average rate of volunteering. However, it is Northern Adelaide that stands out with its low rates of labour force participation and neighbours helping each other out, as well as high health barriers, low community integration and a low ability to receive emotional and general support from others. Eastern Adelaide also has a low rate of neighbours helping each other out, but this is accompanied by high labour force participation and a high capacity to raise \$2000 in an emergency.

In the rest of South Australia, both the Outer Adelaide and Yorke, Northern and Eyre regions have relatively strong integration into the community. Yorke, Northern and Eyre also has strengths in volunteering and active membership, but has relatively low labour force participation, a low capacity to raise \$2000 and a relatively high proportion of residents reporting an inability to obtain emotional and general support from others when needed.

For Perth, insufficient data are available to derive estimates for Central Metropolitan Perth, so the analysis is incomplete. However, North, South East and South West Perth all have relatively low levels of integration into the community, while the first two also have a low rate of neighbours helping each other out. South East Metropolitan Perth has a low volunteering rate and relatively few people who have social contact once a month or less.
Focus on Regions No. 4: Social Capital

Moving beyond Perth, the only defining characteristic of the Lower South West and Great Southern region is the relatively high rate of neighbours helping each other out. The Midlands and Central region shares in that strength, but also has high integration into the community, high labour force participation and high active membership.

Data are only sufficiently reliable for two Tasmanian regions, Greater Hobart and Northern (which includes Launceston). Both regions have low labour force participation and low residential mobility. Residents of Greater Hobart have relatively frequent social contact, while residents of the Northern region have above-average levels of integration into the community.

10.2 SUMMARY SCALES

Chapter Eight provides details of the principal components analysis which has been undertaken across the 69 BTRE defined regions. Two principal components have been identified which are internally consistent and highly unidimensional. Standardised factor scores have then derived to measure these two distinct facets of social capital:

- Community involvement; and
- General support.

These two scales provide useful summary measures of two important dimensions of social capital, but they do not comprehensively cover the social capital concept. Other aspects of social capital, such as frequency of social contact, satisfaction with family relationships and economic participation, are not closely linked to either community involvement or general support.

Figure 10.1 presents a national map of the community involvement and general support scales for the 69 BTRE defined regions. From the first map it is evident that community involvement is relatively low in many of Australia's metropolitan regions and generally quite high in other parts of Australia. Particularly high levels of community involvement are apparent in southern NSW and regional Victoria. When metropolitan regions are defined as regions which contain all or part of an urban centre of more than 100 000 population, the only *non*-metropolitan region with relatively low community involvement is Mackay in Queensland.

General support is relatively low in a number of the more remote regions such as Northern Territory, Northern and North West NSW, Far North Queensland and Yorke, Northern and Eyre. The capital cities contain a mix of high and low support regions, while the Central Highlands region of Victoria (which includes Ballarat) stands out as having a particularly high score on the general support scale. The Northern and Mackay regions of Queensland also stand out from adjacent regions which have lower general support.

FIGURE 10.1 MAPS OF COMMUNITY INVOLVEMENT AND GENERAL SUPPORT SCALES FOR THE 69 BTRE DEFINED REGIONS, AUSTRALIA, 2001





Note Indicators sourced from HILDA should not be considered representative of sparsely populated areas or remote indigenous communities.

Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001. The methodology used to derive the community involvement and general support scales is detailed in Section 8.2.3.

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Focus on Regions No. 4: Social Capital

From Figure 10.1 it is quite clear that general support and community involvement are distributed quite differently across Australia's regions, and high community involvement is not generally associated with high general support. Unfortunately, the maps hide considerable variation in general support and community involvement within Australia's major cities. Figure 10.2 is identical to Figure 10.1, but focuses on the Sydney metropolitan area, while Figure 10.3 focuses on the Melbourne metropolitan area.

Within Sydney, only Gosford-Wyong and Northern Beaches and Central Northern Sydney have above average scores on the community involvement scale. Community involvement is particularly low in Inner Western and Inner Sydney, Canterbury-Bankstown, Fairfield-Liverpool and Blacktown. In contrast, much of Sydney has high scores on the general support scale — Northern Beaches and Central Northern Sydney performs particularly well in this respect. However, a cluster of regions with low general support is evident which includes Inner Western and Inner Sydney, Central Western Sydney, Canterbury-Bankstown, Fairfield-Liverpool and Blacktown.

Community involvement also tends to be low in much of Melbourne (Figure 10.3a). The outer suburban regions of Mornington Peninsula, Eastern Outer Melbourne and Yarra Ranges Shire Part A are exceptions with relatively high scores on the community involvement scale. A cluster of regions surrounding the city centre have particularly low community involvement, as does the outer suburban region of Greater Dandenong and Frankston. The pattern for general support is different. There are distinct groups of regions with relatively low scores on the general support scale to the north and west of the city centre, and in the outer south-eastern suburbs. In contrast, general support is particularly strong in Southern Melbourne, Eastern Middle Melbourne, Boroondara City and the Mornington Peninsula.

Both the Sydney and Melbourne maps are suggestive of the general support scale being closely linked to socio-economic advantage, at least in metropolitan areas. In other words, regions where a relatively high proportion of the population report difficulties in obtaining emotional, financial or other support are likely to be regions with high levels of disadvantage with respect to income, education, unemployment and other factors. This possible linkage is investigated more thoroughly in Chapter 11.

FIGURE 10.2 MAPS OF COMMUNITY INVOLVEMENT AND GENERAL SUPPORT SCALES FOR BTRE DEFINED REGIONS, SYDNEY, 2001





Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001. The methodology used to derive the community involvement and general support scales is detailed in Section 8.2.3.

FIGURE 10.3 MAPS OF COMMUNITY INVOLVEMENT AND GENERAL SUPPORT SCALES FOR BTRE DEFINED REGIONS, MELBOURNE, 2001



COMMUNITY INVOLVEMENT



Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001. The methodology used to derive the community involvement and general support scales is detailed in Section 8.2.3.

To further investigate the relationship between general support and community involvement, the 69 BTRE defined regions have been classified into equal-sized low, medium and high categories against both of the summary scales. Because the analysis classifies one third of all regions as having low support (community involvement), it identifies some regions as having relatively low support (community involvement), although they do not show up as having any apparent weakness in this regard from Table 10.3.

From Table 10.4 it is apparent that there is not a strong association between the general support and community involvement scales across the BTRE defined regions. Of the 23 regions that have a high general support score only 6 have a high community involvement score and an equal number of regions have a low community involvement score. When it comes to regions with low scores on these two scales, the picture is more unidimensional. That is, of the 23 regions that have a low general support score, 13 also have a low community involvement score and only 6 have a high community involvement score.

The regions that have a low score on both of these dimensions of social capital are all located in metropolitan areas. All of the regions with low community involvement are metropolitan regions, while the regions with high community involvement are largely non-metropolitan. The general support measure is not split so neatly, with both metropolitan and non-metropolitan regions being well represented in each of the low, medium and high support categories.

10.3 A REGIONAL TYPOLOGY

Section 8.3 described the use of cluster analysis to classify *individual* respondents into six social capital 'types'. Cluster analysis can also be applied at a *regional* level, to identify sub-groups of regions which have a distinctive profile in terms of the social capital indicators. Appendix VIII provides details of the cluster analysis which has been applied to the 69 BTRE defined regions and is based on the same set of 11 social capital indicators which served as inputs into the cluster analysis of individuals. Table 10.5 provides a general description of each of the ten resulting clusters and lists the regional members of each cluster.

Outliers have been retained in the analysis as one of the goals of the cluster analysis is to identify any regions which have a highly unique social capital profile. The ten-cluster solution includes five clusters which are outliers. The Logan City LGA, Moreton SD Balance and Gippsland and East Gippsland regions have no peers amongst the BTRE defined regions. Northern, Yorke and Eyre in SA and Northern and North West NSW are two relatively remote regions which group together as a single 'low general support, but high community involvement' cluster. The final outlier cluster consists of the adjacent Blacktown and Fairfield-Liverpool regions in Sydney's west, which group together to form a 'low on all measured aspects of social capital' cluster.

General		Community involvement	olvement			
support	High	Average	Low			
High	Goulburn & Ovens-Murray (Vic) Mid-North Coast (NSW)	Northern Beaches & Central North Sydney (NSW)	Outer South Western Sydney (NSW)			
	Richmond-Tweed (NSW)	Outer Western Sydney (NSW)	Boroondara City (Vic) Inner Melbourne (Vic)			
	South Eastern (NSW)	Barwon (Vic)				
	South East & Murraylands (SA) Midlands & Central (WA)	Central Highlands (Vic)	Northern QLD (QId)			
		Eastern Middle Melbourne (Vic)	Eastern Adelaide (SA) Western Adelaide (SA)			
		Eastern Outer Melbourne (Vic)				
		Mornington Peninsula (Vic)				
		Southern Melbourne (Vic)				
		Southern Adelaide (SA)				
		North Metropolitan Perth (WA)				
1.00000	Central West (NSW)	Canberra (ACT) Lower Northern Sydney (NSW) Yarra Ranges Shire Pt A (Vic)	Factors Suburba Sudney			
Average			(NSW)			
	Hunter (excl Newcastle) (NSW)	Brisbane City LGA (Qld)	St George-Sutherland (NSW)			
	Illawarra (NSW)	Brisbane SD Bal (Qld)	Moreland & Northern Middle			
	Murray & Murrumbidgee (NSW)	Mackay (Qld)	Melbourne (Vic)			
	Western District (Vic)	Sunshine Coast (Qld)	South West Metropolitan Perth (WA)			
	Moreton SD Bal (Qld)	East Metropolitan Perth (WA)				
	Outer Adelaide (SA)	Greater Hobart (Tas)				
	South West & Lower Great Southern (WA)					
	Northern (TAS)					
	Northern Territory (NT)					
Low	Northern & North West (NSW)	Newcastle (NSW)	Blacktown (NSW)			
	Gippsland & East Gippsland	Mallee-Wimmera (Vic)	Canterbury-Bankstown (NSW)			
	Loddon (Vic)	Darling Downs (Qld) Fitzrov (Old)	Central Western Sydney (NSW)			
	Far North (Qld) Wide Bay-Burnett (Qld) Yorke, Northern & Eyre (SA)		Fairfield-Liverpool (NSW) Inner Western & Inner Sydney (NSW)			
			Greater Dandenong & Frankston (Vic)			
			Outer Western & Northern Melbourne (Vic)			
			South Eastern Outer Melbourne (Vic)			
			Western Melbourne (Vic)			
			Gold Coast LGA (Qld)			
			Logan City LGA (Qld)			
			Northern Adelaide (SA)			
			South East Metropolitan Perth (WA)			

TABLE 10.4 LEVEL OF GENERAL SUPPORT	AND COMMUNITY INVOLVEMENT IN THE 69
BTRE DEFINED REGIONS, 2001	

Note Community involvement and general support are summary scales derived from principal components analysis. Details of their component indicators and construction are provided in Section 8.2.3. The high, medium and low categories are equally sized (i.e. each category contains 23 regions). Indicators sourced from HILDA should not be considered representative of sparsely populated areas. Metropolitan regions are highlighted in blue. A metropolitan region contains all or part of an urban centre of more than 100 000 population. For 2001, Gold Coast-Tweed, Newcastle, Wollongong, Geelong, Townsville, Sunshine Coast and Canberra-Queanbeyan are considered metropolitan, alongside the six state capitals.

Source BTRE analysis of data from HILDA, 2001.

TABLE 10.5 REGIONAL SOCIAL CAPITAL TYPOLOGY, 2001

Average general support and informal socialising, but	Low on community integration and neighbours helping				
low community involvement – Cluster A	each other out. High on active membership, capacity to raise \$2000 and labour force participation – Cluster D				
Canterbury-Bankstown (NSW)	Lower Northern Sydney (NSW)				
Eastern Suburbs Sydney (NSW)	Canberra (ACT)				
Inner Western & Inner Sydney (NSW)	Northern Territory				
Newcastle (NSW)	High on all aspects of social capital – Cluster E				
Outer South Western Sydney (NSW)	Northern Beaches & Central North Sydney (NSW)				
Outer Western Sydney (NSW)	Eastern Middle Melbourne (Vic)				
St George-Sutherland (NSW)	Central Highlands (Vic)				
Barwon (Vic)	Mornington Peninsula (Vic)				
Boroondara City (Vic)	Outer Adelaide (SA)				
Eastern Outer Melbourne (Vic)					
Greater Dandenong & Frankston (Vic)	Average general support and informal socialising, but high community involvement – Cluster F				
Inner Melbourne (Vic)	Central Weet NSW				
Moreland & Northern Middle Melbourne (Vic)	Gosford-Wyong (NSW)				
Outer Western & Northern Melbourne (Vic)	Goulburn & Ovens-Murray (NSW)				
South Eastern Outer Melbourne (Vic)	Hunter (excl Newcastle) (NSW)				
Southern Melbourne (Vic)	Illawarra (NSW)				
Western Melbourne (Vic)	Murray & Murrumbidgee (NISW/)				
Brisbane City LGA (QId)	Mid North Coast (NSW)				
Gold Coast LGA (Qld)	Richmond-Tweed (NSW)				
Mackay (Qld)	South Eastern NSW				
Northern QLD					
Sunshine Coast (Qld)	Mallee Wimmera (Vic)				
Eastern Adelaide (SA)	Western District (Vic)				
Northern Adelaide (SA)	Wide Bay Burnett (Old)				
Southern Adelaide (SA)	South East & Murraylands (SA)				
Western Adelaide (SA)	Midlands & Contral M/A				
East Metropolitan Perth (WA)	South Most & Lower Creat Southern (MA)				
North Metropolitan Perth (WA)	South West & Lower Great Southern (WA)				
South East Metropolitan Perth (WA)	Northern TAS				
South West Metropolitan Perth (WA)	Low general support, but very high community				
Greater Hobart (Tas)	Ginneland & East Ginneland (Vic)				
Low on all measured aspects of social capital – Cluster B	Low financial support, integration into the community and neighbours helping each other out. Average in other respects – Cluster H				
Blacktown (NSW)	Logan City LGA (Qld)				
Fairfield-Liverpool (NSW)					
Low support and average community involvement – Cluster C	Average on most aspects of social capital, but infrequent social contact and high help between neighbours – Cluster I				
Central Western Sydney (NSW)	Moreton SD Bal (Qld)				
Brisbane SD Bal (Qld)					
Darling Downs (Qld)	Low general support, but high community involvement –				
Far North (Qld)	Cluster J				
Fitzroy (Qld)	Northern & North West NSW				
Yarra Ranges Shire Pt A (Vic)	Yorke, Northern & Evre SA				
	· ·, ·································				

 Note
 Based on application of cluster analysis to social capital indicators at the scale of the 69 BTRE defined regions. Details of methodology and results are provided in Appendix VIII. Indicators sourced from HILDA should not be considered representative of sparsely populated areas. Metropolitan regions are highlighted in blue. A metropolitan region contains all or part of an urban centre of more than 100 000 population. For 2001, Gold Coast-Tweed, Newcastle, Wollongong, Geelong, Townsville, Sunshine Coast and Canberra-Queanbeyan are considered metropolitan, alongside the six state capitals.

Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001.

Focus on Regions No. 4: Social Capital

The dominant regional grouping is cluster A. It is distinguished by low scores on the four community involvement indicators (i.e. active membership, volunteering, integration into the community and neighbours helping each other out), but resembles the national average in other respects. It contains 31 regions and Mackay in Queensland is the only non-metropolitan member.

The other important grouping is cluster F, which performs strongly against the community involvement indicators but resembles the national average in other respects. It consists of 17 predominantly non-metropolitan regions, and is significantly different to cluster A on 5 of the 11 indicators.

Cluster C is characterised by a relatively low ability of residents to obtain support. Four of the six members of this cluster are located in Queensland. Cluster D has high labour force participation and active membership rates as well as a high capacity to raise \$2000, but these strengths are coupled with limited neighbourhood and community connections. The three members of this cluster (Canberra, Lower Northern Sydney and the Northern Territory) are all high income regions with a relatively transient population.

Cluster E has a very strong capacity to raise \$2000 in an emergency as well as high emotional and general support. This cluster also has relatively high community involvement, but does not perform as well as cluster F in this respect. Clusters E and F are the only regional groupings in Table 10.5 which have no substantial weaknesses in terms of the set of 11 social capital indicators.

The regional cluster analysis confirms many of the results presented earlier in this report. It finds that satisfaction with family relationships and frequency of social contact display little variation across Australia's regions.⁷³ If the aim is to differentiate between levels of social capital in different regions, indicators such as volunteering, active membership, integration into the community and the capacity to raise \$2000 are likely to be of much greater value.

The analysis identifies regional groupings which have broadly similar characteristics in terms of the 11 selected social capital indicators. The majority of the metropolitan regions group together into a single cluster. Like principal components analysis, the regional cluster analysis clearly distinguished between metropolitan and non-metropolitan regions in terms of the community involvement indicators, but this distinction does not extend to other aspects of social capital. The ten-cluster solution reflects considerable regional variation in the form that social capital takes. It suggests that social capital takes a highly distinctive and unique form in several Australian regions.

⁷³ There is no significant difference between the non-outlier clusters in terms of satisfaction with family relationships or frequency of social contact.

10.4 DISTRIBUTION OF SOCIAL CAPITAL WITHIN REGIONS

Cluster analysis has also been applied at the scale of the *individual* (as opposed to the region) to identify six distinct groupings of individuals in terms of the selected social capital indicators. Examining the relative importance of these six clusters provides some insight into the distribution of social capital in each place. However, small sample sizes place limitations on the reliability of the cluster analysis results at a regional scale.⁷⁴ Section 8.3 described the six clusters, while details of the cluster analysis methodology are provided in Appendix VII.

Cluster 2 consists of individuals with weak family and community bonds, feelings of loneliness and a lack of emotional or financial support. Individuals in this cluster have limited access to social capital resources, and regions with a high concentration of such individuals are of particular interest from both a social capital and social disadvantage perspective. Regions with a very high proportion of the population in cluster 2 are:

- Loddon and Gippsland and East Gippsland in Victoria;
- Far North Queensland;
- Northern Territory;
- Northern Adelaide; and
- South West Metropolitan Perth.

All but the last two of these regions have a highly polarised distribution of social capital, in that the region also has a particularly high proportion of individuals in cluster 6 (high levels of participation, connectedness and support). Relative to the national average, cluster 6 is under-represented in many of the capital city regions. Queensland's regions (with the exception of Far North Queensland) all have a relatively low proportion of their population in this cluster. This 'social capital rich' cluster is most prominent in the Northern Territory; the Yorke, Northern and Eyre region of SA; Northern Tasmania; and in various BTRE defined regions within non-metropolitan Victoria and southern NSW (see Figure 10.4).

Figure 10.5 illustrates the distribution of the population across all six social capital clusters for selected BTRE defined regions. The selected regions all have a cluster analysis sample of more than 150 observations. The chart is sorted in terms of the relative prominence of cluster 6, which makes it clear that regions with high representation of the social capital rich do not necessarily have low representation of the limited social capital clusters (or vice versa).

⁷⁴ For an individual to be grouped into a cluster requires that all 11 HILDA indicators have a valid response, so the regional sample size for the cluster analysis is generally smaller than the regional sample for any single indicator. Clusters 1, 2 and 5 account for relatively small proportions of the population and estimates may be less reliable than for the other clusters.



FIGURE 10.4 MAP OF PROPORTION OF POPULATION IN CLUSTER 6 FOR BTRE DEFINED REGIONS, AUSTRALIA, 2001

Source BTRE analysis of HILDA 2001 unit record data. The methodology used to derive the six social capital clusters is detailed in Section 8.3.

Metropolitan regions feature strongly in the bottom half of the chart, as they tend to have low representation of cluster 6. For example, the Gold Coast LGA has a substantial under-representation of cluster 6 and an over-representation of the two clusters with limited social capital resources (clusters 1 and 2). Brisbane City LGA and Northern Adelaide also have distributions which are skewed towards those with limited social capital resources. In contrast, the social capital distribution is strongly skewed towards the social capital rich in: Goulburn and Ovens-Murray (Victoria); Yorke, Northern and Eyre SA; and South West and Lower Great Southern WA.

South East Metropolitan Perth and the Barwon region of Victoria have a relatively small proportion of the population at either extreme. Instead these two regions have a high concentration of individuals who have strong family bonds, but are not volunteers and have limited labour force participation (cluster 3). Canberra and the Goulburn and Ovens-Murray region of Victoria have relatively few individuals in this cluster.

FIGURE 10.5 DISTRIBUTION OF POPULATION ACROSS SIX SOCIAL CAPITAL CLUSTERS FOR SELECTED BTRE DEFINED REGIONS, 2001



- □ 1. Limited emotional support, social contact & community involvement
- 2. Lonely, Limited emotional & financial support, Weak family & community bonds
- \square 3. Strong family bonds, Not volunteers, Low labour force participation
- □ 4. High support, Not volunteers or active members
- 5. High support, Active members & socialisers
- 6. High support, High involvement in the community

Note Results should not be considered representative of the most sparsely populated parts of Australia. Cluster analysis was based on at least 150 observations for each of these regions.

Source BTRE analysis of HILDA 2001 unit record data

Cluster 4 consists of individuals with high overall support who are not volunteers or active members. This cluster is markedly under-represented in Northern and North West NSW, the Mid-North Coast of NSW and the Yorke, Northern and Eyre region of SA.

This typology-based approach provides a different perspective on social capital in Australia's regions than does a simple analysis of the average value of the social capital indicators across regions. It provides greater insight into the distribution of social capital, which differed markedly across the 69 BTRE defined regions. For example, six regions have been identified which have a particularly strong concentration of individuals who are lacking in key social capital elements (cluster 2). This spatial concentration of individuals who feel isolated, have limited ability to access support and weak family and community bonds is of interest in identifying social exclusion and disadvantage. Loddon in Victoria is one region which has a concentration of such individuals, but does not emerge as having multiple social capital weaknesses when the focus is simply on *average* regional values for the selected social capital indicators (i.e. Table 10.3), because the region also has a high concentration of social capital rich individuals. In fact, four of the six regions with a high concentration of social capital rich individuals. This example shows the importance of complementing regional averages with distribution-based analysis to obtain a more complete picture of social capital in a region.

10.5 IN SUMMARY

This chapter has provided a snapshot of how key social capital elements were distributed across the 69 BTRE defined regions in 2001. Overall, it is those aspects of social capital relating to community and neighbourhood connections and financial support which vary most across the 69 regions. There is little regional variation in satisfaction with family relationships, feelings of loneliness or the two indicators of emotional and general support.

The indicator-based analysis highlights some regions as being particularly well placed in terms of social capital resources (e.g. Northern Beaches and Central North Sydney, Goulburn and Ovens-Murray VIC, Midlands and Central WA). However, Northern Adelaide and Fairfield-Liverpool have multiple weaknesses which cut across several dimensions of social capital.

The previous chapter concluded that residents of major cities were lacking in some key elements of social capital, but the major cities are certainly not a homogenous category and this chapter highlights the considerable variation in key elements of social capital *within* Australia's major cities. Nevertheless, all of the regions with a low score on the 'community involvement' summary scale are metropolitan regions, while most of the regions with a high score are nonmetropolitan. The 'general support' summary scale is not split so neatly, with both metropolitan and non-metropolitan regions being well-represented in each of the low, medium and high support categories. The regional cluster analysis also provides a clear distinction between metropolitan and non-metropolitan regions, and finds that social capital has taken a highly distinctive and unique form in several Australian regions, such as Moreton SD (Balance) in Queensland and Gippsland and East Gippsland in Victoria. Analysis of the distribution of social capital has identified several regions with a strong concentration of people who feel isolated, lack support and have weak family and community bonds. It has also identified regions with a concentration of people with high support and high community involvement. This typology-based approach provides a different, but complementary, perspective on the nature of social capital in Australia's regions.

Focus on Regions No. 4: Social Capital

CHAPTER 11 SOCIAL CAPITAL AND REGIONAL WELLBEING

The current strong interest in the concept of social capital is undoubtedly related to claims that high levels of social capital have positive socio-economic impacts. In this chapter we test these claims and explore the evidence as to whether social capital is related to different aspects of the social and economic wellbeing of regions, paying particular attention to economic performance, subjective wellbeing, disadvantage, education and health.

11.1 BACKGROUND

11.1.1 Analysis by BTRE

Due to the reliance of this study on snapshot (rather than time series) data, this chapter makes no attempt to draw conclusions about the causality of observed relationships between the BTRE's set of social capital indicators and socioeconomic wellbeing. Rather, this exploratory analysis simply sets out to establish evidence of association, or lack of association, between variables.

Regional relationships between aspects of social capital and socio-economic outcomes have been analysed for the 69 BTRE defined regions using correlation and regression techniques. The initial bivariate correlation analysis has been applied to all regions, as well as to metropolitan⁷⁵ and non-metropolitan regions separately. Partial correlation analysis has been used to isolate regional relationships between social capital indicators and wellbeing outcomes, by controlling for the influence of key geographic and socio-demographic characteristics. Due to the small sample size of the regional analysis, the number of explanatory variables has been kept to a minimum by only including variables which demonstrate a significant and sizeable correlation in the bivariate analysis.

⁷⁵ A metropolitan region contains all or part of an urban centre of more than 100 000 people.

11.1.2 Limitations of existing research

Existing research often reports an association between social capital indicators and various social and economic outcomes. However, many of these studies are open to criticism on the grounds that they poorly measure and/or conceptualise social capital. Even where regional connections between social capital and wellbeing outcomes are established, they should be interpreted with caution, as not all residents have equal access to a region's social capital.

Another issue is the direction and extent of any causal link. Social capital research is in its early stages, and some of the contributors are keen to draw casual relationships even when the available data and methods do not permit this.⁷⁶ Consequently, it is important for readers to recognise the fundamental difference between association and causation, and to critically evaluate any claims of causality. An additional complexity is the potential role of social capital as an intermediate (or mediating) variable, influencing the causal link between various indicators of wellbeing (Vinson 2004). For these reasons, the literature generally provides only suggestive evidence as to the links between social capital and wellbeing.

This chapter sets out to examine regional level associations between aspects of social capital and socio-economic wellbeing. However, results of some individual level studies are also discussed, as there is often limited regional evidence available. In fact, these individual level studies frequently offer a better opportunity to identify and to explain the underlying reasons and dynamics of associations.

11.2 HEALTH

Some of the most convincing evidence about the positive impacts of social capital has come from studies of its relationship with health outcomes. Key social capital elements (such as presence of networks, strong social links, general and emotional support, close friends and neighbours) have been positively correlated with longevity, low physical stress, good mental health and low suicide and mortality rates for individuals (Berkman & Glass 2000). While there is convincing evidence from longitudinal and prospective studies, such as Kawachi et al (1996), that weak social capital can lead to poor health outcomes, it is also probable that health can affect individual access to social networks. Thus, it is likely that a bi-directional causal relationship exists between social capital and health status.

⁷⁶ For further information, refer to Durlauf (2002a, 2002b).

11.2.1 Regional evidence

Putman (2000) used regression analysis to assess the relationship between a summary measure of social capital and health outcomes in the USA. He found social capital to be the second most important predictor of low birth weight, and childhood morbidity and mortality (after poverty). In this state level analysis, he also found a strong positive relationship between indexes of public health and social capital, and a strong negative relationship between mortality rates and social capital.

A state level analysis of the relationship between perceived health and social capital by Kawachi, Kennedy & Glass (1999) found statistically significant and large correlations between social mistrust and the percentage of residents in fair or poor health (0.71) and between the perception of reciprocity and fair or poor health (-0.66). However, the relationship between group membership and fair or poor health was rather small (-0.28, p=0.08). The authors hypothesised that the links between social capital and health at the state level may be due to 'more cohesive states producing better health via more egalitarian patterns of political participation that result in the passage of policies that ensure the security of all members'.

When additional analysis was undertaken at the individual level, controlling for the influence of socio-demographic characteristics, the association of mistrust and reciprocity with fair or poor health was attenuated, but still statistically significant. This effect of social capital on perceived health was similar among men and women, and while it was evident among all income groups, the effect was strongest for individuals on low incomes (Kawachi, Kennedy & Glass 1999).

Kawachi and his colleagues identified a number of pathways through which social capital might positively influence health at the neighbourhood level:

- Enabling more rapid dissemination of health information;
- Increasing the likelihood that healthy norms of behaviour are adopted;
- Exerting social control over deviant behaviour that is harmful to health;
- Cohesive communities with cooperative networks are better at influencing their access to health services and amenities; and
- Providing support and acting as a source of self-esteem and mutual respect.

The authors distinguished between the compositional and contextual effects of social capital on health. Compositional effects refer to direct influences. For example, knowledge of the resources inherent in one's network may promote a sense of personal control and reduce stress, thus reinforcing the ability of the immune system to fight disease. Contextual (or collective) effects, are argued to

influence the health of groups through indirect means. For example, socially cohesive communities may be more successful in uniting to ensure better health services are provided in their communities.

A survey of adults in western Scotland by Macintyre, McIver & Sooman (1993) found that, at the individual level, belonging to a local association was not related to measures of health after age, sex and social class was controlled for. However, the aggregate membership rate for postcode areas was positively associated with individual health (even after controlling for socio-demographic characteristics). The health of individuals was not associated with their own membership of local associations, but rather with the aggregate level of membership in the community. Another relevant finding was that areas with higher levels of membership had better amenities and services, which is consistent with the idea that participation in local associations influences the level of resources that an area can command. The findings of this study suggest that social capital is influencing health through contextual rather than compositional effects.

Whiteley (2004) looked at the association between volunteering and health on a regional level. Analysis of 101 local authorities in Britain found a moderately strong positive correlation (0.37) between voluntary activity and the percentage of people who reported being in good health, controlling for other influences.

10.2.2 Evidence for individuals

A series of prospective studies of individuals have been particularly convincing in establishing the link between social networks and health outcomes, because these studies are able to demonstrate a causal pattern over time rather than simply reflecting a cross-sectional association.

Berkman & Syme (1979) examined mortality rates over a 9 year period and concluded that mortality rates were strongly associated with measures of social connectedness such as church membership and the size of extended family and friendship networks. Kawachi et al (1996) collected information on the social networks of 32 624 American male health professionals, and four years later followed up these men and measured mortality by various causes. Socially isolated men were at increased risk of mortality from cardiovascular disease and accidents or suicides. They also had an increased risk of stroke incidence. The analysis of coronary heart disease incidence and mortality suggests that social networks enhance survival following the onset of disease, and the protective effects of social ties operate *after* the onset of disease.

A longitudinal analysis of Americans aged 65 and older by Musick et al (1999) found that volunteering continued to have a significant effect on reducing mortality rates, even when variables such as age, sex, socio-economic status and

health were controlled for. The protective effects of volunteering were particularly strong for individuals with low levels of informal social interaction.

Pevalin & Rose (2003) used nine waves of data from the *British Household Panel Survey*⁷⁷ to investigate the links between social capital and health. The measures of social capital examined were social participation, low contact with friends, high perceived crime rate, low neighbourhood attachment and low social support. Controlling for socio-demographic characteristics, only high social participation lowered the likelihood of an onset of common mental illness and only low social support reduced the chances of recovery. Those reporting social participation had a higher chance of recovering sooner from poor self-rated health. While social capital was found to have positive effects on the health of individuals, it played a relatively minor role in the onset and recovery processes for common mental illness and poor self-rated health.

An important Australian cross-sectional study of the relationship between social capital and health is by Baum et al (2000). The study explored the relationship between different forms of participation (an aspect of social capital) and physical and mental health in the western suburbs of Adelaide. The data were collected during 1997–98 through a mail survey. A consistent theme from the study was a relative lack of participation in social and civic activities by people with low income and educational levels. Controlling for age and economic status, the health of individuals was strongly associated with social participation, but not with civic participation. Active involvement in the social life of the community may improve health by acting as a buffer to poor health as age increases and socio-economic status declines. The authors regarded the relationship between health and participation to be complex and bi-directional.

Queensland Health (2003), based on a survey of Queensland households, found that core social capital dimensions (reciprocity and cohesion, community identity and generalised trust) had a significant positive association with selfreported health status. The uptake of good health behaviours was also associated with higher community involvement and generalised trust. In addition, self efficacy (a sense of control over the decisions which affect life) was found to be a particularly significant influence on self-reported health. The effect of social capital and efficacy were strong even after controlling for a range of socio-demographic factors.

Berry & Rickwood (2000) provides some insight into the processes underlying the association between social capital and individual mental health. The study found that greater community participation leads to higher social support,

⁷⁷ As HILDA is in part modelled on this survey, the study provides an illustration of the sort of longitudinal social capital research that could potentially be undertaken for Australia in several years time.

which in turn leads to increased trust. Further, increased community trust works to protect individuals against psychological distress. The importance of this study is the finding that the relationship between social support and psychological wellbeing, already well established by other studies, is not a direct relationship. Instead, it is mediated by trust in people in your community. That is, 'social support is protective against distress but only because it increases the likelihood of trusting unfamiliar others'.

11.2.3 New evidence using BTRE's social capital indicators

To investigate the regional level association between aspects of social capital and health we have used the self-assessed health status measure from HILDA:

In general would you say that your health is excellent, very good, good, fair or poor? {Scale of 1 (excellent) to 5 (poor)}

A summary measure has been constructed from the reversed survey data using a [0,100] scale with equal intervals, so that if that if everyone in a region describes their health as 'poor' the score will be zero, and the score will be 100 if everyone describes their health as 'excellent'. The national mean of the health measure is 63.6 (halfway between good and very good health), and regional scores range from 56.0 to 73.3. While the mean self-assessed health status score is significantly higher in metropolitan regions, there is a good overlap between the metropolitan and non-metropolitan regions.

Across the 69 BTRE defined regions, the self-assessed health status measure is positively correlated with labour force participation (0.42) and with the general support summary scale (0.57) and all its components (but particularly with the capacity to raise \$2000). Self-assessed health is not significantly linked to the community involvement summary scale or its components. The association with the general support scale is significant in both metropolitan and non-metropolitan regions (see Figure 11.1), but the association with labour force participation is only significant for metropolitan regions.

At the scale of the BTRE defined regions, self-assessed health status is significantly correlated with the SEIFA Index of disadvantage (0.63), real income per taxpayer in 2000-01 (0.49) and population density (0.33). Partial correlation analysis has been used to determine whether the links between self-reported health and the social capital indicators continue to hold when these factors are controlled for. Table 11.1 shows that the associations are strongly affected by the underlying correlation between self-assessed health and the socio-economic disadvantage of the area. After controlling for the effects of socio-economic disadvantage, only the regional association between general support and self-assessed health status remains statistically significant. Regions

with a high level of self-reported health tend to have a relatively high general support score.

To investigate if associations between health status and social capital are operating through contextual effects, as suggested by Macintyre et al (1993), three regressions have been estimated for individuals (see Table 11.2). Equation 1 includes individual level social capital indicators and socio-demographic variables. Equation 2 considers the role of State/Territory, urban centre size and remoteness by adding these as independent variables. Equation 3 considers the effect of regional community involvement by adding it as an independent variable. If this regional social capital variable proves to be a significant predictor of health for individuals, after controlling for the social capital and socio-demographic characteristics of individuals, this would support the idea that social capital is influencing health through contextual effects.

FIGURE 11.1 ASSOCIATION BETWEEN SELF-ASSESSED HEALTH STATUS AND GENERAL SUPPORT, 69 BTRE DEFINED REGIONS, 2001



Source BTRE analysis of HILDA 2001 unit record data.

TABLE 11.1 SOCIAL CAPITAL INDICATORS THAT EXPLAIN VARIATION IN SOCIO-
ECONOMIC OUTCOMES ACROSS THE 69 BTRE DEFINED REGIONS, 2001

Social and economic outcomes	Social capital indicators	Controls	Regional correlation
Self assessed health status	General support	None	0.57*
	Canacity to raise \$2000	SEIFA Index of disadvantage	0.32
	Capacity to raise \$2000	SEIEA Index of disadvantage	0.04
		Real income per taxpaver	0.47*
	Labour force participation	None	0.42*
		Real income per taxpaver	0.34*
		SEIFA Index of disadvantage	0.11
Educational attainment - Bachelor or	Capacity to raise \$2000	None	0.46*
higher degree gualification		Population density	0.60*
5 5 1		Real income per taxpayer	0.38*
	Neighbours helping each	None	-0.49*
	other out	Population density	-0.18
		Metropolitan	-0.33*
	<u> </u>	Real income per taxpayer	-0.42*
	Satisfaction with family	None	-0.50*
	relationships	Population density	-0.24
Linomployment rate	Canacity to raise \$2000	Neno	-0.40"
onemployment rate	Capacity to raise \$2000	Roal income per taxpaver	-0.51
	General support	None	0.36*
	Erequency of applied contact	None	0.21*
	Frequency of social contact	Population density	-0.31
		Real income per taxpaver	-0.23
Aggregate real taxable income	Living in the same SLA as 5	None	-0.57*
growth, 1990–91 to 2000–01	years ago		0.01
Aggregate real taxable income	Living in the same SLA as 5	None	-0.45*
growth, 1995–96 to 2000–01	years ago	SEIFA Index of disadvantage	-0.40*
	Satisfaction with family	None	-0.44*
	relationships	Population density	-0.25
		Metropolitan	-0.32*
		SEIFA Index of disadvantage	-0.37*
Real income per taxpayer, 2000–01	Social contact once a month	None	-0.35*
	or less	Population density	-0.18
		Metropolitan	-0.26
		SEIFA Index of disadvantage	
Life satisfaction	Community involvement	None	0.60*
		Motropoliton	0.44
		SEIEA Index of aconomic resources	0.42
	Integration into the community	None	0.45
	integration into the community	Metropolitan	0.65*
		SEIFA Index of economic resources	0.68*
	Satisfaction with family	None	0.62*
	relationships	Population density	0.50*
		Metropolitan	0.53*
		SEIFA Index of economic resources	0.54*
SEIFA Index of disadvantage	General support	None	0.58*
		Population density	0.66*
	Capacity to raise \$2000	None	0.68*
	Inability to obtain emotional &	None	-0.51*
	general support from others		
	Frequency of social contact	None	0.35*
		Population density	0.27
	<u></u>	Metropolitan	0.28
	Social contact once a month	None	-0.38*
	or less	Population density	-0.28
SEIEA Index of occurring recourses	Capacity to raise \$2000	Neno	-0.28
SEIFA INDEX OF ECONOMIC RESOURCES	Capacity to raise \$2000	None Deputation density	0.44"
	How commonly do peighbours		0.55*
	help each other out?	Population donsity	-0.00
	hop each other out?	r opulation density	-0.32
	Labour force perticipation	Neno	-0.33^
	Labour force participation	INUTIE	0.00

Note Controls are only listed when they changed the strength of association by more than 5 percentage points. * = significant at the 1% level

Source RIPT and ARTI data are sourced from BTRE's *Taxable Income Database* (BTRE 2005). Educational attainment data are sourced from BTRE's *Education, Skills and Qualifications Database* (BTRE 2004c). Geographic areas, unemployment rates and SEIFA Indexes are sourced from C-DATA 2001. Population is measured using ABS' Estimated Resident Population data for 2001. Social capital, health and life satisfaction measures have been developed by BTRE from HILDA 2001 unit record data.

	Equation1		Equation 2		Equation 3	
	${}^{a}R^{2}$	β	${}^{a}R^{2}$	β	${}^{a}R^{2}$	β
	0.21		0.21		0.21	
Age		-0.25*		-0.25*		-0.26*
Sex		-0.04*		-0.04*		-0.04*
Employed		0.13*		0.13*		0.13*
Unemployed		0.06*		0.06*		0.06*
Home owner or currently paying off a mortgage		0.01		0.01		0.01
Rents from a government housing authority		-0.05*		-0.04*		-0.04*
Low educational attainment		-0.07*		-0.07*		-0.07*
High educational attainment		0.04*		0.04*		0.04*
Partnered		0.00		0.00		0.00
Presence of children in the household		0.02		0.02		0.02
Lone person household		0.03		0.03		0.03
Single parent household		0.01		0.01		0.01
English proficiency		-0.03*		-0.03*		-0.03*
Transience		-0.01		0.00		0.00
Total household income		0.04*		0.04*		0.03*
Born overseas		0.02		0.02		0.02
SEIFA index of relative socio-economic disadvantage		0.02		0.01		0.01
How commonly do neighbours help each other out?		-0.00		0.00		0.00
Satisfaction with family relationships		0.04*		0.04*		0.04*
Active membership		0.09*		0.09*		0.09*
Frequency of social contact		0.01		0.00		0.00
I often feel very lonely		-0.10*		-0.10*		-0.10*
Voluntary work		-0.01		-0.01		-0.01
Capacity to raise \$2000 in one week for emergency		0.11*		0.11*		0.11*
Emotional & general support received from others		0.04*		0.04*		0.04*
Integration into the community		0.12*		0.13*		0.13*
^b Victoria		nr		-0.01		-0.01
^b Queensland		nr		-0.01		-0.01
^b South Australia		nr		-0.01		-0.01
^b Western Australia		nr		0.01		0.01
^b Tasmania		nr		-0.01		0.00
^b Northern Territory		nr		-0.02		-0.02
^b Australian Capital Territory		nr		-0.01		-0.01
[°] Remoteness class		nr		-0.04*		-0.04*
^d Urban centre size category		nr		0.00		0.00
^e Region level community involvement summary scale		nr		nr		0.00

TABLE 11.2 REGRESSION OF SELF-REPORTED HEALTH STATUS OF INDIVIDUALS AGAINST SOCIAL CAPITAL, SOCIO-DEMOGRAPHIC AND GEOGRAPHIC VARIABLES, 2001

Note β are the standardised regression coefficients. Although self-reported health status is an ordinal variable, weighted OLS estimation was used in this exploratory analysis, to enable clearer presentation of results. Socio-demographic variables were defined as outlined in Appendix V, except that full-time and part-time employed were combined into a single 'employed' category. The SEIFA Index of Disadvantage relates to 1996 and was sourced from HILDA. Social capital indicators are defined in Appendix I, and were expressed on a [0,1] scale.

^a Adjusted R² is reported to allow comparison of R² values across models with different numbers of variables. ^b Compared to the control state of NSW.

⁶ Remoteness class was constructed as continuous variables with a value of 0 for major cities, 1 for inner regional, 2 for outer regional, and 3 for remote and very remote areas.

^d Urban centre size category was constructed as a continuous variable with values ranging from 0 (for rural areas) to 8 (for cities of more than 1 million).

^e The community involvement summary scale was derived for the 69 BTRE defined regions. Its construction is described in Section 8.2.3

* = significant at the 1% level

Source BTRE analysis of HILDA 2001 unit record data.

The results in Table 11.2 indicate that while remoteness is a significant predictor of health, facts such as urban centre size, State/Territory and regional community involvement are *not* related to the self-assessed health of individuals. Instead, health is strongly associated with age, employment status and education, together with individual measures of integration into the community, active membership, capacity to raise \$2000 and feelings of loneliness. Together, the socio-demographic variables and social capital indicators explain 21% of the variation of health status across individuals, although the socio-demographic variables are more powerful predictors than the social capital indicators. Nevertheless, the social capital indicators are a significant and substantial predictor of self-reported health status.

The associations between self-assessed health status and aspects of individual's social capital (see Table 11.2) are generally not observable at the regional scale, once socio-economic disadvantage is controlled for. The sole exception is the significant link between general support and self-reported health status (see Table 11.1). Therefore, the analysis suggests that an individual's level of social capital is related to the health of that individual through compositional effects, rather than contextual effects. However, it is possible that contextual effects operate at a more disaggregated geographic scale (e.g. neighbourhood, LGA) which would not necessarily be picked up in this analysis.

Overall, the results are consistent with the literature which emphasises the protective effects of social connectedness and social support resources on health outcomes for individuals (e.g. Berkman & Syme 1979, Pevalin & Rose 2003). While these individual level effects may also be observable at the regional scale, our results do not provide support for the idea that the social capital of the place in which a person lives has a beneficial effect on an individual's health, above and beyond the effect of the individual's own social capital resources.

11.3 EDUCATION

Education is considered both a potential source of social capital and an outcome of social capital. Côté (2001) notes that education and learning foster the development of skills, values and practices which are conducive to social cooperation and participation. Children can learn and practice cooperation, see how networks operate, observe responsible civic engagement and get involved in a variety of community activities via their school. On the other hand, Coleman (1988) emphasised the role of strong communities and network ties between parents, teachers and students in fostering learning.

CHAPTER 11

11.3.1 Regional evidence

Putnam (2000) found social capital to be positively related to an index of the educational performance (based on SAT scores, test scores and high school drop out rates) of children across American states. This beneficial effect persisted even after controlling for other factors that might affect educational success at a state level, such as racial composition, affluence, poverty rates, spending on schools and teacher/student ratios. Social capital was found to be the single most important explanatory factor for educational performance. Furthermore, Putnam asserts that the impact of race, poverty and adult education on some of the educational outcomes (particularly SAT scores) are indirect and they are mediated by the impact of social capital. He also found that the level of informal social capital (i.e. social trust and the frequency of informal contacts) was a stronger predictor of student achievement at a state level, than formal or institutionalised social capital (i.e. activities such as church attendance and community projects).

While Putnam could not identify the underlying mechanism for this relationship, he suggested that states with higher social capital may have experienced improved educational performance through greater parental engagement in schools as well as children spending less time watching television and more time in other leisure activities. Putnam (2000) also links social capital to school size, where smaller schools are considered to provide more opportunities and encouragement for students through more face-to-face engagement. Religious schools are also shown to outperform non-religious schools, and Putnam argues this is due to the social networks associated with religions.

Glaeser (2001) reports that his analysis of WVS data found a positive relationship between years of education and organisation membership in almost all of the countries investigated. Similarly, Whiteley (2004) identified a significant positive association (0.32) between voluntary activity and educational performance across 101 British local authorities. In addition, analysis of the *National Educational Longitudinal Study* (NELS) of 8th graders in the USA for 1988, found that measures of parent and student participation in community activities which were aggregated to the school level, were consistently positively associated with school performance, even after accounting for family social capital, demographic and geographic factors (Sun 1999).

11.3.2 Evidence for individuals

Glaeser (2001) contends that:

'the most robust correlate of social capital variables across individuals is years of schooling. For example, the raw correlation of years of education with membership in organizations is 34 percent in the GSS . . . The education-social connection relationship should probably be seen as the most robust and most important fact about the formation of social capital' (p39).

The strongest evidence relates to links between the structure and quality of family networks and educational attainment. Coleman (1988) used data from the *High School & Beyond Longitudinal Study* to conclude that family-based social capital (measured by intact families, small families and high parental expectations) was inversely related to high school dropout rates. Analysis of the NELS by Sandefur et al (1999) found that adolescents in stable and intact families were more likely to make three different types of educational transition (high school graduation, entering post-secondary education, entering a four-year post-secondary institution). The study also found that greater parent-child interaction, intergenerational closure⁷⁸ and Catholic school attendance had a significant and positive influence on educational transitions.

Smith et al (1995) undertook an analysis of the *High School & Beyond Longitudinal Study* which found that both family social capital (measured in terms of family structure and interaction) and community social capital (measured in terms of involvement in community organisations and residential mobility) were significant predictors of the likelihood that a child would attend college.

Considerable research has been undertaken into the links between student mobility and educational outcomes. A number of studies based on the NELS have found that moving schools between 1st and 8th grades increases the likelihood of dropping out of high school, after controlling for other factors (e.g. Teachman et al 1996). Pribesh & Downey (1999) reported that the lower achievement of movers was partially a result of declines in social relationships experienced by students who move, but most of the negative effect of moving was attributable to pre-existing differences between movers and non-movers.

While there is robust evidence linking educational outcomes and social capital, the processes and causal direction of these links remains unclear. Much of the literature explores the influence of the social capital resources of families on the educational outcomes of students. However, the relationship between social capital and education is blurry and subject to several other possible interpretations (Glaeser 2001):

⁷⁸ Intergenerational closure refers to the extent to which the parents of an adolescent know the parents of his or her friends.

- Individuals who invest more in education may possess a greater orientation toward the future (i.e. higher discount factor), and consequently may also invest more in social capital.
- Social capital may reflect relative prestige, in that social interaction is more pleasant for more prestigious individuals (who tend to be well educated).
- A significant part of education is learning social skills and cooperation, so that educational institutions form a primary setting where social capital is developed.

The conceptualisation of social capital in education-related studies tends to be quite narrow. While there is considerable research into the influence of familybased social capital on educational outcomes, the links between education and other aspects of social capital (such as community involvement, social support, frequency of social contact, trust and reciprocity) have rarely been explored.

11.3.3 New evidence using BTRE's social capital indicators

Regional educational outcomes have been assessed based on the proportion of respondents to the 2001 census who hold a bachelor degree or higher qualification. Data are sourced from BTRE's *Focus on Regions No. 2: Education, skills and qualifications* database.

Analysis of the links between BTRE's social capital indicators and educational outcomes for the 69 regions found that a region's level of educational attainment is significantly related to most of the social capital indicators. Exceptions are the active membership rate, health barriers to social participation and feelings of loneliness. However, for most indicators the relationship is of a reasonably small magnitude, and is likely to be influenced by the markedly different distribution of educational attainment in metropolitan and non-metropolitan areas. The most notable bivariate relationships are:

- Regions with a high proportion of residents holding a bachelor degree or higher qualification report a higher capacity to raise \$2000 in an emergency (0.46). The correlation is observable, but not significant, for non-metropolitan regions.
- Regions with a high proportion of residents holding a bachelor degree or higher qualification tend to report less help from neighbours (-0.49). This relationship is observable in both metropolitan and non-metropolitan regions.
- Metropolitan regions with a high proportion of degree holders tend to report less satisfying family relationships (-0.49).

At the regional scale, the education measure is significantly correlated with the SEIFA Index of disadvantage (0.79), population density (0.75), real income per taxpayer in 2000–01 (0.65) and metropolitan status (0.43). Partial correlation analysis has been used to determine whether the links between educational qualifications and the social capital indicators continue to hold when population density, metropolitan status and income are controlled for (see Table 11.1). The high correlation of education with the SEIFA Index of disadvantage is a result of data on educational qualifications being one of the key components of this SEIFA index, and so it would not be meaningful to include this measure of socio-economic disadvantage as a control variable in the partial correlation analysis.

The regional association of high educational attainment with neighbours helping each other out, does not hold once population density is controlled for, and nor does the association with satisfaction with family relationships. However, the regional association between educational attainment and capacity to raise \$2000 remains strong. Inclusion of the regional income control does reduce the extent of the association, but it remains statistically significant. It was previously reported that individuals with bachelor degrees are much more likely to be able to raise \$2000 in one week for an emergency, even when household income is controlled for (Table 7.5), so this simply represents a regional scale reflection of the result observed earlier at the individual scale. The findings suggest that the link between high educational qualifications and the capacity to raise \$2000 is not simply due to more highly educated people (regions) having higher incomes, but instead relates to the size and strength of support networks.

11.4 ECONOMIC OUTCOMES

A range of studies have examined the relationship between social capital and economic outcomes at the individual, micro and macro levels. Social capital is generally considered to enhance an individual's labour market outcomes and personal income. Other studies have found that social capital benefits firms in terms of improved outcomes from innovation (e.g. Landry et al 2001). However, evidence as to the impact of social capital on the economic growth of regions and nations is more mixed.

11.4.1 Regional evidence

According to theory, trust and norms that compel trustworthiness serve to reduce transaction costs in the market economy, minimise the costs of enforcing agreements, and reduce fraud and corruption (Fukuyama 1995). Social capital is believed to facilitate economic activity and improve efficiency by influencing the extent to which individuals are willing to cooperate with one another

(Putnam et al 1993). Social capital can also provide a competitive advantage to regions and nations by placing negotiators on the same wave-length, enhancing the creation of knowledge and innovation, improving information flows and facilitating the adoption of new technologies (Maskell 2001). A regional example is the different economic impact of Silicon Valley and Boston's Route 128 corridor in the USA (Putnam 2000). Putnam argued that the success of Silicon Valley was largely due to the horizontal networks of cooperation that developed between businesses in the local area, which were more flexible and dynamic than regional industrial systems in which learning is confined to individual firms (e.g. Route 128).

There have been numerous cross-country analyses of links between economic performance and key aspects of social capital. Using WVS data for 29 market economies, Knack & Keefer (1997) found a significant positive association between annual per capita GDP growth between 1980 and 1992 and the proportion responding that most people could be trusted, controlling for initial income levels, human capital and the relative price of investment goods. The study also found a positive association (significant at the 10% level only) between norms of civic cooperation⁷⁹ and economic growth for this set of countries. No relationship was identified between group membership and economic growth.

The cross-country studies have been criticised by Durlauf (2002a, 2002b) for not accounting for all the relevant determinants of growth, for ignoring the endogeneity of the social capital variables and for assuming a constant relationship across markedly different cultural settings. Regional-level studies generally minimise this last problem, by focusing on regions within a single country or a set of similar countries.

Beugelsdijk & von Schaik (2001) analysed the relationship between social capital and economic growth for 54 European regions (from 7 countries) between 1950 and 1998, using a model based on that of Knack & Keefer (1997). They found that trust and growth were not associated with one another at the regional level. However, active group membership had a significant, positive and robust influence on regional economic growth. Helliwell & Putnam (1995) find that, controlling for initial income, Italian regions with a more developed civic community had higher economic growth rates between 1950 and 1990.

Casey & Christ (2004) investigated the relationship between Putnam's social capital index and various economic performance measures for 48 American

⁷⁹ Civic cooperation was a composite measure reflecting whether a range of behaviours could always be justified, never be justified or something in between. Specified behaviours included avoiding a fare on public transport, cheating on taxes and claiming government benefits that you are not entitled to.

states between 1980 and 2001. In terms of simple correlations, there was a strong, negative association between social capital and unemployment across states (-0.58). Regression analysis also found that social capital had a significant negative (but relatively minor) influence on unemployment rates when education, industry structure and other factors were controlled for. However, social capital was not significantly correlated with Gross State Product (GSP) per capita, GSP per capita growth, productivity growth or employment growth across states, and regression analysis provided no evidence that greater stocks of social capital produced stronger economic growth.

Dr Robert Cushing (cited in Florida 2003) found that social capital had little to do with economic growth for U.S. metropolitan areas. High tech regions scored poorly on most of Putnam's social capital indicators, excelling only in 'protest politics' and 'diversity of friendships'. The low social capital communities had the highest rates of diversity and population growth.

Narayan & Pritchett (1997) undertook a study of social capital in Tanzanian villages, where social capital was measured by trust, group involvement and group heterogeneity. The effects of social capital on average household expenditures were significant, controlling for a range of household and village characteristics. These effects primarily operated at the village level rather than at the household level — average social capital for the village influenced household expenditures, but household social capital did not. However, a later study of Indonesian villages (Grootaert 1999) found that the effects of social capital operated primarily at the household level.

Miguel, Gertler & Levine (2003) investigated the relationship between a range of social capital indicators and growth in manufacturing employment across 274 Indonesian districts from 1985 to 1995. They found that initial social capital did not predict subsequent industrial development. However, districts that experienced rapid industrialisation showed significant increases in most social capital measures, while neighbouring districts experienced out-migration and a decline in social capital. Thus, causality was found to run from industrialisation to social capital, rather than vice versa.

11.4.2 Evidence for individuals

Numerous studies have concluded that the labour market outcomes of individuals are enhanced by their access to social capital, particularly bridging social capital (OECD 2001). In addition, well-connected individuals are more likely to be promoted faster, receive higher salaries and be favourably evaluated by their peers (Woolcock 2001).

In a study based on interviews with professional and technical workers in a town in Massachusetts, Granovetter (1973) found that more than half had found their jobs through a personal connection. The majority of these personal connections were not close friends — instead, they were only acquaintances, indicating that weak ties are more useful than strong ties in the search for jobs as they cover a greater range of links. Similarly, an Australian study by Stone, Gray & Hughes (2003) found that having an educationally diverse network was an important predictor of finding a job.

Aguilera (2002) investigated the importance of social networks as a resource for the unemployed and underemployed to gather information which leads to employment and increased labour force participation. He found that having six or more close friends was strongly positively related with employment and hours worked in the USA. Group involvement and the occupational, racial and religious diversity of friends were positively related to employment, but the relationship with hours worked was weaker. The study concluded that networks possessing superior resources would provide richer information for obtaining employment.

Grootaert (1999) estimated how the economic wellbeing of households in Indonesia was affected by social capital, focusing on membership and participation in local associations. Households with high social capital had higher per capita expenditures, more assets, higher savings and better access to credit. The strongest economic benefits came from the number of memberships, group heterogeneity and active participation in decision making. The direct effect of social capital on household per capita expenditures was found to dominate the reverse effect in explaining correlation between the two measures.

11.4.3 New evidence using BTRE's social capital indicators

Regional studies have reported links between social capital and a range of regional economic outcomes, including GDP growth, unemployment and average incomes. Reflecting this, regional links with the BTRE's social capital indicators have been assessed for several economic measures:⁸⁰

- Unemployment rate, 2001;
- Growth in aggregate real taxable income (ARTI), 1995–96 to 2000–01;
- Growth in ARTI, 1990–91 to 2000–01; and
- Real income per taxpayer, 2000–01.

⁸⁰ The unemployment rate is sourced from census data and the other economic measures are derived from the BTRE's *Taxable Income Database* (BTRE 2005).

The most noteworthy regional links between the social capital indicators and economic measures are summarised below.

- The unemployment rate is significantly negatively correlated with the frequency of social contact (-0.31), the labour force participation rate (-0.76), capacity to raise \$2000 (-0.51) and the general support summary scale (-0.36). The last two relationships are significant for metropolitan regions, but are not evident for the non-metropolitan regions. The association with frequency of social contact is only significant for non-metropolitan regions.
- Regions with higher economic growth tend to have a relatively low proportion of people living in the same SLA as 5 years ago. This relationship is observable for both metropolitan and non-metropolitan regions for both growth measures. For metropolitan regions, 5 year growth has a significant positive association with labour force participation (0.44) and a significant negative association with satisfaction with family relationships (-0.40).
- High income metropolitan regions generally have a relatively low share of residents with social contact once a month or less (-0.35).

At the regional scale, unemployment is significantly correlated with the SEIFA Index of disadvantage (-0.75), population density (-0.30) and real income per taxpayer (-0.45). Partial correlation analysis is used to determine whether the links between unemployment and the support and frequency measures continue to hold when population density and income are controlled for (see Table 11.1).⁸¹ The high correlation of the unemployment rate with the SEIFA Index of disadvantage is a result of unemployment data being one of the key components of this SEIFA index, and so it would not be meaningful to include this measure of socio-economic disadvantage as a control variable in the partial correlation analysis.

While the regional association of unemployment rates and frequency of social contact is not robust to the inclusion of controls, the associations with the financial support and general support measures remain statistically significant. High unemployment regions tend to have relatively low levels of financial support and general support. A significant negative association between unemployment and the availability of support, particularly financial support, is also evident for individuals (Table 7.5).

Partial correlation analysis has also been used to determine whether the identified associations between the BTRE's social capital indicators and the

⁸¹ The labour force participation rate is one of BTRE's social capital indicators, but is also an economic measure. Consequently, links between the labour force participation rate and the four economic outcome measures have not been further explored.

other economic outcome measures are robust to the inclusion of controls. The only associations which remain significant are between the 5 and 10 year economic growth measures and the stability of the regional population. Regions which have grown rapidly over the last 5 or 10 years have more transient populations, but this does not translate into lower community involvement. It is likely that the high level of transience is due to strong economic growth attracting new residents due to increased employment opportunities.

Overall, the literature does not provide convincing evidence that social capital is a significant driver of regional economic outcomes. Analysis of BTRE's social capital indicators finds few meaningful links with regional measures of economic growth or average income, but does identify significant links between unemployment rates and the availability of support at a regional level. In this respect, the results are similar to those of Casey & Christ (2004), who reported that social capital is a significant predictor of unemployment rates in American states, but is unrelated to economic growth.

11.5 SUBJECTIVE WELLBEING

Subjective wellbeing or reported life satisfaction is thought to be positively correlated with high levels of social capital. Putnam (2000) argues that happiness is related most strongly to health, but is also strongly related to social ties and human capital.

11.5.1 Regional evidence

There have been several cross-country and cross-region studies of the links between social capital and life satisfaction. Whiteley (2004) found a significant positive correlation (0.26) between volunteering rates and average life satisfaction levels in 101 British local authorities. Helliwell (2004) analysed the links between average social capital and average life satisfaction in 50 countries, and found that national average levels of trust and group involvement were significant positive predictors of life satisfaction.

Helliwell (2002) used a mix of individual and national variables to explain life satisfaction of individuals using World Values Survey data from 49 countries. Individuals who were involved in more voluntary organisations reported higher life satisfaction, as did frequent church attendees, those who believed most people could be trusted and those who believed it was never appropriate to cheat on taxes. In addition, the life satisfaction of individuals was significantly influenced by the national average value of the voluntary organisations indicator. This suggests that individuals receive spillover benefits from living in societies with high involvement in voluntary organisations.⁸² The spillover effects of involvement on other's wellbeing are estimated to be larger than the direct benefits from one's own involvement in voluntary organisations.

In Australia, Shields & Wooden (2003) used HILDA to investigate the role of neighbourhood characteristics in determining life satisfaction. The study found that the average amount of social interaction between neighbours in the local area was a significant positive influence on the life satisfaction of individuals, after controlling for a range of social, demographic and geographic variables.

11.5.2 Evidence for individuals

Li, Pickles & Savage (2003) investigated whether social capital gave British individuals an elevated sense of happiness (or less depression) when other social and demographic factors were controlled for. Their findings suggested this was indeed the case for the neighbourhood attachment and social network dimensions of social capital, but not for civic participation. Having a trusting attitude was also significantly and positively associated with the subjective wellbeing of individuals. Also in Britain, Duffy (2004) reports that talking to neighbours and playing sport are two of the key drivers of life satisfaction. In Australia, Evans & Kelley (2002a) reported evidence that life satisfaction was strongly positively associated with the individual's perceptions of the sociability and civility of the neighbourhood and the number of close friends they had in the local area.

Therefore, evidence from both Britain and Australia suggests that interaction with neighbours has a positive influence on life satisfaction. However, in Canada, Farell, Aubry & Coulombe (2003) concluded that the frequency of engaging in neighbouring behaviour was not a direct predictor of subjective wellbeing for individuals, but was instead predictive of an increased sense of community, which in turn predicted subjective wellbeing.

11.5.3 New evidence using BTRE's social capital indicators

To investigate associations between life satisfaction and aspects of social capital, life satisfaction has been measured using the following HILDA question:

"How satisfied are you with your life?" {Scale of 0 (totally dissatisfied) to 10 (totally satisfied)}

A summary life satisfaction measure has been constructed from the survey data using a [0,100] scale with equal intervals, so that if everyone in a region

⁸² These results are based on ordered probit estimation. When the equation was initially estimated using OLS regression, the national average values of all four social capital indicators had a significant positive influence on the life satisfaction of individuals.

responds 'totally dissatisfied' the score will be zero, and the score will be 100 if everyone responds 'totally satisfied'. The national mean of the indicator is 79.6, and regional scores range from 74.5 to 85.6.

Life satisfaction is not uniformly distributed between metropolitan and nonmetropolitan regions. The mean life satisfaction score is significantly higher in non-metropolitan regions. Nevertheless, a distribution plot shows a good overlap between the metropolitan and non-metropolitan regions.

For the 69 BTRE defined regions, the average level of life satisfaction of residents is positively and significantly correlated with the community involvement summary scale for the region (0.60). This correlation is significant for metropolitan regions (0.54), but not for non-metropolitan regions. The positive association with the summary scale is being driven by the 'integration into the community' indicator which is significantly associated with life satisfaction across both metropolitan (0.61) and non-metropolitan regions (0.73). Average life satisfaction is also positively and significantly correlated with satisfaction with family relationships across all regions (0.62), metropolitan regions (0.52) and non-metropolitan regions (0.55). Since these two social capital indicators are based on satisfaction are not surprising.

There are some further notable associations with life satisfaction which are significant for metropolitan regions, but not for non-metropolitan regions:

- I often feel very lonely (-0.63);
- Health barriers (-0.55); and
- General support summary scale (0.54).

At a regional level, life satisfaction is significantly correlated with population density (-0.48), metropolitan status (-0.47) and the SEIFA Index of economic resources (-0.43). Partial correlation analysis (see Table 11.1) is used to test whether the regional associations of life satisfaction with community involvement, integration into the community and satisfaction with family relationships continue to exist, when the influence of these other variables is controlled for. In fact, the partial correlation analysis finds that all three associations remain statistically significant.

Regions with strong integration into the community and high community involvement tend to report higher average levels of life satisfaction than other regions. In addition, regions where residents, on average, report high satisfaction with family relationships tend to have above-average levels of satisfaction with their life as a whole. It is likely that these results are simply a regional reflection of the strong correlations of these social capital indicators with life satisfaction at the scale of the individual.
Three regressions have been estimated to investigate whether regional community involvement is an important factor in predicting individual life satisfaction, above and beyond the community involvement of the individual themselves (as found by Helliwell 2002). Equation 1 includes individual level social capital and socio-demographic variables. Equation 2 considers the role of State/Territory, urban centre size and remoteness by adding them as independent variables, while equation 3 is used to test whether regional community involvement has an effect on the life satisfaction of individuals.

Table 11.3 summarises the regression results, and shows that the life satisfaction reported by individuals is unrelated to State/Territory, urban centre size, remoteness, or region-level community involvement. Instead, an individual's life satisfaction is strongly associated with their personal levels of integration into the community, satisfaction with family relationships, feelings of loneliness and ability to receive emotional and general support. It should be noted that the models explain nearly 30% of the variation in the life satisfaction of an individual, and the social capital indicators are much more powerful predictors than the socio-demographic and geographic variables.

The results in Table 11.3 do not provide support for the idea that the extent of community involvement in a person's region of residence has a beneficial effect on an individual's subjective wellbeing, above and beyond the effect of the individual's own social capital resources. Instead, the relationship observed at the regional scale between community involvement and life satisfaction appears to simply be a reflection of the association of these two variables at the scale of the individual.

11.6 OTHER ASPECTS OF WELLBEING

11.6.1 Crime

Social capital is believed to be important for discouraging anti-social and criminal behaviour. The literature suggests that communities with shared values and norms, and with strong informal social networks, have a lower incidence of crime (OECD 2001).

Putnam (2000) found that for American states, the reported murder rate was strongly negatively predicted by social capital. Putnam found social capital to be a stronger predictor than other plausible measures, including poverty. Similarly, social capital was the strongest predictor of state differences in tax evasion, indicating that people are more likely to comply with the law in states with high levels of social capital.

	Equ	ation 1	Equa	ation 2	Equa	ation 3
	$^{a}R^{2}$	β	${}^{a}R^{2}$	β	${}^{a}R^{2}$	β
	0.30		0.30		0.30	
Age		-0.03		-0.03		-0.03*
⁵Sex		-0.01		-0.01		-0.01
Employed		-0.05*		-0.05*		-0.05*
Unemployed		-0.05*		-0.05*		-0.05*
Home owner or currently paying off a mortgage		0.04*		0.04*		0.04*
Rents from a government housing authority		0.01		0.01		0.01
Low educational attainment		0.03*		0.03*		0.03*
High educational attainment		-0.05*		-0.05*		-0.05*
Partnered		0.02		0.01		0.01
Presence of children in the household		-0.02		-0.02		-0.02
Lone person household		-0.03*		-0.03*		-0.03*
Single parent household		-0.03*		-0.03*		-0.03*
English proficiency		-0.06*		-0.06*		-0.06*
Transience		-0.01		-0.01		-0.01
Total household income		0.02		0.02		0.02
Born overseas		-0.02		-0.01		-0.02
SEIFA index of relative socio-economic disadvantage		-0.01		-0.01		-0.01
How commonly do neighbours help each other out?		-0.02		-0.02		-0.02
Satisfaction with family relationships		0.16*		0.16*		0.16*
Active membership		0.02		0.02		0.02
Frequency of social contact		0.03*		0.03*		0.03*
I often feel very lonely		-0.15*		-0.15*		-0.15*
Voluntary work		-0.04*		-0.04*		-0.04*
Capacity to raise \$2000 in one week for an emergency		0.08*		0.08*		0.08*
Emotional & general support received from others		0.12*		0.11*		0.12*
Integration into the community		0.31*		0.31*		0.31*
^b Victoria		nr		0.00		0.00
Queensland		nr		0.02		0.02
^b South Australia		nr		0.01		0.01
^b Western Australia		nr		0.00		0.00
^b Tasmania		nr		0.01		0.01
^b Northern Territory		nr		0.00		0.00
^b Australian Capital Territory		nr		0.00		0.00
^c Remoteness class		nr		0.01		0.01
^d Urban centre size category		nr		0.01		0.01
^e Region level community involvement summary scale		nr		nr		-0.01

TABLE 11.3 REGRESSION OF INDIVIDUAL LIFE SATISFACTION AGAINST SOCIAL CAPITAL, SOCIO-DEMOGRAPHIC AND GEOGRAPHIC VARIABLES, 2001

β are the standardised regression coefficients. Although life satisfaction is an ordinal variable, weighted OLS Note estimation was used in this exploratory analysis, to enable clearer presentation of results. Socio-demographic variables were defined as outlined in Appendix V, except that full-time and part-time

employed were combined into a single 'employed' category. The SEIFA Index of Disadvantage relates to 1996 and was sourced from HILDA. Social capital indicators are defined in Appendix I.

^a Adjusted R² is reported to allow comparison of R² values across models with different numbers of variables. ^b Compared to the control state of NSW.

^c Remoteness class was constructed as continuous variables with a value of 0 for major cities, 1 for inner regional, 2 for outer regional, and 3 for remote and very remote areas. ^d Urban centre size category was constructed as a continuous variable with values ranging from 0 (for rural

areas) to 8 (for cities of more than 1 million).

e The community involvement summary scale was derived for the 69 BTRE defined regions. Its construction is described in Section 8.2.3

* = significant at the 1% level

BTRE analysis of HILDA 2001 unit record data. Source

Kennedy et al (1998) found that firearm violent crime rates were strongly correlated with lack of social trust (0.83) and membership of voluntary organisations (-0.49) across American states, controlling for poverty and firearm availability. Kawachi, Kennedy & Wilkinson (1999) argued that levels of crime are influenced by two sets of societal characteristics - the degree of relative deprivation and the degree of cohesiveness in social relations. Using

state-level crime data for the USA, the authors found indicators of low social capital to be strongly associated with violent crimes (homicide, assault, robbery) and property crime (burglary).

Using survey data from 343 Chicago neighbourhoods, Sampson et al (1997) investigated the relationship between violent crime and collective efficacy (defined as social cohesion amongst neighbours and a willingness to intervene on behalf of the common good). Collective efficacy was found to be a robust predictor of lower rates of neighbourhood violent crime, controlling for other influences such as disadvantage.

In Britain, Whiteley (2004) found a significant negative correlation (0.30) across local authorities between voluntary activity and the number of burglaries per thousand population. Focusing on the eastern states of Australia, Carcach & Huntley (2002) found that crime rates were lower in LGAs with high levels of participation in community oriented activities (such as Scouts Australia or State Emergency Services). This association remained significant even after controlling for the basic economic and social characteristics of communities.

Overall, there is evidence from several different geographical settings that communities with high social capital tend to experience less crime. However, there has been little investigation of the causality of this relationship. Due to an absence of crime data for the BTRE defined regions, this report did not explore the relationship between social capital and crime levels in Australia's regions.

11.6.2 Child welfare

The welfare of children has been identified by Putnam (2000) as being affected by social capital. Putnam developed a composite measure of child welfare which included teen pregnancy, infant mortality, low-birth weights, violent juvenile crime and early school leaving. This index was correlated with his index of social capital at the state level, and he concluded that social capital matters for children's successful development in life. The only other variable that demonstrated a stronger effect on American children's life was poverty. Since it is related to the health, education and crime spheres of wellbeing, it is not surprising that child welfare would also seem to be positively influenced by high levels of social capital.

An Australian study by Vinson & Baldry (1999) identified geographic clusters of child maltreatment cases in western Sydney. Compared to residents of other areas, residents of these clusters had relatively low neighbourhood attachment.

Runyan (1998) examined the extent to which the social capital of parents is associated with positive developmental and behavioural outcomes of high-risk preschool children. The longitudinal study found that the social connectedness of mothers (particularly church affiliation, perception of social support, and support within the neighbourhood) was a key factor in children successfully avoiding behavioural and emotional problems later in life.

A study of African American families in Baltimore by O'Brien Caughy et al (2003) found that the association between how well a parent was integrated into her neighbourhood and the presence of child behaviour problems depended on the degree of economic impoverishment of the neighbourhood. In wealthier neighbourhoods behavioural problems were highest for those children whose parents did not know many neighbours. In poor or disadvantaged neighbourhoods the lowest levels of behavioural problems were for those children whose parents did not know many neighbours. This interaction between neighbourhood integration and the impoverishment of a neighbourhood illustrates the complexity of social capital and its relationship with wellbeing outcomes.

Due to an absence of information on child welfare for the BTRE defined regions, the relationship of the BTRE's social capital indicators to the wellbeing of children in Australia's regions has not been explored.

11.6.3 Disadvantage

Most studies that set out to investigate the relationship between social capital and disadvantage use specific measures of disadvantage, such as unemployment, poverty, low income or limited education. However, there have been some studies which take a broader perspective on socio-economic advantage and disadvantage.

Rose (1999) investigated the extent to which social capital contributed to basic components of human wellbeing in Russia, such as getting enough food, income security and emotional and physical health. He concluded that some aspects of social capital did produce increases in individual wellbeing, but that a portfolio of resources (comprising socio-economic advantages and social capital) was the best way for individuals to secure wellbeing.

In Australia, Vinson (2004) identified limited education, low income, unemployment and poor work skills as the recurrent features of highly disadvantaged areas, and then examined their relationship with broader social and health outcomes. The correlation between unemployment and low birth weight was found to be lower for high social cohesion communities than for low social cohesion communities. This pattern was repeated for other sets of socio-economic factors. He concluded that social cohesion acted as a buffer, reducing or containing the negative effects of socio-economic disadvantage. The availability of composite measures of socio-economic disadvantage for the BTRE defined regions has allowed investigation of the regional relationship between social capital and disadvantage. All four SEIFA indexes have been explored, but the analysis focuses only on the two indexes which have the most meaningful relationships with the BTRE's regional social capital indicators:

- SEIFA Index of disadvantage, 2001 a census-based summary measure of disadvantage which focuses on low income earners, low educational attainment and high unemployment; and
- SEIFA Index of economic resources, 2001 a census-based summary measure of economic resources which focuses on incomes, rent paid, mortgage repayments and dwelling size.

Metropolitan regions have a significantly higher average score than nonmetropolitan regions for both SEIFA indexes. While both indexes vary considerably across metropolitan regions, there is little variation in the index scores across the non-metropolitan regions, possibly due to the level of aggregation.

SEIFA Index of disadvantage

Across the 69 BTRE defined regions, the level of disadvantage is significantly correlated with the general support summary scale (0.58) and some of its components, particularly the capacity to raise \$2000 (0.68) and the inability to obtain emotional and general support from others (-0.51). Disadvantage is also significantly associated with a region's labour force participation rate (0.54), frequency of social contact (0.35) and social contact once a month or less (-0.38). These associations are driven by the metropolitan regions and are generally not observable for the non-metropolitan regions. This may be due to the 24 non-metropolitan regions lacking adequate variation on this index to establish associations with other measures.

Figure 11.2 illustrates the overall relationship between the general support summary scale and the SEIFA Index of disadvantage. The correlation remains significant when metropolitan status and population density are controlled for (see Table 11.1), as do the correlations with capacity to raise \$2000 and inability to obtain emotional and general support from others.⁸³ However, the associations with the two social frequency indicators are no longer significant, once the geographic variables are controlled for.

⁸³ Since unemployment is an input into the SEIFA index, correlations with the labour force participation rate were not further investigated.





Note General support summary scale derived using principal components analysis (see Section 8.2.3).Source BTRE analysis of HILDA 2001 unit record data and SEIFA data from C-DATA 2001.

While the level of socio-economic disadvantage of a region is positively associated with the level of financial, emotional and general support residents can access, a region's level of disadvantage has no apparent association with aspects of community involvement.

Table 11.4 provides more detail on the relatively strong correlation (0.71) between socio-economic disadvantage and general support for metropolitan regions. Relatively disadvantaged metropolitan regions such as Fairfield-Liverpool and Western Melbourne have a low score on this SEIFA index and also tend to have a low level of general support. More advantaged metropolitan regions tend to have a high level of general support. However, there are exceptions to this pattern, such as Western Adelaide and Outer South-Western Sydney, which both have an above-average level of general support, despite being socio-economically disadvantaged.

SEIFA Index of economic resources

Across the 69 regions, this index is significantly correlated with the extent to which neighbours help each other out (-0.55), the capacity to raise \$2000 (0.44) and the labour force participation rate (0.66). The associations with neighbourhood reciprocity and labour force participation are observable in both metropolitan and non-metropolitan regions, but the association with financial support is not evident in non-metropolitan regions.

TABLE 11.4 RELATIONSHIP BETWEEN LEVEL OF GENERA	AL SUPPORT AND SEIFA INDEX
OF DISADVANTAGE FOR METROPOLITAN REGIONS, 2001	1

General	S	SEIFA Index of disadvantage, 2001			
support	Low disadvantage	Average	High disadvantage		
High support	Northern Beaches & Central North Sydney (NSW) Boroondara City (Vic) Eastern Middle Melbourne (Vic) Eastern Outer Melbourne (Vic) Inner Melbourne (Vic) Mornington Peninsula (Vic) Southern Melbourne (Vic) Eastern Adelaide (SA) Canberra (ACT)	Barwon (Vic) Southern Adelaide (SA) North Metropolitan Perth (WA)	Outer South Western Sydney (NSW) Northern QLD (Qld) Western Adelaide (SA)		
Average	Eastern Suburbs Sydney (NSW) Lower Northern Sydney (NSW) St George-Sutherland (NSW) Yarra Ranges Shire Pt A (Vic) Brisbane City LGA (Qld)	Outer Western Sydney (NSW) South Eastern NSW (NSW) Moreland & Northern Middle Melbourne (Vic) Sunshine Coast (Qld) East Metropolitan Perth (WA) South West Metropolitan Perth (WA) Greater Hobart (Tas)	Gosford-Wyong (NSW) Illawarra (NSW) Richmond-Tweed (NSW)		
Low support	Inner Western & Inner Sydney (NSW)	Outer Western & Northern Melbourne (Vic) South Eastern Outer Melbourne (Vic) Brisbane SD Bal (Qld) Gold Coast LGA (Qld) South East Metropolitan Perth (WA)	Blacktown (NSW) Canterbury-Bankstown (NSW) Central Western Sydney (NSW) Fairfield-Liverpool (NSW) Newcastle (NSW) Greater Dandenong & Frankston (Vic) Western Melbourne (Vic) Logan City LGA (Qld) Northern Adelaide (SA)		

Note General support summary scale derived using principal components analysis (see Section 8.2.3).
 A metropolitan region contains all or part of an urban centre of more than 100 000 population. For 2001, Gold Coast-Tweed, Newcastle, Wollongong, Geelong, Townsville, Sunshine Coast and Canberra-Queanbeyan are considered metropolitan, alongside the six state capitals.
 The high, medium and low categories are equally sized in each sub-category (i.e. each category contains 15 regions).

Source BTRE analysis of HILDA 2001 unit record data and SEIFA data from C-DATA 2001.

The correlations remain significant when metropolitan status and population density are controlled for (see Table 11.1), although the association between the SEIFA index and the extent to which neighbours help each other out does drop considerably. The results therefore suggest that residents of regions with a high level of economic resources are less likely to report neighbours helping each other out than residents of less affluent regions. The positive association of the economic resources index with labour force participation and financial support is in accordance with expectations.

11.6.4 Inequality

Research has also been undertaken into the relationship between social capital and various aspects of inequality, particularly income and health inequalities. Putnam (2000) reported that the American states with the highest social capital had the most equally distributed incomes, while states with low social capital had the largest gaps between the rich and the poor. Similarly, Kawachi et al (1997) reported that income inequality was strongly correlated with group membership (-0.46) and a lack of social trust (0.76) across 39 American states.

At the international scale, it is the Scandinavian countries which tend to report the highest levels of social capital (see Chapter Six), and these are also the most egalitarian countries. Using WVS data for 29 market economies, Knack & Keefer (1997) concluded that income equality was associated with higher levels of trust and stronger norms of civic cooperation. In contrast, Leigh (2005) finds no apparent relationship between inequality and trust in Australian neighbourhoods.

Some authors have hypothesised social capital to be a mediator between income inequality and poor health. Veenstra (2001) suggests that income inequality may affect health through its impact on social cohesion or social capital. That is, greater inequality leads to decreased participation and greater mistrust, both of which then influence health. The mediation hypothesis was investigated by Kawachi et al (1997) who found that the empirical data supported the following conclusion:

'the growing gap between the rich and poor affects the social organization of communities and that the resulting damage to the social fabric may have profound implications for the public's health' (p1497).

Taken together, the empirical evidence suggests that a relatively equal distribution of incomes within an area is generally conducive to the development of social capital.

11.7 IN SUMMARY

This section reviews the evidence on regional links between social capital and key aspects of social and economic wellbeing, and presents some new analysis of these links for Australia's regions. The evidence supporting such links is more convincing at the scale of the individual, where the underlying processes and mechanisms of social capital effects can best be observed.

Overall, there is a reasonable amount of evidence that social capital is *associated* with positive health, education and life satisfaction outcomes and reduced crime and disadvantage at the regional level, but the direction of any causality has not been clearly established. Evidence as to the regional relationship

between social capital and economic growth is more mixed, with significant associations identified for some aspects of social capital in some studies (e.g. Beugelsdijk & von Schaik 2001), while other studies identified no significant relationship (e.g. Casey & Christ 2004).

Using the BTRE's regional social capital indicators, several significant relationships have been identified with regional wellbeing outcomes:⁸⁴

- Regions where residents report an above-average level of general support generally experience a relatively high level of self-assessed health, a low unemployment rate and low socio-economic disadvantage.
- Regions where residents report a high capacity to raise \$2000 in an emergency tend to have a high proportion of residents holding a bachelor or higher degree qualification, a low unemployment rate and low socio-economic disadvantage.
- Regions with a high average level of life satisfaction are also likely to report a high average level of community involvement, integration into the community and satisfaction with family relationships.
- Regions with a high average level of economic resources tend to report a low level of reciprocity within their neighbourhood.

These regional relationships generally reflect significant associations between the social capital indicator and wellbeing outcomes for individuals. While some studies have concluded that the social capital of the place in which a person lives has 'spillover' benefits for individual's health and wellbeing, above and beyond that person's own social capital resources (Macintyre 1993, Helliwell 2002), no such 'spillover' effects were identified in the Australian context.

BTRE finds *no* evidence that key aspects of social capital such as community involvement, support or frequency of social contact are associated with regional *economic growth* in the Australian context.⁸⁵ However, a significant negative association is identified between one aspect of social capital (neighbourhood reciprocity) and a region's *average* level of economic prosperity. It is important to recognise that the analysis does not capture some important aspects of social capital (such as the distinction between bonding, bridging and linking networks), is undertaken at an aggregated regional scale and is based on a snapshot of social capital for 2001–02. The analysis presented in this chapter is exploratory, and only provides suggestive evidence regarding the influence of social capital on the economic and social wellbeing of Australia's regions.

⁸⁴ All listed relationships are statistically significant at the 1% level, after controlling for the influence of population density, metropolitan status and other relevant factors.

⁸⁵ Rapidly growing regions tend to have a relatively transient population, but this does not translate into lower community involvement, lower support or less frequent social contact.

CHAPTER 12 SOCIAL CAPITAL INDICATORS DATABASE

12.1 THE DATABASE

The BTRE's *Social capital indicators database* is available in Microsoft Excel 2003 format from the BTRE website at <www.btre.gov.au>. It contains the social capital indicators which form the basis of the regional analysis in this information paper and relates to the 2001–02 financial year.⁸⁶

The database provides information on all 33 of BTRE's social capital indicators for Australia and each of its States and Territories (the 33 indicators are detailed in Appendix I). The database also provides social capital information for:

- National and state remoteness classes (29 of the 33 indicators are available at this scale);
- Capital city and state balances (All 33 indicators are available at this scale);
- Urban centre size categories (15 indicators are available at this scale); and
- 69 BTRE defined regions (15 indicators are available at this scale).

As well as providing the average regional value for each available indicator, the database identifies whether the regional estimate differs significantly from the national average.

Other information contained in the database includes:

- Details of how the 69 regions were defined;
- A description of each of the BTRE's regional indicators of social capital;
- 'Community involvement' and 'general support' factor scores for each of the BTRE defined regions; and
- The proportion of the population classified to each of the six social capital clusters for Australia, States and Territories, national and state

⁸⁶ Only four of the indicators do not relate to 2001–02. Carers data relates to 2003, job search and donation data to 2000, and union membership data to 2003.

remoteness classes, urban centre size categories, capital cities and state balances, and BTRE defined regions.

• Selected small area measures, which have been shown to inform one or more element of social capital. Small area data are provided for all SLAs, LGAs and SSDs, to enable analysis of social capital within user defined regions. Appendix IX provides further information.

The information in the database has been developed by BTRE from a number of different data sources:

- Household Income and Labour Dynamics of Australia (HILDA) survey, 2001;
- ABS' General Social Survey 2002;
- ABS Census of Population and Housing, 2001;
- ABS *Labour Force Survey* (and supplements), various years;
- ABS Survey of Voluntary Work, 2000;
- ABS Survey of Disability, Ageing and Carers, 1998
- Australian Electoral Commission data on voter turnout, 2001;
- BRS Wellbeing and Access to Services Database, 2002.

The database aims to provide a snapshot of the nature of social capital in Australia's regions as of 2001–02. It provides an initial benchmark, and the intention is to update it periodically to refect new data are gathered for regions. Most of the BTRE's 33 social capital indicators are derived from collections which will be rerun over the next few years and these sources will be able to be used to construct time-series information on social capital. For example:

• HILDA has been funded through to 2008 (a total of eight waves). The analysis in this report is based on the 2001 data, which is more reliable than the 2002 data, due to a considerably higher response rate. The HILDA survey instruments for 2002, 2003 and 2004 will enable 11 of the BTRE's 12 HILDA-based social capital indicators to be updated for each of these years, while a modified version of the 'integration into the community' indicator could also be developed and monitored over time.⁸⁷ Eight consecutive years of data on key elements of social capital for individuals and regions will be a valuable source of information on the dynamics of social capital, and some additional questions of relevance to social capital have recently been added.⁸⁸

⁸⁷ One of the three survey items which form this indicator (how important is involvement in the community to your life) was only collected in the 2001 HILDA survey.

⁸⁸ Some additional questions were added to HILDA to assess personal efficacy in 2003, while the 2004 survey included questions on religious attendance.

- The ABS intends to run a *General Social Survey* in 2006 which will include a social capital module, and repeat many of the questions asked in the 2002 survey. This module may also provide some new indicators of social capital at a broad regional scale. In addition, the ABS *Survey of Voluntary Work* will be rerun in 2006 as part of the *General Social Survey*.
- The ABS *Census of Population and Housing* is undertaken every 5 years. For the first time, the 2006 Census will include questions on unpaid work (i.e. voluntary work, caring) which will provide valuable new small area information on social capital.
- The ABS updates trade union membership data annually.
- Voter turnout data for the 2004 federal election is available from <vtr.aec.gov.au>.

The BTRE's *Social capital indicators database* provides a valuable contextual basis for understanding social capital in Australia's regions and informing regional development. It can be used to develop a profile of social capital in a particular region or to undertake regional comparisons. Through linkage with other regional information sources, including the BTRE's *Taxable income* (BTRE 2005), *Industry structure* (BTRE 2004b) and *Education, skills and qualifications* (BTRE 2004c) databases, a richer understanding can be gained of relationships between social capital and regional wellbeing.

12.2 AN EXAMPLE: WIDE BAY-BURNETT, QUEENSLAND

The following application to the Wide Bay-Burnett region of Queensland illustrates how the BTRE's *Social capital indicators database* can be used as part of a regional profiling exercise. A clear message from this application is that while the database can be used to identify a region's strengths and weaknesses with respect to social capital, more in-depth analysis is needed to understand the underlying reasons why a particular aspect of social capital is particularly strong or weak within a region.

12.2.1 About the region

The Wide Bay-Burnett region covers an area of 52 382 km² to the north and north-west of Brisbane (DOTARS 2003). As one of the 69 BTRE defined regions, Wide Bay-Burnett covers 21 LGAs⁸⁹ from Miriam Vale in the north to Nanango

⁸⁹ The LGAs included in Wide Bay-Burnett are: Biggenden Shire, Bundaberg City, Burnett Shire, Cooloola Shire, Eidsvold Shire, Gayndah Shire, Hervey Bay City, Isis Shire, Kilkivan Shire, Kingaroy Shire, Kolan Shire, Maryborough City, Miriam Vale Shire, Monto Shire, Mundubbera Shire, Murgon Shire, Nanango Shire, Perry Shire, Tiaro Shire, Wondai Shire and Woocoo Shire. This is the same geographical area as the Wide Bay-Burnett SD.

in the south. The major regional centres are Bundaberg, Hervey Bay, Maryborough and Gympie.

Wide Bay-Burnett is also a cohesive Area Consultative Committee (ACC) region. ACCs are apolitical, not-for-profit, community-based committees funded by the Australian Government with volunteer Committee members. ACCs' core business is the promotion and facilitation of projects under the Regional Partnerships program. Their role also includes facilitating whole-of-government responses to opportunities in their communities. The area covered by the Wide Bay-Burnett ACC is equivalent to the BTRE defined region, except that the Miriam Vale LGA⁹⁰ is excluded from the ACC's scope of operations.

Wide Bay-Burnett has also been targeted as a 'prototype region' by the Australian Government's *Sustainable Regions* programme. This programme assists regional communities to address priority issues they have themselves identified. The boundaries of the Sustainable Region are equivalent to the BTRE defined region's boundaries.

In June 2001 the region had an estimated resident population of around 237 000 persons. From 1991 to 2001, the population increased by 21%, mostly due to 'sea change' migration to the region. This growth is expected to continue, with a population of 288 000 projected for the year 2016 (DOTARS 2003).

The Wide Bay-Burnett region differs notably from the Australian population in terms of its socio-demographic profile – Box 12.1 summarises key social and demographic characteristics of the region's population.

12.2.2 Social capital indicators

In terms of the social capital indicators, Wide Bay-Burnett has been identified as having three weaknesses:

- Frequency of social contact (a score of 53 compared to the national average of 63, on a summary scale of 0 100);
- Only get together socially once a month or less with friends or relatives (31% compared to a national average of 20% of the population); and
- Labour force participation rate of 53% compared to 63% nationally.

⁹⁰ Miriam Vale accounts for less than 2% of the region's population, and so does not significantly affect the results presented.

BOX 12.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS, WIDE BAY-BURNETT, 2001

Relative to the Australian population, the Wide Bay-Burnett region has the following characteristics:

- A high proportion of its population in each of the older age groups (aged 50 and over). There is also a low representation of persons aged 20 to 34 in the region.
- Families with children represent only 55% of families, compared with the national figure of 64%. The proportion of 'couple only families' is relatively high, perhaps due to the large number of retirees in the region.
- Home ownership is relatively high (71%) in the region. These homes are mostly owned outright (48%) rather than being purchased (23%).
- The region has high unemployment, at around 11.1% compared to 7.4% for Australia in 2001. Labour force participation is low, and as an indicator of social capital, is discussed further below.
- The region is relatively rural, with 29% of people living in rural areas compared to a national figure of 10%. Also, while only 3% of the nation lives in settlements of between 200 and 999 people, the figure is 7% for Wide Bay-Burnett
- There is a concentration of people on lower incomes in the region. Real income per taxpayer (RIPT) for 2001 was only about 77% of the national average.
- A high proportion of people in the region receive income support from Centrelink, including pensions, benefits and allowances. The older age profile and unemployment rate are likely to be the two main reasons for this.
- Life expectancy is marginally below the national average for both males and females.
- The Retail Trade, Agriculture (sugar cane, beef cattle, fruit and vegetables, dairy and timber) and Manufacturing industries are the most significant employers in the region.
- Wide Bay-Burnett has a significantly lower than average proportion of people with a Bachelor degree or higher qualification at 6%, compared to the national average of 13%.
- Growth in aggregate real taxable income (ARTI) is slightly lower for the last 10 years in Wide Bay-Burnett than the national figure: 28% compared to 30% for 1990–91 to 2000–01. However, most of that growth occurred during the 1990–91 to 1995–96 period, and growth was relatively slow over the subsequent five-year period.
- The ABS Socio-Economic Indexes for Areas (SEIFA) indicate the region is relatively disadvantaged.

Sources DOTARS (2003); BTRE Education, Skills and Qualifications Database 2004; BTRE Taxable Income Database 2005; and BTRE analysis of data from C-DATA 2001.

Closer examination of the frequency of social contact data shows that both males and females in Wide Bay-Burnett had relatively infrequent social contact. The most informative demographic factor in explaining this result is age. A key factor behind this result is that 25 to 44 year olds in the region tend to have much less frequent social contact than individuals of the same age in Australia as a whole (Figure 12.1).

The high value of the isolation indicator for Wide Bay-Burnett (people get together socially once a month or less with friends or relatives) has implications for the levels of inclusion and support in the region. Figure 12.2 shows that the proportion of people in the least frequent category of social contact (less often that once every three months) is particularly high in Wide Bay-Burnett at 13%, compared to the national average of 5%. Regional residents in this category also

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report relatively low satisfaction with family relationships, low support, high levels of loneliness and a low active membership rate.





Source BTRE analysis of HILDA 2001 unit record data.





Source BTRE analysis of HILDA 2001 unit record data.

Wide Bay-Burnett's low labour force participation rate is partly attributable to the high proportion of retired people in the region. While 15 to 24 year olds in Wide Bay-Burnett are participating to roughly the same extent as their counterparts in the rest of Australia, all other age groups are significantly less involved in the labour force than their national counterparts. This suggests that factors other than age are also contributing to the region's low labour force participation rate. Other potentially relevant factors include:

- Over time, the region's high unemployment rate may have led to unemployed people becoming discouraged jobseekers and exiting the labour force (or the region); and
- The region has a relatively high representation of Disability Support Pensioners (DOTARS 2003) who are outside the labour force.

The cluster analysis found that Wide Bay-Burnett had a higher representation of individuals in clusters 2 and 6 than did Australia. Cluster 2 represents 14% of individuals in the region (compared to 10% nationally), and is characterised by loneliness, limited emotional and financial support, and weak family and community bonds. There is also an above average proportion of 'social capital rich' individuals, with 25% of residents falling into cluster 6, compared to 21% nationally. Cluster 6 is characterised by high levels of support, connectedness and community involvement.

The Wide Bay-Burnett region was ranked 22nd out of the 69 regions on the community involvement summary scale. In terms of the general support summary scale, Wide Bay-Burnett was ranked 54th out of the 69 regions, so that the low level of support was more pronounced that the high level of community involvement.

This application illustrates how the BTRE's *Social capital indicators database* can be used as an exploratory tool for regions to identify any strengths or weaknesses with respect to social capital. One of the Wide Bay-Burnett Sustainable Region's main priorities is to enhance its social infrastructure, including community cohesiveness and individual opportunity. This section identified some challenges to cohesiveness and individual opportunity in the region, such as the existence of a significant group of socially isolated individuals in the region. While the database can be a useful tool for highlighting relevant issues, more in-depth investigation and engagement in the region would be necessary to understand the underlying causes of these behaviours and attitudes, and to identify the best way of addressing social capital weaknesses.

12.3 IN SUMMARY

The *Social capital indicators database* contains the data which underlies the regional analysis in this report and is available from the BTRE website <www.btre.gov.au>. The database provides a valuable contextual basis for understanding social capital in Australia's regions and informing regional development. It can be used to develop a profile of social capital in a particular region or to undertake regional comparisons. Through linkage with other regional information sources, a richer understanding can be gained of relationships between social capital and regional wellbeing.

CHAPTER 13 CONCLUSION

Social capital is a resource that is inherent in relationships and networks, and can potentially be used by individuals and communities to achieve social and economic outcomes. Alongside human capital, environmental capital and produced economic capital, social capital has a role to play in supporting regional development. The aim of this study was to explore the spatial dimensions of social capital within Australia, and the extent to which social capital is related to the economic and social wellbeing of Australia's regions.

In the international context, Australia seems to be relatively well endowed with social capital, experiencing high rates of volunteering and civic involvement. Only the Scandinavian countries consistently rank more highly in international comparisons. However, some elements of social capital do appear to be declining in Australia — such as trust and church attendance — while other elements of social capital are stable or increasing. Australian trends in social capital are broadly similar to those operating in the USA.

Using the ABS Social Capital Framework (ABS 2004a) as the conceptual reference point, BTRE identified a set of 33 social capital indicators for which regional data are available on a nationwide basis. The indicators covered a range of different aspects of social capital, including feelings of safety, volunteering, donations, neighbourhood reciprocity, frequency and mode of social contact, ability to obtain support, and satisfaction with family relationships. These indicators provide a snapshot of social capital in Australia's regions for 2001–02, and the information is now publicly available in the accompanying *Social capital indicators database* <www.btre.gov.au>.

Where a person lives is a significant influence on the social capital resources which are available to individuals. This result continues to hold when the demographic, social and economic characteristics of individuals are controlled for. Urban centre size has a much more widespread influence on the social capital indicators than either State/Territory or remoteness. More specifically, rural areas and small towns display very high levels of 'community involvement' (measured by volunteering, active membership, neighbours helping each other out and integration into the community), while at the other extreme, the major metropolitan centres display relatively low community involvement. For urban centres with populations of between 20 000 and 1 million, community involvement is similar to the national average.

Rural areas stand out as being particularly well placed in terms of community connections and participation, but social contact is relatively infrequent and the literature also suggests that Australia's rural communities may be lacking in bridging ties and acceptance of diversity.

When considered in their entirety, Australia's major cities were found to be lacking in some key elements of social capital, but the major cities are not a homogenous category and there was considerable variation in social capital *within* the major cities. While some metropolitan regions (e.g. Northern Beaches and Central North Sydney) appeared to be well-placed in terms of social capital resources, other metropolitan regions (e.g. Northern Adelaide, Fairfield-Liverpool) displayed multiple weaknesses which cut across several social capital dimensions. The multifaceted nature of social capital meant that it was rarely uniformly high or low in a region, with most regions displaying strengths *and* weaknesses with respect to the social capital indicators.

With few exceptions, metropolitan regions had lower levels of community involvement than non-metropolitan regions. Particularly high levels of community involvement were evident in the regions of southern NSW and nonmetropolitan Victoria. The availability of emotional, general and financial support was distributed more evenly between metropolitan and nonmetropolitan regions.

A regional typology of social capital was developed which classified most of the 69 BTRE defined regions as either the standard metropolitan type (average general support and informal socialising, but *low* community involvement) or the standard non-metropolitan type (average general support and informal socialising, but *high* community involvement). Social capital took a highly distinctive form in several Australian regions, such as Gippsland and East Gippsland in Victoria.

Analysis of the distribution of social capital amongst residents of each region identified several regions which had a concentration of people with high support and high community involvement (e.g. Yorke, Northern & Eyre SA). It also identified regions with a high proportion of people who felt isolated, lacked support and had weak family and community bonds (e.g. South West Metropolitan Perth). It was not unusual for a region to have concentrations of both types of individuals, so that reliance on regional averages may not identify regions where there is a significant concentration of disadvantage in access to social capital resources.

Overall, it was those aspects of social capital relating to community and neighbourhood connections and financial support which varied most across Australia's regions. Other important aspects of social capital – such as satisfaction with family relationships, feelings of loneliness, and the availability of emotional and general support – were not particularly dependent on place of residence.

The existing literature provides reasonably convincing evidence that social capital is associated with positive health, education and life satisfaction outcomes and reduced crime and disadvantage at the regional level, but the direction of any causality has not been clearly established. The literature provides mixed evidence as to whether a regional relationship exists between social capital and economic growth.

Across Australia's regions, there was no significant association between recent economic growth and core elements of social capital, such as community involvement, support or frequency of social contact. At the regional scale, high unemployment rates, poor self-reported health and greater socio-economic disadvantage were associated with a lower average availability of emotional, general and financial support. Furthermore, regions with high community involvement and high satisfaction with family relationships reported aboveaverage life satisfaction.

These regional relationships between social capital and wellbeing reflect significant associations between the social capital indicators and wellbeing outcomes for individuals. While some studies have concluded that the social capital of the place in which a person lives has 'spillover' benefits for the wellbeing of individuals, above and beyond that person's own social capital resources, no such effects were identified in the Australian context. The evidence regarding social capital effects tends to be much more convincing at the scale of the individual, where the underlying processes and mechanisms of social capital effects can best be observed.

This study provides a detailed snapshot of the spatial dimensions of social capital in Australia, which can serve as a benchmark for future research and assessment of trends. However, it is subject to a number of limitations, relating to limited regional disaggregation, a lack of time-series information and less than comprehensive coverage of the elements of social capital. Data availability is improving, and ABS' collection of volunteering and carers data in the 2006 census will provide small area information relevant to social capital. Future waves of the longitudinal HILDA survey will provide a means of improving understanding of the dynamics of social capital for individuals and regions. In addition, a soon-to-be completed DOTARS study of *'Community diversity and economic development in regional Australia'* will provide complementary qualitative information on the role of network diversity in Australia's regional communities.

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The World Bank has noted that the social capital literature has 'been more successful at documenting the beneficial impact of social capital than at deriving policy prescriptions and providing guidelines about how to invest in it' (Grootaert & van Bastelaer 2001). While this study does not aim to provide direct input into policy development, the BTRE's new *Social capital indicators database* will make it easier for social capital considerations to be incorporated into regional planning and policy analysis.

BTRE would support the Productivity Commission's conclusions that policy intervention to build social capital requires a more in-depth understanding of the sources and processes underlying social capital creation (PC 2003). Research on the following topics would provide a stronger evidence base for policy makers:

- Using longitudinal data to explain changes in different aspects of social capital over time for individuals, and improve understanding of the sources of social capital and the processes by which they operate;
- Using regional time-series data to improve understanding of the dynamics of social capital in Australia's regions, and the factors driving changes in regional social capital; and
- In-depth research into how a region's stock of social capital influences how it responds to change, and the eventual outcomes in terms of social and economic wellbeing.

Information on the effectiveness of different types of interventions from smallscale policy experimentation and evaluation, would also provide a valuable evidence base for policy makers.

While the concept of social capital is unlikely to transform our understanding of the key drivers of economic development or generate new forms of intervention (Francis 2002), it does give prominence to the role that social networks and norms play in the development process. Although the direction of causality remains unclear, the evidence presented in this study supports the conclusion that regions with rich stocks of social capital are generally healthier, happier, more educated and less disadvantaged.

APPENDIX I BTRE'S SET OF REGIONAL SOCIAL CAPITAL INDICATORS

The indicators are organised according to the ABS Framework for Social Capital (ABS 2004a), in line with the presentation in Table 5.1. This appendix describes each of the indicators, including the underlying survey question, strengths and limitations, and the conceptual link to social capital.

AI.1 NETWORK QUALITIES

AI.1.1 Norms

Trust and trustworthiness

Indicator: Feelings of safety at home alone after dark Source: ABS General Social Survey, 2002 Item: How safe or unsafe do you feel at home alone by yourself after dark? {Very unsafe/Unsafe/Neither safe nor unsafe/Safe/Very safe/ Never at home alone after dark} Scane: All persons aged 18 - aveluding people in epersolv persolv persolv persolv

Scope: All persons aged 18+, excluding people in sparsely populated areas.

Scale: Remoteness classes; States and Territories.

The indicator was constructed from the survey data using a [0,100] scale with equal intervals,⁹¹ so that if everyone in a region felt 'very unsafe' the score would be zero, and the score would be 100 if everyone felt 'very safe'. Those who were never at home alone after dark were excluded. The national mean of the indicator was 79 – just above an average response of 'safe'. This was seen as a useful way of summarising the responses from this question, without requiring more than a single indicator.

The ABS Framework identifies 'feelings of safety at home alone after dark' as being an indicator of trust. Fear for personal safety can restrict a person's social participation and reduce trust within a community (ABS 2004d). While the

⁹¹ That is, 'very unsafe' received a score of 0, 'unsafe' a score of 25, 'neither safe nor unsafe' a score of 50, 'safe' a score of 75 and 'very safe' a score of 100.

indicator relates to a specific context, and is likely to be associated with the media's portrayal of crime, it is expected to provide some insight into generalised trust. Given the centrality of trust to the concept of social capital, ideally this indicator would be complemented by more direct measures of informal and generalised trust, and of trustworthiness. Due to an absence of relevant regional data, this was not possible in the present study.

Reciprocity

Indicator: *Donation rate*

Source: ABS Survey of Voluntary Work, 2000

- Item: Personal donations of money to organisations in any form over last 12 months (excludes purchases of goods and raffle tickets and donations made on a business, rather than individual, basis)
- Scope: All usual residents of private dwellings aged 18+, excluding people in sparsely populated and indigenous areas.
- Scale: Capital city and balance of state; States and Territories.

Using data provided by ABS, the indicator was calculated from the number of people who made a donation expressed as a percentage of the total regional population aged 18 and over. Donations can be seen as altruistic behaviour since a donation is a voluntary transfer of funds for which the donor has not received a (tangible) benefit in return. However, there is potentially an intangible return through the feeling that comes from making a contribution. ABS (2004a) interprets reciprocity as 'encompassing the full spectrum of giving and receiving behaviour ranging from the quid pro quo of favours and other direct exchanges, to behaviours considered to be altruistic . . . such as making charitable donations.' The ABS identifies this as an indicator of both the 'community support' and 'reciprocity' elements of their framework.

Indicator: *Volunteering rate*

Source: HILDA, 2001

- Item: How many hours would you spend on each of the following activities in a typical week?
 - Volunteer or charity work (for example, canteen work at the local school, unpaid work for a community club or organisation)
- Scope: All persons aged 15+, excluding people in sparsely populated areas.
- Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

The number of volunteers was calculated as the number of persons who provided a response of greater than zero to item (e), and the volunteering rate was calculated by expressing the number of volunteers as a share of all persons aged 15 and over who responded to the question. Undertaking voluntary work

involves contributing time to the community, and so provides an indicator of reciprocity. It involves providing assistance to other individuals, groups and the wider community, and so is also relevant to the community support element of the ABS framework.

As a check on its validity, the HILDA volunteering indicator for 2001 was compared to estimates from the ABS *Survey of Voluntary Work* (SVW) 2000 at the capital city/balance of state level, and to the 2002 GSS estimates of voluntary work at the state remoteness class level. The HILDA measure relates to voluntary work in a typical week, while the other two measures relate to whether any voluntary work was undertaken in the last 12 months. Hence, the HILDA volunteering rate would be expected to generally be lower than rates derived from the other two sources — this is borne out by the national estimate of 22% from the 2001 HILDA, compared to 34% from the GSS in 2002 and 32% from the SVW in 2000. A further difference is that HILDA's scope relates to persons aged 15 and over, rather than those aged 18 and over.

Given the focus of this study on spatial patterns, an important test of the validity of the HILDA measure is whether (relative to the other two data sources) it identified broadly the same set of regions as having relatively high, low or average volunteering rates. Despite the significant definitional differences, the GSS and HILDA volunteering measures have an 85% correlation across the 18 state remoteness classes (Figure I.1), while the SVW and HILDA measures have a correlation of 76% across the 14 capital city/balance of state regions. The HILDA measure was preferred because of its greater capacity to provide insight into the spatial dimensions of voluntary work, and because the available evidence suggests it was capturing meaningful differences in volunteering rates at the regional scale.

By focusing on volunteering in a typical week, the HILDA indicator is likely to pick up the core volunteers in a region, but not occasional volunteers. The indicator does not provide information on the number of organisations volunteered for or time spent volunteering. While hours volunteered in a typical week was available from HILDA, it was not sufficiently reliable at a regional scale.

The HILDA question includes a very limited set of prompts. In comparison, the prompts in the ABS' *General Social Survey* relate to voluntary work undertaken for a wide range of organisations including professional, political, cultural and environmental organisations. As a result, it is possible that the HILDA indicator could have a somewhat skewed or restricted coverage of voluntary work.

The volunteering indicator has higher estimated RSEs at the regional scale than other HILDA indicators, typically between 10% and 20%. To ensure that small

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samples and high RSEs do not cause incorrect conclusions to be drawn, significance testing is used when comparing regional estimates.





Source BTRE analysis of HILDA 2001 data and ABS General Social Survey 2002 data.

Indicator: How commonly do neighbours help each other out in your neighbourhood?

Source: HILDA, 2001

Item:

m: How common are the following things in your neighbourhood?

 Neighbours helping each other out {Never happens/Very rare/Not common/Fairly common/Very common/Don't know}

Scope: All persons aged 15+, excluding people in sparsely populated areas.

Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

The indicator was constructed from the survey data using a [0,100] scale with equal intervals,⁹² so that if that if everyone in a region responded 'never happens' the score would be zero, and the score would be 100 if everyone responded 'very common'. 'Don't know' responses were excluded. This was seen as a useful way of summarising the responses from the question into a single indicator. The national mean of the indicator was 63 – halfway between 'not common' and 'fairly common'.

⁹² That is, 'never happens' received a score of 0, 'very rare' a score of 25, 'not common' a score of 50, 'fairly common' a score of 75 and 'very common' a score of 100.

This indicator provides a measure of reciprocity in the context of the local neighbourhood, which is of particular interest in this study due to the focus on the links between social capital and place. The HILDA indicator is similar to the neighbourhood reciprocity indicator used by Stone & Hughes (2002) - 'people around here are willing to help each other out'.

AI.1.2 **Common purpose**

Social participation

Indicator:	Participation rate in church or religious activities
Source:	ABS General Social Survey, 2002
Item:	In the last three months, have you participated in any of the
	following activities?
	Church or religious activities
Scope:	All persons aged 18+, excluding people in sparsely populated areas.
Scale:	Remoteness classes: States and Territories.

The indicator was calculated as the number of people who had participated in church or religious activities in the last 3 months expressed as a percentage of the total regional population aged 18 and over. Participation in religious and church activities is one means through which people develop social networks and bind into communities. Religion may also influence behaviours such as participation in voluntary work. Clearly this indicator represents only one specific form of social participation, and in itself cannot be used to draw broader inferences about social participation.

Nationally, 23% of adults participated in church or religious activities, well below the religious affiliation rate of 73% (from the census). While information on religious affiliation is available at a small area level from the census, it is not significantly related to religious participation at a regional scale. Since it is the 'participation' aspect which is of most relevance to social capital, the GSS indicator was selected.

Indicator: Participation rate in sport or recreational physical activity

Source:	ABS General Social Survey, 2002
Item:	In the last 12 months did you participate in any physical activities for
	recreation, exercise or sport (as participant, coach, umpire, official or
	administrator)? {Yes/No}
Scope:	All persons aged 18+, excluding people in sparsely populated areas.

Remoteness classes; States and Territories. Scale:

The indicator was calculated as the number of people who had participated in sport or recreational physical activity in the last year expressed as a percentage of the total regional population aged 18 and over. Participating in sport is a common means through which people develop social networks and contribute to the community in a voluntary capacity. This is a very common form of social participation, with 64% of Australian adults participating in sport or recreational physical activity in the 12 month period. However, it still represents only one specific form of social participation, and in itself cannot be used to draw broader inferences about social participation.

The selected indicator provides a very broad measure of sport and recreation participation, which encompasses organised and non-organised activity, as well as participation in a playing or non-playing role. The 2002 GSS also collected information on participation in organised sport and physical activity, participation as a player and as a non-player. Regional estimates for all participation, organised participation and player participation were very highly correlated across the state remoteness classes (correlation coefficients>0.85). Since this is only one type of social participation, only a single indicator was needed and the broadest measure of sporting participation was selected.

Indicator: *Active membership rate*

Source:	HILDA, 2001
Item:	Are you currently an active member of a sporting, hobby or
	community-based club or association? {Yes/No}
Scope:	All persons aged 15+, excluding people in sparsely populated areas.
Scale:	BTRE defined regions; Remoteness classes; Size of urban centre
	classes; Capital city and balance of state; States and Territories.

The indicator was calculated as the number of people who stated they were an active member of a sporting, hobby or community-based club or association expressed as a percentage of all persons aged 15 and over who responded to the question. Active membership of sporting, hobby or community-based groups is an important means by which people come together for a common purpose, such as social participation or to provide assistance within the community. Involvement in voluntary groups is commonly used as an indicator of social capital (e.g. Putnam 2000, Hall 1999).

The source question encompasses a range of group types, and so the indicator is relevant to the community support and civic participation elements of social capital, as well as to social participation. Nationally, 39% of persons aged 15 and over were active members, which could involve anything from simply attending one or two group activities a year, to extensive involvement in and co-ordination of group activities. The indicator provides a summary measure of group involvement within a region, but cannot capture regional differences in frequency of involvement, number of groups involved in or time spent.

The active membership indicator has higher estimated RSEs at the regional scale than some of the other HILDA indicators, typically between 10% and 15%. To ensure that these higher RSEs do not cause incorrect conclusions to be drawn, significance testing is used when comparing regional estimates.

Civic participation

Indicator: *Voter turnout at federal election*

Source:	Australian Electoral Commission
	<www.aec.gov.au _content="" index.htm="" voting="" what=""></www.aec.gov.au>
Item:	House of Representatives voter turnout percentage at 10 November
	2001 federal election.
Scope:	All enrolled voters.
Scale:	Federal electorates; Capital city and balance of state; States and
	Territories.

The ABS Framework defines civic participation as "the process by which citizens' concerns, needs and values are incorporated into governmental decision making". Voting in elections and referenda is an important form of civic participation. However, due to the compulsory nature of voting in federal, state and some local government elections, indicators of voter turnout may not provide much insight into civic participation in the Australian context. Since no other nationally-consistent, regional indicators were identified which specifically related to civic participation, the voter turnout indicator was retained. Nationally, voter turnout was 94.9% in 2001, and has remained relatively stable since 1928 (when it was 93.6%).

Indicator: Trade union membership rate

Source: *Employee Earnings, Benefits and Trade Union Membership* supplement to ABS *Labour Force Survey*, August 2003 and 1993

- Item: Proportion of employees who were members of a trade union in their main job.
- Scope: Employed persons aged 15+, excluding people in sparsely populated areas.
- Scale: ABS Labour Force Survey regions (2003 only); Capital city and balance of state; States and Territories.

The indicator was calculated as the number of employees who were members of a trade union in their main job expressed as a percentage of the total number of employees in the region. The ABS Framework identifies the union membership rate as a relevant indicator of both 'civic participation' and 'economic participation'. Membership of unions arises from labour force participation, and can provide support and enable sharing of information. Focus on Regions No. 4: Social Capital

Trade union membership can also serve as a means of participating in democracy and governance.

Nationally, 23% of employees were trade union members in 2003. There has been a steady decline in trade union membership in recent decades, which can be partly attributed to changes in labour market composition (e.g. growth of service industries, increases in part time and casual employment) and partly attributed to substantial shifts in the industrial relations environment (ABS 2004e). The declining importance of trade union membership, and its strong dependence on labour market composition, may limit its usefulness as a regional indicator of civic or economic participation.

Union membership data were also available from the HILDA survey. However, the HILDA data had high RSEs and did not align well with the LFS data at the capital city-balance of state level. Consequently, the LFS indicator of union membership was selected.

Indicator: *Active membership rate*

See description under 'Social participation'

Community support

Indicator: *Proportion of carers in population*

ABS Survey of Disability, Ageing and Carers, 2003
Persons who provided ongoing informal assistance, in terms of help
or supervision, to the elderly or persons with disabilities/long-term
conditions (includes both primary carers and other carers).
Persons of all ages living in households or cared accommodation,
excluding people in sparsely populated areas.
States and Territories (except NT, which was not considered
sufficiently reliable to be published); Remoteness classes.

The indicator was calculated as the number of persons who identified as carers expressed as a percentage of the total regional population. The provision of care to people who have a long-term illness or disability is an important form of community support, which reinforces trust and contributes to the cohesion of families and the broader community. Caring responsibilities can also place limitations on social and economic participation.

Approximately 13% of Australians identified as carers in 2003, and about onefifth of those were primary carers (2.4%). HILDA also collected information on caring responsibilities, but the data were not sufficiently reliable at the regional scale, and did not align well with estimates from the ABS *Survey of Disability*, *Ageing and Carers*. Caring data from the 1998 *Survey of Disability*, *Ageing and Carers* is comparable to 2003 data at the State/Territory scale. Indicator: Donation rate See description under 'Reciprocity'

Indicator: Volunteering rate See description under 'Reciprocity'

Indicator: Active membership rate See description under 'Social participation'

Family

Indicator: Satisfaction with family relationships

Source: HILDA, 2001

Item: Please indicate how satisfied or dissatisfied you are with each of the following relationships. How satisfied are you with:

- your relationship with your partner
- your relationship with your children
- your partner's relationship with your children
- your relationship with your stepchildren
- how well the children in the household get along with one another
- your relationship with your parents
- your relationship with your step-parents
- your relationship with your (most recent) former spouse or partner.

{For each relationship type: Scale of 0 (completely dissatisfied) to 10 (completely satisfied), or Does not apply}

Scope: All persons aged 15+, excluding people in sparsely populated areas.

Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

A 'satisfaction with family relationships' score was calculated for each individual as the average score across all relationship types which applied to the individual, and multiplied by ten so it was expressed on a [0,100] scale like the other HILDA variables. Therefore, a person would receive a score of 100 if they were completely satisfied with their relationship with their partner, but did not respond to any of the other relationship types. A person would also receive a score of 100 if they were completely satisfied with all eight types of relationships. The regional indicator was derived as the weighted average of scores across all individuals who lived in the region.

The indicator construction equally weights each type of relationship to which the individual responds. In practice, some relationship types are likely to be much more important than others. However, the relative importance of particular relationship types will differ across individuals and life stages, and in the absence of alternative weights, the equal weighting approach was considered reasonable. The alternative approach of separate indicators for each type of relationship was rejected, since the objective was to keep the indicator set to a manageable size.

Nationally, the indicator averages 81, reflecting a high overall degree of satisfaction with family relationships. On average, people responded to 3.3 relationship types, with 'relationship with your partner', 'relationship with your children' and 'relationship with your parents' having the highest response rates (between 60% and 70% each). Ninety-one percent of individuals responded to at least one of the eight relationship types. Overall, people were most satisfied with their relationships with their own children, and least satisfied with their relationships with their spouse or partner, their step-parents and their step-children.

Of the BTRE's 33 regional social capital indicators, this is the only indicator which does not directly relate to an element of the ABS Framework. The ABS Framework proposes an indicator of 'satisfaction with friendships', but no equivalent indicator for family relationships. Family is generally considered fundamental to social capital, through its role in creating norms and social ties, and serving as a primary source of social support. Consequently, BTRE decided to include the 'satisfaction with family relationships' indicator in its regional analysis, and explore its relationship with other aspects of social capital.

Economic participation

Indicator: *Labour force participation rate*

Source:	ABS Census of Population and Housing, 2001
Item:	Proportion of the population aged 15 and over who are in the labour
	force (either employed or unemployed).
Scope:	All enumerated persons aged 15 and over.
Scale:	Statistical Local Areas, BTRE defined regions; Remoteness classes;
	Size of urban centre classes; Capital city and balance of state; States
	and Territories.

The indicator was calculated as the number of persons in the labour force expressed as a share of the number of persons aged 15 and over whose labour force status was known. In the census, about 1.7% of persons aged 15 and over had an unknown labour force status, and were excluded from the calculation. The labour force participation rate could potentially have been derived from several other data sources, such as HILDA or the ABS *Labour Force Survey*. The census-based indicator was selected as it was available and reliable at a small area level.

Labour force participation is a key indicator of the extent of economic participation in regions, with 63% of adult Australians participating in 2001. From the perspective of social capital, what is of relevance is the social networks which people establish through their participation in the workforce, and the support, knowledge and other resources which can be accessed through these networks. In contrast, long-term unemployment can lead to a decline in social networks, and to social exclusion. Therefore, regional labour force participation rates will provide a more meaningful guide to economic participation when complemented by regional information on employment and unemployment rates.

Indicator: *Trade union membership rate* See description under 'Civic participation'

Barriers to participation

Indicator: Health barriers to social participation

- Source: HILDA, 2001
- Item: During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives etc)? {All of the time/Most of the time/Some of the time/A little of the time/None of the time}
- Scope: All persons aged 15+, excluding people in sparsely populated areas.
- Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

The indicator was constructed from the survey data using a [0,100] scale with equal intervals,⁹³ so that if that if everyone in a region responded 'none of the time' the score would be zero, and the score would be 100 if everyone responded 'all of the time'. This was seen as a useful way of summarising the responses from the question into a single indicator. The national mean of the indicator was 19 — meaning that, on average, health barriers interfered with social activities less frequently than 'a little of the time'.

Some people are limited in the extent to which they can participate in social activities. Disabilities and poor physical or mental health are potentially important barriers to social participation. While the selected indicator specifically relates to health barriers to *social* participation, it may also provide some guide to the extent to which poor health impacts upon other forms of participation in the community and economy.

⁹³ That is, 'none of the time' received a score of 0, 'a little of the time' a score of 25, 'some of the time' a score of 50, 'most of the time' a score of 75 and 'all of the time' a score of 100.

Focus on Regions No. 4: Social Capital

Indicator: Language barriers to participation

Source:	ABS Census of Population and Housing, 2001
Item:	For people who speak a language other than English at home:
	How well does the person speak English? {Very well/Well/Not
	well/Not at all}
Scope:	All enumerated persons.
Scale:	Statistical Local Areas, BTRE defined regions; Remoteness classes;
	Size of urban centre classes; Capital city and balance of state; States
	and Territories.

The indicator was calculated as the total number of persons who spoke English not well or not at all, expressed as a share of the regional population. Poor English may limit the range of people an individual can communicate with, and the extent to which an individual can fully participate in the community. The language barriers indicator is potentially relevant to social, civic and economic participation and provision of community support. Nationally, 2.2% of people spoke English not well or not at all in 2001.

Indicator: Transport barriers to participation

Source: ABS General Social Survey, 2002

- Item: I would now like you to consider all the places you need to go, by car or other transport. Which statement best describes your overall transport situation?
 - Can easily get to the places needed
 - Sometimes have difficulty getting to the places needed
 - Often have difficulty getting to the places needed
 - Can't get to the places needed
 - Never go out/housebound

Scope: All persons aged 18+, excluding people in sparsely populated areas.Scale: Remoteness classes; States and Territories.

The indicator was constructed from the survey data using a [0,100] scale,⁹⁴ so that if everyone in a region responded 'can easily get to the places needed' the score would be zero, and the score would be 100 if everyone responded 'can't get to the places needed'. Those who responded 'never go out/housebound' represented just 0.1% of the population and were excluded from the calculation, as it was impossible to tell whether transport barriers were a relevant factor.

A lack of private transport or insufficient public transport can potentially serve as a barrier to social participation or to other forms of participation, and leave a person feeling isolated. The national mean of the indicator was 7 -meaning

⁹⁴ 'Can easily get to the places needed' received a score of 0, 'Sometimes have difficulty getting to the places needed' a score of 33.3, 'Often have difficulty getting to the places needed' a score of 66.7, while 'Can't get to the places needed' received a score of 100.

that the great majority of the population could easily get to the places they needed to go and did not experience transport barriers.

Indicator: *Proportion of carers in population* See description under 'Community support'

AI.2 NETWORK STRUCTURE

AI.2.1 Network size

Indicator: *Anticipated source of support in a crisis*

Source: ABS General Social Survey, 2002

Item: If you needed to, could you ask someone (who does not live with you) for any of these types of support in a time of crisis? {Yes/No} Types of support: Advice on what to do, emotional support, Help out when you have a serious illness or injury, Help in maintaining family or work responsibilities, Provide emergency money, accommodation or food.

Scope: All persons aged 18+, excluding people in sparsely populated areas.

Scale: Remoteness classes; States and Territories.

The indicator was calculated as the number of persons who stated that they could ask someone who did not live with them for support in a time of crisis, expressed as a share of the regional population aged 18 and over. Nationally, 94% of people had an anticipated source of support in a crisis.

In the ABS Framework this indicator is classified as a measure of network size, but the indicator is also relevant to the sharing support element of the framework. The number and variety of ties that a person has influences the range and quality of resources that person has access to, including whether or not a person can obtain support in a time of crisis. The selected indicator provides some insight into network size by identifying if a person has at least one relationship (outside the household) through which they could obtain support in a crisis, but provides no information on the number of potential sources of such support. Therefore, it can be used to help target regions where there are significant numbers of people with extremely small networks, but not to identify whether average network size differs across regions.

Indicator: Anticipated support from family in a crisis

- Source: ABS General Social Survey, 2002
- Item: Could ask family member (who does not live with you) for any of these types of support in a crisis.
 Types of support: Advice on what to do, emotional support, Help out when you have a serious illness or injury, Help in maintaining family or work responsibilities, Provide emergency money, accommodation or food.
 Scope: All persons aged 18+, excluding people in sparsely populated areas.
- Scale: Remoteness classes; States and Territories.

The indicator was calculated as the number of persons who stated that they could ask a family member who did not live with them for support in a crisis, expressed as a share of the regional population aged 18 and over. Nationally, 82% of people anticipated they could ask a family member for support in a crisis. The selected indicator provides some insight into the size of a person's familial network by identifying whether the person has at least one family member (outside the household) from which they could obtain support in a crisis, but provides no information on the number of family members from which they could obtain such support.

Indicator: Anticipated support from friend in a crisis

- Source: ABS General Social Survey, 2002
- Item: Could ask a friend (who does not live with you) for any of these types of support in a crisis.

Types of support: Advice on what to do, emotional support, Help out when you have a serious illness or injury, Help in maintaining family or work responsibilities, Provide emergency money, accommodation or food.

Scope: All persons aged 18+, excluding people in sparsely populated areas.

Scale: Remoteness classes; States and Territories.

The indicator was calculated as the number of persons who stated that they could ask a friend for support in a crisis, expressed as a share of the regional population aged 18 and over. Nationally, 66% of people anticipated they could ask a friend for support in a crisis. The selected indicator provides some insight into the size of a person's friendship network by identifying whether the person has at least one friend from which they could obtain support in a crisis, but provides no information on the number of friends from which they could obtain support.

Indicator: Anticipated support from neighbour in a crisis

Source: ABS General Social Survey, 2002

- Item: Could ask a neighbour for any of these types of support in a crisis. Types of support: Advice on what to do, emotional support, Help out when you have a serious illness or injury, Help in maintaining family or work responsibilities, Provide emergency money, accommodation or food.
- Scope: All persons aged 18+, excluding people in sparsely populated areas.Scale: Remoteness classes; States and Territories.

The indicator was calculated as the number of persons who stated that they could ask a neighbour for support in a crisis, expressed as a share of the regional population aged 18 and over. The selected indicator provides some insight into the size of a person's neighbourhood network by identifying whether the person has at least one neighbour from which they could obtain support in a crisis, but provides no information on the number of neighbours from which they could obtain such support.

Nationally, 34% of people anticipated they could ask a neighbour for support in a crisis. While neighbours were a much less common source of support than friends or family members, this indicator was retained in the analysis due to the study's focus on place-based aspects of social capital.

AI.2.2 Network frequency/intensity and communication mode

Indicator: *Frequency of social contact*

Source: HILDA, 2001

Item: In general, about how often do you get together socially with friends or relatives not living with you? {Every day/Several times a week/About once a week/Two or three times a month/About once a month/Once or twice every 3 months/Less often than once every three months}

Scope: All persons aged 15+, excluding people in sparsely populated areas.

Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

The indicator was constructed from the survey data using a [0,100] scale with equal intervals,⁹⁵ so that if that if everyone in a region responded 'less often than once every three months' the score would be zero, and the score would be 100 if everyone responded 'every day'. This was seen as a useful way of

⁹⁵ 'Less often than once every three months' received a score of 0, 'once or twice every three months' a score of 16.7, 'about once a month' a score of 33.3, 'two or three times a month' a score of 50, 'about once a week' a score of 66.7, 'two or three times a week' a score of 83.3 and 'every day' a score of 100.
summarising the responses from the question into a single frequency indicator. The national mean of the indicator was 61 - meaning that social contact was a little less frequent than once a week, on average.

ABS (2004a) notes that people have different predispositions to sociability, and the optimal balance between social interaction and solitude varies across individuals. The frequency of social contact can have an important influence on the quality of relationships and the development of cooperation, trust and social support. The HILDA frequency indicator specifically relates to getting together for social purposes, and so excludes remote forms of contact (such as phone or e-mail), while some respondents may also omit more routine contact with friends or relatives from their responses. The ABS' GSS provides an alternative indicator of the overall frequency of social contact, which includes remote contact, but provides а very coarse breakdown of frequency (weekly/monthly/quarterly) and is less spatially disaggregated.

Indicator: Face to face contact with family or friends in last week

Source:	ABS General Social Survey, 2002
Item:	In the last week, have you seen friends of family who do not live with
	you?
	{Yes/No}
Scope:	All persons aged 18+, excluding people in sparsely populated areas.
Scale:	Remoteness classes: States and Territories.

The indicator was calculated as the number of persons who stated that in the last week they had seen family or friends who do not live with them, expressed as a share of the regional population aged 18 and over. Nationally, 84% of people had face to face contact in the last week with friends or family who do not live with them.

Onyx (2001) highlights the importance of face to face contact and notes that people need 'real, human, personal interaction for social capital to develop'. While the selected indicator also provides some information on frequency, it has specifically been included as an indicator of communication *mode*, to be used in conjunction with the GSS indicator on telephone, mail or e-mail contact. Unlike the HILDA social frequency indicator, it does not relate to contact for specifically social purposes.

Indicator: Telephone, mail or e-mail contact with family or friends in last week

Source:	ABS General Social Survey, 2002					
Item:	In the last week, have you had telephone, mail, e-mail or other					
	contact with friends or family who do not live with you? {Yes/No}					
Scope:	All persons aged 18+, excluding people in sparsely populated areas.					
Scale:	Remoteness classes; States and Territories.					

The indicator was calculated as the number of persons who stated that in the last week they had telephone, mail, e-mail or other contact with family or friends who do not live with them, expressed as a share of the regional population aged 18 and over. The intention of the question was to also pick up other forms of communication, such as SMS text messaging. Nationally, 91% of people had telephone, mail or e-mail contact in the last week with friends or family who do not live with them.

The selected indicator provides some information on frequency, but has specifically been included as an indicator of communication *mode*, to be used in conjunction with the GSS indicator of face to face contact. Quantitatively, the most important of the three identified modes for communicating with family and friends is telephone contact, which can be very useful for exchanging information and maintaining relationships at a distance.

Indicator: Usage of e-mail or chat sites in last 12 months

Source:	ABS General Social Survey, 2002
Item:	In the last 12 months, did you use e-mail or access chat sites via the
	Internet? {Yes/No}
Scope:	All persons aged 18+, excluding people in sparsely populated areas.
Scale:	Remoteness classes; States and Territories.

The indicator was calculated as the number of persons who stated that in the last 12 months they had used e-mail or chat sites, expressed as a share of the regional population aged 18 and over. Nationally, 47% of people had used e-mail or chat sites in the last 12 months. Unfortunately, the indicator cannot be directly compared to the GSS face to face contact and telephone, mail and e-mail contact indicators which relate to a much shorter (one week) period.

This separate indicator of communication via the Internet has been included in the analysis as it is a mode of communication which is becoming an increasingly common means of keeping in touch, and disseminating and exchanging information. While communication via the Internet is potentially very useful to those living in remote locations, access to and usage of the Internet varies considerably across regions.

The ABS *Census of Population and Housing* contains an indicator of internet usage which is available at a small area level. The GSS indicator was preferred to the census indicator because it specifically relates to usage of the Internet for communication purposes (excluding other common uses such as browsing and research) and so provides a conceptually stronger indicator of communication mode. The two indicators were very strongly correlated across the state remoteness classes (correlation coefficient=0.85), suggesting that census data on internet usage may be a useful small area proxy for this element of social capital.

AI.2.3 Transience/mobility

Indicator: Proportion who live in same SLA as they did 5 years ago

Source:	ABS Census of Population and Housing, 2001
Item:	Proportion of the population who continued to live in the same SLA
	as they did 5 years ago
Scope:	All persons enumerated at home on census night.
Scale:	Statistical Local Areas, BTRE defined regions; Remoteness classes;
	Size of urban centre classes; Capital city and balance of state; States
	and Territories.

The indicator was calculated as the number of persons who continued to live in the same SLA that they lived in 5 years ago, divided by the total number of persons in the SLA who were enumerated at home on census night and provided a usable Australian address for 5 years ago.⁹⁶ The national value of the indicator was 63%, meaning that 63% of the in-scope population lived in the same SLA as they did 5 years ago, while 37% moved SLA. The 63% figure would include some people who had moved SLA during the 5 year period, but had subsequently returned to the initial SLA.

The indicator is intended to provide a guide to the extent to which a region's population has consisted of the same set of people over time (i.e. it is an indicator of residential stability). Moving from one locality to another may sever some network ties, particularly if the move involves considerable distance, and it can take considerable time to establish networks in the new location. People who have lived in a community for a long period are more likely to have developed relationships and be actively involved in the community (Onyx & Bullen 1997, Swinburne Institute for Social Research 2002).

The following indicators can also be derived from census data:

- proportion who live in same SLA as they did 1 year ago;
- proportion who live at same address as they did 1 year ago; and
- proportion who live at same address as they did 5 years ago.

When selecting an indicator, the 5 year timeframe was preferred over the 1 year timeframe since the establishment of new networks and integration into a community would typically take longer than a year.

About one third of all people who changed address over the five year period moved within the same SLA. The choice of an indicator which excludes moves within an SLA represents an attempt to exclude short distance moves (e.g. moves within the same town), since the majority of relationships and

⁹⁶ Persons whose were not born or were overseas at the time of the last census, persons whose moving status was unknown, and persons for whom it was unclear whether they had moved within or outside the SLA were excluded from the calculation.

community involvements could generally be maintained in the face of such a move. Of course, information on distance of move would enable this distinction to be made more precisely.

The 5 year census indicators of 'same address' and 'same SLA' were very highly correlated across regions (correlation coefficient = 0.80 for BTRE defined regions and 0.85 for SLAs). The 'same SLA' measure was more closely linked to measures of community integration and social support than the 'same address' indicator, and so seemed to be more relevant to the investigation of social capital. Since the preference was to retain only one indicator for each element of the ABS framework, the 'same address' indicator was dropped from the analysis.

A number of indicators relating to residential mobility/stability can be derived from HILDA data. While these indicators were highly correlated with the census indicators across regions, the census indicator was preferred due to its reliability and greater capacity for spatial disaggregation.

AI.3 NETWORK TRANSACTIONS

AI.3.1 Sharing support

Physical/financial assistance, emotional support and encouragement

Indicator: *Could ask someone for small favours*

Source: ABS General Social Survey, 2002

- Item: If you needed to, could you ask someone (who does not live with you) for help with these types of things?
 - Look after pets or water garden while away from home
 - Collect mail or check your house while away from home
 - Mind a child for a brief period
 - Help with moving or lifting objects
 - Help out when you are sick or injured (e.g. sprained ankle or flu)
 - Borrow equipment

{Yes/No}

Scope: All persons aged 18+, excluding people in sparsely populated areas.

Scale: Remoteness classes; States and Territories.

The indicator was calculated as the number of persons who stated they could ask someone for help with small favours expressed as a share of the regional population aged 18 and over. Nationally, 93% of people could ask someone for small favours.

ABS (2004a) defines physical and financial support as 'the informal sharing of support between individuals and groups in an ad hoc, occasional or periodic manner and including forms of support such as lending money or equipment, providing transport, assisting with household maintenance tasks, or looking after someone's house or pets while they are away.' Physical and financial support help individuals cope with stress and difficult events in their lives. The selected indicator relates to receipt (rather than provision) of support. The GSS 'anticipated source of support in a crisis' indicator was only moderately correlated with the 'could ask someone for small favours' indicator across the state remoteness classes, suggesting they are picking up different aspects of social support, and should both be retained.

Indicator: Emotional and general support received from others

Source: HILDA, 2001

Item: The following statements have been used by many people to describe how much support they get from other people. How much do you agree or disagree with each?

- There is someone who can always cheer me up when I'm down
- When something's on my mind, just talking with the people I know can make me feel better
- When I need someone to help me out, I can usually find someone

{For each statement: Scale of 1 (strongly disagree) to 7 (strongly agree)}

Scope: All persons aged 15+, excluding people in sparsely populated areas.

Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

For each individual, an average score was calculated across the three items, based on a [0,100] scale with equal intervals.⁹⁷ The regional indicator was then calculated as the average score across all individuals in the region who responded to at least one of the three statements. If everyone in a region responded 'strongly disagree' to all three statements the score would be zero, and the score would be 100 if everyone responded 'strongly agree' to all three statements. The national average value of the indicator was 74 – meaning there was reasonably strong agreement with the three statements (the 'cheer me up' statement received less agreement than the others).

Emotional support includes listening to problems, providing advice and assistance coping with emotions. HILDA contains 10 statements relating to support, but for the purposes of this study a relatively small set of indicators

⁹⁷ A response of 1 (strongly disagree) received a score of 0, 2 a score of 16.7, 3 a score of 33.3, 4 a score of 50, 5 a score of 66.7, 6 a score of 83.3 and 7 (strongly agree) a score of 100.

was needed. Six of the ten statements specifically related to the extent to which emotional and general support was received from others, and were selected for possible inclusion in a summary indicator — the three statements listed above were positively phrased, while the other three were negatively phrased.

Due to the focus of the analysis on the spatial dimensions of social capital, a valid summary indicator needs to be strongly correlated with its components at the regional scale. Across the 69 BTRE defined regions, the correlation coefficients of the components with the summary indicator were:

- 0.87 for 'When I need someone to help me out, I can usually find someone';
- 0.86 for 'When something's on my mind, just talking with the people I know can make me feel better'; and
- 0.83 for 'There is someone who can always cheer me up when I'm down'.

Factor analysis at the regional scale also supported the construction of a single summary indicator for these three statements.⁹⁸ However, factor analysis did not support the construction of a broader summary indicator which combined both the positively and negatively phrased HILDA support statements.

This indicator differs from the GSS indicators of 'could ask someone for small favours' and 'anticipated source of support in a crisis' in its focus on emotional support rather than physical support. While household members are likely to be a major source of 'emotional and general support received from others', the GSS indicators specifically exclude support from people who you live with.

Indicator: Inability to obtain emotional and general support from others

Source: HILDA, 2001

- Item: The following statements have been used by many people to describe how much support they get from other people. How much do you agree or disagree with each?
 - I often need help from other people but can't get it
 - I don't have anyone that I can confide in
 - I have no-one to lean on in times of trouble

{For each statement: Scale of 1 (strongly disagree) to 7 (strongly agree)}

- Scope: All persons aged 15+, excluding people in sparsely populated areas.
- Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

For each individual, an average score was calculated across the three items, based on a [0,100] scale with equal intervals.⁹⁷ The greater the *inability* to obtain

⁹⁸ The standardised alpha score of 0.83 indicated a good internal consistency between the three statements.

emotional and general support from others, the higher the score. The regional indicator was then calculated as the average score across all individuals in the region who responded to at least one of the three statements. If everyone in a region responded 'strongly disagree' to all three statements the score would be zero, and the score would be 100 if everyone responded 'strongly agree' to all three statements. The national average value of the indicator was 24 — meaning there was reasonably strong disagreement with the three statements.

The three statements underlying this indicator all specifically relate to the extent to which the person is *unable* to receive emotional or general support from others. Due to the focus of the analysis on the spatial dimensions of social capital, a valid summary indicator needs to be strongly correlated with its components at the regional scale. Across the 69 BTRE defined regions, the correlation coefficients of the components with the summary indicator were:

- 0.93 for 'I have no-one to lean on in times of trouble';
- 0.87 for 'I don't have anyone that I can confide in'; and
- 0.83 for 'I often need help from other people but can't get it'.

Factor analysis at the regional scale also supported the construction of a single summary indicator for these three statements.⁹⁹ However, factor analysis did not support the construction of a broader summary indicator which combined the six statements underlying the HILDA indicators of 'Inability to obtain emotional and general support from others' and 'Emotional and general support received from others'. The two summary indicators have a statistically insignificant correlation coefficient of –0.26 across the 69 BTRE defined regions.

Both indicators have relatively low variation across regions, so that only a few regions are identified as being significantly different from the national average. Lack of regional variation was not considered grounds for excluding an indicator, as there is no reason to believe that all aspects of social capital should vary across Australia's regions. Identifying those aspects which are relatively stable across regions is of interest in itself.

⁹⁹ The standardised alpha score of 0.84 indicated a good internal consistency between the three statements.

Indicator: Capacity to raise \$2000 in one week for emergency

Source: HILDA, 2001

- Item: Suppose you had only one week to raise \$2000 for an emergency. Which of the following best describes how hard it would be for you to get that money?
 - I could easily raise the money
 - I could raise the money, but it would involve some sacrifices (e.g. reduced spending, selling a possession)
 - I would have to do something drastic to raise the money (e.g. selling an important possession)
 - I don't think I could raise the money.

Scope: All persons aged 15+, excluding people in sparsely populated areas.Scale: BTRE defined regions; Remoteness classes; Size of urban centre

classes; Capital city and balance of state; States and Territories.

The indicator was constructed from the survey data using a [0,100] scale with equal intervals,¹⁰⁰ so that if that if everyone in a region responded 'I don't think I could raise the money' the score would be zero, and the score would be 100 if everyone responded 'I could easily raise the money'. This was seen as a useful way of summarising the responses from the question into a single indicator. The national mean of the indicator was 66 – meaning that, on average, Australians could raise the money but it would involve some sacrifices.

This indicator has been included as a measure of the financial support available to individuals within regions. An individual may find it easy to raise the money either because they have plenty of savings or other assets, or because they have strong family or friendship networks through which they could borrow the money. Therefore, in theory, this indicator should be related to the socioeconomic status of regions (particularly income and wealth) as well as to measures of network size and other social support indicators.

The GSS also included an indicator of 'capacity to raise \$2000 within one week'. The HILDA indicator was preferred to the GSS indicator, which was less spatially disaggregated and forced respondents to answer either yes or no to the question (rather than providing a range of possible responses).

Indicator: Anticipated source of support in a crisis See description under 'Network size'

Indicator: Anticipated support from family in a crisis See description under 'Network size'

¹⁰⁰ 'I don't think I could raise the money' received a score of 0, 'I would have to do something drastic to raise the money' a score of 33.3, 'I could raise the money, but it would involve some sacrifices' a score of 66.7 and 'I could easily raise the money' a score of 100.

Focus on Regions No. 4: Social Capital

- Indicator: Anticipated support from friend in a crisis See description under 'Network size'
- Indicator: Anticipated support from neighbour in a crisis See description under 'Network size'
- **Indicator:** *How commonly do neighbours help each other out in your neighbourhood?* See description under 'Reciprocity'

Integration into the community

Indicator: Integration into the community

Source: HILDA, 2001

Items: I am now going to ask you some questions about how satisfied or dissatisfied you are with some of the things happening in your life. Please indicate your level of satisfaction with each aspect of life. e). Feeling part of your local community

g) The neighbourhood in which you live

{For each statement: Scale of 0 (totally dissatisfied) to 10 (totally satisfied)}

I am now going to ask you how important the following factors are to you in your life at the present time. Please indicate how important each factor is.

d) Involvement in your local community

{For each statement: Scale of 0 (one of the least important things in my life) to 10 (the most important thing in my life)}

Scope: All persons aged 15+, excluding people in sparsely populated areas.

Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

For each individual, an average score was calculated across the three items and multiplied by ten so it was expressed on a [0,100] scale. The regional indicator was then calculated as the weighted average score across all individuals in the region who responded to at least one of the three statements. If everyone in a region said they were totally dissatisfied with their neighbourhood and feeling part of the community and that involvement in the community was one of the least important things in their life, the regional score would be zero. The regional score would be 100 if everyone gave a response of 10 (totally satisfied/the most important thing in my life) to all three statements.

Integration into the community refers to the process through which an individual is welcomed into a community, and the extent to which they feel accepted, included and involved in the community. Interaction with others and a sense of belonging to the community are other aspects of integration. Feeling welcome in a community contributes to satisfaction with where you live, and

this can flow through to broader wellbeing, including mental health (Centre for Mental Health Research 2003). The three HILDA items which form part of the 'integration into the community' indicator measure different aspects of this issue. While the 'satisfaction with the neighbourhood in which you live' indicator relates purely to satisfaction with place, the other two indicators relate to feelings of involvement in the community. For many people, involvement in the community is not seen as an important part of their life, but this does not mean they will be dissatisfied with the extent to which they feel part of the community. Both aspects are relevant when measuring community integration. The national average value of the indicator was 67 - satisfaction with the neighbourhood (80) was higher than satisfaction with feeling part of the community (66), while the average score for importance of involvement in the community was 56.

In order to keep the size of the indicator set to a minimum, consideration was given to whether the three items could be validly combined into a summary indicator. Due to the focus of the analysis on the spatial dimensions of social capital, a valid summary indicator needs to be strongly correlated with its components at the regional scale. Across the 69 BTRE defined regions, the 3 components had the following correlations with the 'integration into the community' summary indicator:

- 0.96 for satisfaction with feeling part of community;
- 0.88 for importance of involvement in community; and
- 0.82 for satisfaction with the neighbourhood in which you live.

Factor analysis at the regional scale also supported the construction of a single summary indicator for these three items.¹⁰¹

¹⁰¹ The standardised alpha score of 0.87 indicated a good internal consistency between the three statements.

Sharing knowledge, information and introductions

Indicator: Used internet to access government services over past 12 months

Source: ABS General Social Survey, 2002

- Item: In the last 12 months, did you use the internet to access any government services for private purposes?
 - Electronic lodgement of tax returns, applications or claims for benefits, applications for permits etc, or bill payments (e.g. rates and car registration)
 - Information or services relating to taxation, pensions or other benefits, employment/unemployment
 - Other
 - No
 - Don't know

Scope: All persons aged 18+, excluding people in sparsely populated areas.Scale: Remoteness classes; States and Territories.

The indicator was calculated as the number of persons who stated they had used the internet to access at least one government service over the past 12 months, expressed as a share of the regional population aged 18 and over. Nationally, 21% of people used the internet to access government services for private purposes in the 12 month period.

Sharing of information and knowledge refers to the exchange of information between individuals and organisations, and the extent to which information can be accessed. In order to fully participate in the community, individuals need adequate levels of access to information and other resources. This particular indicator relates to access to formal information on government services via one specific, but increasingly important, channel — the Internet. While the indicator does not provide a general measure of the extent to which individuals can access government services (or other resources), it does focus on an issue of major policy interest which is likely to have a strong spatial dimension.

Indicator: Proportion of successful job seekers using friends, relatives or company contacts to gain employment

- Source: Successful and unsuccessful job search experience supplement to ABS Labour Force Survey, July 2000
- Item: A successful job seeker is a person who started a job for wages or salary in the previous 12 months with a new employer. A successful job seeker used friends, relatives or company contacts to gain their most recent job if the jobseeker approached the employer (rather than vice versa) and had:
 - prior knowledge that the job was available through friends, relatives or company contacts; or
 - had no prior knowledge that the job was available, but the first step taken was to contact friends or relatives.
- Scope: Persons aged 15+, excluding people in sparsely populated areas.
- Scale: ABS Labour Force Survey regions; Capital city and balance of state; States and Territories.

The indicator was calculated as the number of successful job seekers who used friends, relatives or company contacts to obtain their most recent job, expressed as a share of all successful job seekers in the region. Nationally, there were 1.9 million successful job seekers in 2000, and 24% of them used friends, relatives or company contacts to gain employment.

Research shows that networks provide a valuable source of information and introductions for job seekers (e.g. Granovetter 1973). The indicator was expressed as a share of successful job seekers, rather than as a share of the total population, so that regional differences would not be dominated by regional variation in labour force participation and job turnover. Instead, the indicator should highlight regional differences in the extent to which family, friends and company contacts were used as a resource when seeking work, relative to other methods (such as newspaper advertisements, Centrelink or the Internet).

AI.4 NETWORK TYPES

AI.4.1 Isolation

Indicator: *I often feel very lonely*

Source:	HILDA, 2001
Item:	The following statements have been used by many people to describe
	how much support they get from other people. How much do you
	agree or disagree with each?
	g). I often feel very lonely
	{Scale of 1 (strongly disagree) to 7 (strongly agree)}
Scope:	All persons aged 15+, excluding people in sparsely populated areas.
Scale:	BTRE defined regions; Remoteness classes; Size of urban centre
	classes; Capital city and balance of state; States and Territories.

The indicator was constructed from the survey data using a [0,100] scale with equal intervals,¹⁰² so that if that if everyone in a region responded 'strongly disagree' the score would be zero, and the score would be 100 if everyone responded 'strongly agree' because they regularly felt very lonely. The national mean of the indicator was 30 – meaning that, on average, Australians moderately disagreed with the statement.

This indicator has been included as a measure of isolation and the extent to which people feel excluded or cut-off from society. Regional analysis will identify whether particular regions tend to have relatively high proportions of people who feel socially excluded. The indicator is a perception-based measure of isolation rather than a behavioural measure.

Indicator: Only get together socially once a month or less with friends or relatives

Source: HILDA, 2001

Item: In general, about how often do you get together socially with friends or relatives not living with you? {Every day/Several times a week/About once a week/Two or three times a month/About once a month/Once or twice every 3 months/Less often than once every three months}

- Scope: All persons aged 15+, excluding people in sparsely populated areas.
- Scale: BTRE defined regions; Remoteness classes; Size of urban centre classes; Capital city and balance of state; States and Territories.

¹⁰² A rating of one (strongly disagree) received a score of 0, two a score of 16.7, three a score of 33.3, four a score of 50, five a score of 66.7, six a score of 83.3 and seven (strongly agree) a score of 100.

The indicator was calculated as the total number of persons who got together socially either 'about once a month', 'once or twice every 3 months' or 'less often than once every three months', expressed as a share of all persons aged 15 and over who responded to the question. The indicator is derived from the same HILDA question as the 'frequency of social contact' indicator. However, rather than providing an overall measure of social frequency, this indicator provides a direct measure of the proportion of the regional population who have minimal social contact with others. It is a behavioural measure of isolation which provides a useful complement to the perceptual 'I often feel very lonely' indicator.

Nationally, 20% of the population only get together socially once a month or less with friends or relatives who do not live with them. The indicator has higher estimated RSEs at the regional scale than some of the other HILDA indicators, with RSEs typically between 10% and 20%. To ensure that these higher RSEs do not cause incorrect conclusions to be drawn, significance testing is used when comparing regional estimates.

APPENDIX II ADDITIONAL DATA SOURCES

This appendix outlines some additional data sources which are relevant to the investigation of social capital in Australia and its regions, but do not directly contribute to the BTRE's set of 33 regional social capital indicators or to the BTRE's *Social capital indicators database*.

The BTRE's suite-of-indicators draws on data from the ABS' *General Social Survey, Survey of Voluntary Work, Labour Force Survey, Survey of Disability, Ageing and Carers* and the *Census of Population and Housing*. However, there are also a number of other ABS collections which provide information relevant to particular aspects of social capital, including:

- The *Time Use Survey*, conducted in 1997 and 1992 (ABS 1998a);
- Various surveys relating to sports participation and physical activities (e.g. ABS 2003a, ABS 2000b);
- Various surveys relating to attendance at cultural venues and events (e.g. ABS 2003b);
- The *Giving to Charities* supplement to the Population Survey Monitor in 1997 (ABS 2004f);
- The *Business Generosity Survey* supplement to the *Economic Activity Survey* in 2000–01 (ABS 2002a);
- The Non-profit institutions satellite account (ABS 2002b).

These ABS surveys can be useful for providing more detailed information on specific aspects of social capital at the national scale. Results are sometimes also published at a State-Territory level, but sub-state data are typically not published.

Other national surveys which provide information relevant to social capital include:

- *World Values Survey*, 1981 and 1995. Data available from: <www.worldvaluessurvey.org/services/index.html>;
- *International Social Science Survey Australia,* various years. Data available from: <www.issp.org>;

- *National Social Science Survey* and *Australian Electoral Study*, various years. Data available from: <assda224-100.anu.edu.au/nesstarlight/index.jsp>;
- AIFS *Families, Social Capital and Citizenship Survey,* 2001 (Stone & Hughes 2002, Stone 2001); and the
- Australian Community Survey, 1998 (Black & Hughes 2000).

In recent years, a number of surveys have been undertaken for particular States which collect information about key elements of social capital:

- The Tasmanian *Healthy Communities Survey*, 1998 (Department of Health and Human Services 1999) covers trust, social networks, quality of family relationships, civic participation and volunteering.
- Tasmanian *Survey of Participation in Sport and Recreation Activities*, 2000.
- The Western Australian *Living in the Regions* study (Patterson Market Research 1999) covered community spirit, perceptions of safety and isolation.
- The *Queensland Household Survey* (Queensland Government Office of Economic and Statistical Research 2004) ran surveys in May 2001, November 2001 and May 2002 which covered issues such as sports participation, cultural attendance, civic participation, sanctions, neighbourhood, public confidence in institutions and tolerance of diversity.
- Department for Victorian Communities (2005) reports on a set of 15 community strength indicators for 79 Victorian LGAs in 2004. The indicators are largely sourced from a specially commissioned CATI survey of 300 individuals in each LGA, but the sports participation indicator comes from the Australian Sports Commission's Exercise, Recreation and Sport Survey.
- Victoria's *Population Health Survey* covers social networks and support, social and civic participation, trust, volunteering and tolerance of diversity. Data from the 2001, 2002 and 2003 surveys is summarised in Department for Victorian Communities (2004), alongside pilot study results for four LGAs. Department of Human Services (2003) includes analysis of the 2002 survey results.
- Victorian *Annual Community Satisfaction Survey* (Department for Victorian Communities 2003) collected information on community engagement.
- Victorian *Exercise*, *Recreation and Sport Survey* 2001–02.

The state-specific data sources are typically disaggregated on the basis of LGAs or state development regions.

APPENDIX III BTRE DEFINED REGIONS

This appendix contains maps of the 69 regions which were developed by the BTRE for the purpose of analysing the HILDA and census-based indicators of social capital. The boundaries of the BTRE defined regions have been based on the requirement that any regional estimates derived from the survey need to have an acceptable level of reliability. The classification was based on the following principles:

- Regional boundaries should be aligned with the ABS' ASGC 2001 classification, and reflect SD and SSD boundaries;
- Regions should be defined so that absolutely no indicators have an estimated RSE of more than 50%, no more than two indicators in any region have an estimated RSE of more than 25% and no more than six indicators in any region have an estimated RSE of more than 10%;¹⁰³
- Data should be collected from three or more CCDs within a region; and
- Where data for a SD is not sufficiently reliable in its own right, it should only be combined with an adjacent region if, on balance, the combination is judged to result in an improvement in the overall availability and utility of information.¹⁰⁴

In practice, this meant that the average sample size for the BTRE defined regions was 198 persons in 2001. The HILDA sample design involved selection of 488 CCDs throughout Australia, and the average SCQ sample for each CCD was 27 respondents. Therefore, with samples of less than 100, there is a risk that respondents are clustered in 3 or 4 CCDs which may not be representative of

¹⁰³ Estimated RSEs for regional estimates of the volunteering rate, and the proportion who have social contact once a month or less, always exceed 10% and sometimes exceed 25%. Estimated RSEs for the active membership rate, health barriers and inability to obtain support indicators are typically between 5% and 20%. Estimated RSEs for the other HILDA indicators are below 10% for all of the BTRE defined regions.

¹⁰⁴ For example, since the Wimmera and Mallee SDs are not sufficiently reliable in their own right, a combined Mallee-Wimmera region improves the overall availability of information.

the region as a whole.¹⁰⁵ This potential source of error is reflected in the design adjusted sampling error used to undertake significance testing.

HILDA data are weighted to reflect the demographic structure of the population at the capital city and state balance level. However, at a more disaggregated scale (such as the scale of the 69 BTRE defined regions) there is a risk that the sample for any region will not be representative of the demographic structure of that region. This potential source of error is also reflected in the sampling error used to undertake significance testing.

A number of regions were excluded from the study due to poor reliability. The excluded regions all had samples of well under 100 persons: Central Metropolitan Perth SSD and the Pilbara, Kimberley, Upper Great Southern and South Eastern SDs in WA; North West, Central West and South West QLD; Far West NSW; and Southern and Mersey-Lyell in Tasmania. The exclusion of regions from the BTRE study cannot be used to infer the presence or absence of a HILDA sample in that region.

The BTRE defined regions represent one or more neighbouring SSDs within Sydney, Melbourne, Perth, Adelaide and Brisbane. Outside the major capitals, the BTRE defined regions represent one or more neighbouring SDs. A listing of the SSDs which make up each of the 69 BTRE defined regions is provided in the BTRE's *Social capital indicators database* at <www.btre.gov.au>.

¹⁰⁵ Three regions which were retained in the analysis have a sample of less than 100 – the Mornington Peninsula and Central Highlands regions of Victoria and the Northern Territory. Results for these regions should be used with caution.



FIGURE III.1 MAP OF THE BTRE DEFINED REGIONS, AUSTRALIA

Source Developed by BTRE based on ASGC 2001 statistical subdivision boundaries.



FIGURE III.2 MAP OF THE BTRE DEFINED REGIONS, SYDNEY

Source Developed by BTRE based on ASGC 2001 statistical subdivision boundaries.



FIGURE III.3 MAP OF THE BTRE DEFINED REGIONS, MELBOURNE

Source Developed by BTRE based on ASGC 2001 statistical subdivision boundaries.

APPENDIX III



FIGURE III.4 MAP OF THE BTRE DEFINED REGIONS, SOUTH EAST QUEENSLAND

Source Developed by BTRE based on ASGC 2001 statistical subdivision boundaries.



FIGURE III.5 MAP OF THE BTRE DEFINED REGIONS, ADELAIDE

Source Developed by BTRE based on ASGC 2001 statistical subdivision boundaries.



FIGURE III.6 MAP OF THE BTRE DEFINED REGIONS, PERTH

Source Developed by BTRE based on ASGC 2001 statistical subdivision boundaries.

APPENDIX IV INDICATOR SELECTION PROCESS

Initially, more than 100 potential indicators of social capital were identified. While it was desirable that the suite-of-indicators be as comprehensive as possible in its coverage of social capital, the aim of the indicator selection process was to reduce the indicator set to a manageable size, without substantial loss of information. The key criteria were:

- Indicators should be clearly linked to an element of social capital identified in the ABS Framework. The number of indicators for any one element of social capital should be kept to a minimum.
- All indicators must be available on a consistent, nationwide basis at a sub-state level. Preference was given to indicators which were available and reliable at a more detailed regional scale. For example, the volunteering rate could be derived from multiple sources (HILDA, GSS, ABS *Survey of Voluntary Work*), as could the labour force participation rate (Census, LFS, HILDA, GSS). In such situations, the preference was to use the data source which could provide the most detailed regional information, so long as that information was conceptually sound and reasonably reliable. In the above examples, HILDA was chosen as the source of the volunteering rate, while the census was chosen as the source of the labour force participation rate.
- Indicators should be statistically reliable there should be no remoteness classes or BTRE defined region for which the indicator has an estimated RSE of more than 50%. All HILDA and GSS indicators were subject to the selection criterion that the RSE could not exceed 25% for more than 1 of the 18 state remoteness classes. This criterion led to the exclusion of many possible indicators which were targeted at small population groups (e.g. job seekers, carers) or were otherwise unreliable (e.g. support in time of crisis from work colleagues). HILDA indicators were subject to the additional criterion that the RSE could not exceed 25% for more than 7 of the 69 BTRE defined regions.
- When multiple indicators were available for a particular element of social capital, the aim was to select a single indicator or composite measure which provided an overall measure of that element.

The initial list of potential indicators had extensive coverage of some elements of the ABS framework. For example, 7 potential indicators were identified relating to different aspects of sporting participation (organised or nonorganised participation, frequency, player/non-player etc). In the above example, the selected indicator was the 'Participation rate in sport or recreational physical activity' from the GSS which was considered to provide the best overall measure of sporting participation. More than one indicator was unnecessary since sporting participation represents only one aspect of social participation.

Correlation analysis was used to inform indicator selection. If two or more conceptually valid and reliable indicators relating to the same element of social capital proved to be very highly correlated across regions (correlation coefficient>0.80), this was considered grounds for selecting one of the indicators as representative, since its exclusion was unlikely to involve a substantial loss of information. For example, the GSS 'perceptions of safety at home alone during the day' indicator had a correlation of 0.93 with the GSS 'perceptions of safety at home alone after dark' indicator across the State remoteness classes. The second indicator was retained as it was the preferred indicator in the ABS Framework, and the first indicator would add little to the analysis.

When two or more conceptually valid and reliable HILDA-based indicators were identified for a particular element of social capital, the availability of unit record data meant that the creation of a summary indicator was a viable alternative to simply selecting one of the indicators as representative. Application of correlation and factor analysis led to the construction of a summary indicator for the 'integration into the community' element, and two separate summary indicators for emotional and general social support (see Appendix I for further detail).

It was not always possible to select a single indicator for a social capital element, either because:

- the social capital element was inherently multidimensional, as in the case of the 'network mode' or 'barriers to participation' elements;
- it was desirable to complement an objective (behavioural) indicator with a more subjective (perception-based) indicator, as in the case of isolation;
- two indicators relating to the same element of social capital turned out to be picking up quite different aspects of the issue, so that excluding one would involve a substantial loss of information.

Therefore, the suite-of-indicators includes multiple indicators for some elements of social capital. The end result of the indicator selection process was a set of 33 indicators for analysing the spatial dimensions of social capital in Australia (see Table 5.1 and Appendix I for details).

APPENDIX V SOCIO-DEMOGRAPHIC VARIABLES USED IN MULTIVARIATE REGRESSION ANALYSIS

The socio-demographic variables used in the multivariate regression analysis were all sourced from the 2001 HILDA survey. This appendix describes the underlying survey questions, the construction of the variables and the default category of each variable in the regression analysis. All socio-demographic variables (apart from age, age squared and household income) were expressed on a [0,1] scale.

Age

The age variable was simply the respondent's age, measured in years. All those aged over 90 years of age were top coded to be aged 90 years. The regression analysis included a squared age variable as well as the age variable, to allow for a possible non-linear relationship between age and the social capital indicators.

Gender

The gender variable was simply the respondent's gender from the HILDA survey. Being female was taken as the default in the analysis, as females accounted for a slightly higher share of the population.

Labour force status

Full-time employed, part-time employed, unemployed and *not in the labour force* categories were derived from HILDA based upon the ABS labour force status classifications (see ABS 2001d). Full time employed persons were taken as the default in the analysis, as the highest proportion of people fell into this category.

Tenure

The tenure status classifications used in the BTRE report were based upon the ABS classification of tenure used in the *General Social Survey*, 2002. Tenure classifications were derived from the following HILDA questions:

(i) Do you or any other members of the household own this home, rent it or do you live here rent free? Possible responses to this question were Own or

currently paying off a mortgage; Rent (or pay board) or a rent-buy scheme; or live rent free or have a life tenure.

(ii) Those who reported they <u>rented</u> were asked: Who does this household rent from? Possible responses to the question were A private landlord or real estate agent; caravan park owner or manager; a government housing authority; a community or co-operative housing group; an employer; manager of a complex or village; or other.

Those reporting in the first question that they are home owners or currently paying off a mortgage were classified as home owners. Those who reported they were *renters from a government housing authority* were classified as such. Similarly, those reporting to be renters from a private landlord or real estate agent were classified as being renters from private landlord. Finally, the *other* tenure category include people who live rent free, have a life tenure or rent from someone other than a government housing authority, private landlord or real estate agent. Home owners were taken as the default category in the regression analysis.

Educational attainment

The high educational attainment and low educational attainment variables were constructed using two different survey questions.

High educational attainment

Firstly, the high educational attainment variable was constructed from a series of qualifications-related questions in HILDA. The HILDA dataset classified all educational qualifications according to the Australian Standard Classification of Education framework and the highest such qualification was identified. Where a respondent had one qualification that was inadequately described and another for which a level could be associated, the qualification which was inadequately described was ignored.

In order to construct the variable used in the regression, BTRE classified those reporting to have a Bachelor degree, Graduate Diploma/Certificate or Postgraduate Masters or Doctorate as having a high level of educational attainment. All other individuals were classified as not having a high level of educational attainment, and this was the default category in the regression analysis.

Low educational attainment

The low educational attainment variable was constructed from the question: *At what age did you leave school?* Valid answers could either be the age the responding person left school, *currently still at school* or *never went to school*. A

second question was asked of those reporting that they went to school, which was: *What was the highest year of school you completed or are currently completing?*

Individuals were classified as having a low level of educational attainment if they never went to school or had left school with a highest year of schooling completed of no more than year 9 or equivalent. Those who reported having completed Year 10 or equivalent (or a higher level of schooling) and those reporting that they were still at school were classified as not having low educational attainment, and were set as the default category in the regression analysis.

Health status

The health status variable is a self-assessed measure of health which was constructed from the responses to the following question: *In general, would you say your health was excellent, very good, good, fair or poor*? Responses to the question were converted to a [0,1] scale with equal intervals, where 1 represented a person with excellent health and 0 represented a person with poor health. A person with 'good' health was set as the default in our analysis, which is equal to 0.5 on the constructed scale.

Country of birth

The country of birth variable was derived from the responses given to the question: *In which country were you born?* Those reporting they were born in a country other than Australia were classified as being born overseas. Being born in Australia was taken as the default in the analysis.

Transience

The transience variable was constructed from the responses given to the question: *When did you move to your current address*? People who reported that they had changed address at least once in the previous 5 years were classified as having moved recently. Those who had not changed address in the previous 5 years were classed as having not changed address recently. People who did not move address in the last 5 years were the default category in our analysis.

English proficiency

The English proficiency variable was constructed from information on whether English was the only language spoken at home. Those who were aged less than 5 years were out of scope. At the household level, information was collected on whether each household member spoke a language other than English at home, and where another language was spoken, the level of English proficiency was reported on. A person's ability to speak English was rated as either *very well*, *well*, *not well* or *not at all*. Those reported to speak English not well or not at all were classed as not being proficient in spoken English. Those who had English

as the only language spoken at home, or spoke another language but could speak English very well or well were classified as being able to speak English proficiently. This English proficient category was the default category in the regression analysis.

Religiousness

This variable was constructed from responses to the question: *How important is religion to your life?* People were asked to rank the importance of religion to their life on a scale from 0 to 10, with 0 representing 'one of the least important things in my life' and 10 representing 'the most important thing in my life'. For the purposes of the regression analysis, the data were divided by ten and expressed on a [0,1] scale. For presentation of the regression results, the control person was defined as having a moderate level of religiousness (i.e. a score of 0.5).

Presence of children in the household

The 'single parent', 'presence of children in the household' and 'lone person household' variables were all constructed using the same derived 'household type' variable from HILDA, which identified 26 different types of household. The household type variable was constructed using information about the structure of the family and whether related or unrelated people were present in each household. The definitions for relationships and families used in the HILDA derived variable are based upon the ABS standard classifications (ABS 1995).

Households containing children aged 15 years and under were classified as being households with children. Those households which contained nondependent children or dependent students aged 15 and over were not classed as households where children were present. The 'group household' category did not indicate if children were present or not, so the unit record data had to be cross referenced with a HILDA variable that was only asked of households with children under the age of 15 present. Those group households with children under 15 were included in the count of households with children.

Single parent household

The single parent variable was constructed using a derived variable in HILDA which identifies different household types. A lone parent household is one in which a sole adult has a dependent child living in the house under the age of 15 years. Sole parents who lived with children aged over 15 were not classed as being 'single parents'. The default category in the regression analysis was not living in a single parent household.

Lone person household

The lone person household variable was constructed using a derived variable in HILDA which classifies different household types. Simply, those who reported they lived alone were classified as living in lone person households. In the regression analysis, the default category was living in a household containing more than one person.

Partnered

The marital status of a person was derived from a number of questions in the HILDA survey. Those reporting that they were either legally married or in a de facto relationship were taken as being partnered. Those who reported being separated, widowed, divorced or never having been married or in a de facto were considered to be not partnered. Not being partnered was taken as the default in the analysis.

Total household income

Total household income was a derived HILDA variable, calculated as the total income for the financial year, summed across all household members. It includes income from all private (market and private transfers) and public (pension and benefit) sources. The total includes Family Tax Benefits and Child Care Benefit (imputed), but excludes windfall income sources. Incomes above \$450 000 were top-coded to \$450 000. Households reporting negative incomes were excluded from the analysis.¹⁰⁶ When presenting the regression results, the control person was defined as having a household income of \$60 000, which was close to the sample average.

¹⁰⁶ More information on the construction of this derived HILDA variable is available from HILDA Survey Waves 1 and 2 Users Guide, <www.melbourneinstitute.com/hilda/download/>

APPENDIX VI DETAILED RESULTS OF PRINCIPAL COMPONENTS ANALYSIS

Principal components analysis has been applied at the regional scale to the 15 HILDA and census-based indicators for the purposes of data reduction. Specifically, principal factor extraction with varimax rotation was used. Results are detailed in Table VI.1, VI.2 and VI.3.

The indicators grouped into four principal components.

- Four support-related indicators formed the first component.
- The second component primarily consisted of indicators of involvement in the community.
- The indicators that loaded on the third component did not fit a coherent social capital concept, and the decision was made not to construct a scale for this component. The indicators that loaded strongly on component 3 were labour force participation, satisfaction with family relationships, emotional and general support received from others, integration into the community and the proportion who live in the same SLA as they did 5 years ago. The close link between high community integration and low geographic mobility is conceptually sound, as is the link between satisfying family relationships and receipt of support. However, to group all five indicators together in a single scale lacked conceptual salience in the context of social capital.
- The two indicators loading on the fourth component were both direct measures of the frequency of social contact. The 'frequency of social contact' indicator already includes information on whether people 'get together socially once a month or less with friends or relatives', and so construction of a summary scale was not appropriate in this instance.

The grouping of indicators on components 1 and 2 were conceptually sound and together accounted for roughly half of the variation across the 69 regions. Two indicators of ability to obtain support were included in component 1, together with indicators reflecting isolation and health barriers, which would both be expected to be associated with a reduced ability to obtain support. Overall, this component provides a general measure of support within regions. The three indicators that loaded exclusively on component 2 measured different aspects of involvement in the community (i.e. volunteering, active membership, how commonly do neighbours help each other out). The 'integration into the community' indicator loaded equally strongly on components 2 and 3. Since it reflects the extent to which people feel part of their community, there were strong conceptual reasons for keeping the community integration indicator with the other measures of community involvement within component 2. The English proficiency indicator showed strongest loading on component 2. There are at least two potential interpretations of why English proficiency would be associated with community involvement. A lack of English proficiency could serve as a barrier to community involvement. Alternatively, the correlation could reflect the concentration of those with poor English proficiency in the largest cities, which are generally characterised by relatively low levels of community involvement.

Having identified these principal components, pre-scale testing was applied to examine the overall reliability of components 1 and 2 as scales and to test their internal reliability. Results are presented in Table 8.4. The reliability analysis of these two scales shows a substantial degree of internal consistency with alpha scores above 0.80 for both scales. Furthermore, item-total correlations revealed both scales were strongly unidimensional. Consequently, these two scales should be of value as overall measures of the general support and community involvement facets of social capital for the 69 BTRE defined regions. However, the results are specific to this regional classification and would not necessarily be transferable to other regional classifications.

TABLE VI.1	INITIAL STATISTICS FROM PRINCIPAL COMPONENTS ANALYSIS ACROSS
	THE 69 BTRE DEFINED REGIONS

Factor	Eigenvalue	Difference	Proportion	Cumulative
1	4.14520893	1.05834638	0.2763	0.2763
2	3.08686254	1.14361129	0.2058	0.4821
3	1.94325126	0.58596287	0.1296	0.6117
4	1.35728839	0.49594385	0.0905	0.7022
5	0.86134454	0.03420071	0.0574	0.7596
6	0.82714383	0.25535612	0.0551	0.8147
7	0.57178771	0.11203937	0.0381	0.8529
8	0.45974833	0.04073313	0.0306	0.8835
9	0.41901520	0.08050597	0.0279	0.9114
10	0.33850924	0.03764384	0.0226	0.9340
11	0.30086539	0.02574790	0.0201	0.9541
12	0.27511750	0.05629421	0.0183	0.9724
13	0.21882329	0.09765562	0.0146	0.9870
14	0.12116766	0.04730146	0.0081	0.9951
15	0.07386620		0.0049	1.0000

Note 1. Extraction Method: Principal Components Analysis. Rotation Method: Varimax with Kaiser Normalization. 2. Kaiser-Meyer-Olkin Measure of Sampling Adequacy=0.678. Bartlett's Test of Sphericity=549.3, Significance=0.000

Source BTRE analysis of HILDA 2001 unit record data and data from 2001 Census of Population and Housing.

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TABLE VI.2	FACTOR MATRIX FROM PRINCIPAL COMPONENTS ANALYSIS ACROSS
	THE 69 BTRE DEFINED REGIONS

	Component			
	1	2	3 4	
Active membership rate	-0.11998	0.88330	-0.02753 0.05933	
Capacity to raise \$2000 in one week for an emergency	-0.69520	0.19114	-0.18641 0.09998	
Health barriers to social participation	0.73096	-0.34516	-0.01656 -0.01341	
How commonly do neighbours help each other out in your neighbourhood?	-0.03165	0.61303	0.51112 -0.28940	
Satisfaction with family relationships	-0.14879	0.13393	0.77982 -0.10074	
Frequency of social contact	-0.11095	-0.01457	-0.03937 0.95183	
I often feel very lonely	0.80585	-0.05836	-0.21794 -0.05605	
Volunteering rate	0.00743	0.85569	0.22714 -0.10489	
Proportion who live in same SLA as they did 5 years ago	0.24300	0.15630	0.69746 0.17247	
Labour force participation rate	-0.25568	-0.06622	-0.56123 0.24479	
Language barriers	0.44096	-0.55913	0.00320 0.29829	
Only get together socially once a month or less with friends/ relatives	0.10820	0.17367	0.01591 -0.93099	
Emotional & general support received from others	-0.42464	-0.09056	0.59408 0.17640	
Inability to obtain emotional & general support from others	0.84441	0.20974	0.11701 -0.11782	
Integration into the community	-0.05061	0.64276	0.62673 -0.04346	

Source BTRE analysis of HILDA 2001 unit record data and data from 2001 Census of Population and Housing.

TABLE VI.3	RESULTS OF PRINCIPAL COMPONENTS ANALYSIS APPLIED ACROSS THE
	69 BTRE DEFINED REGIONS, 2001

Principal component	Factor loading	Eigenvalue	Percentage of variance	Cumulative percentage
1 – General support		4.145	27.63	27.63
Capacity to raise \$2000 in one week for an emergency	0.695			
Health barriers to social participation	-0.731			
I often feel very lonely	-0.806			
Inability to obtain emotional & general support from others	-0.844			
2 – Community involvement		3.087	20.58	48.21
Active membership rate	0.883			
How commonly do neighbours help each other out in your neighbourhood?	0.613			
Volunteering rate	0.856			
Language barriers	-0.559			
Integration into the community	0.643			
3 – Unnamed		1.943	12.96	61.17
Satisfaction with family relationships	0.780			
Proportion who lived in same SLA as 5 years ago	0.697			
Labour force participation rate	-0.561			
Emotional & general support received from others	0.594			
4 – Frequency of social contact		1.357	9.05	70.22
Frequency of social contact	0.952			
Only get together socially once a month or less with friends or relatives	-0.931			

Source BTRE analysis of HILDA 2001 unit record data and data from 2001 Census of Population and Housing.

APPENDIX VII INDIVIDUAL CLUSTER ANALYSIS DETAILS

The selection of methods for forming the clusters and measures of respondent similarity are important choices when undertaking cluster analysis. Our underlying aim was to choose a similarity measure and clustering algorithm that would identify similarities in patterns (the patterns of dips and rises across the indicators) as well as similarities in magnitudes (the mean score of the case over all of the indicators). Two different hierarchical approaches (construction of a hierarchy of a treelike structure) were initially used:

- Within-groups Linkage¹⁰⁷ method with a Squared Euclidean Distance; and
- Ward's Method¹⁰⁸ with a Squared Euclidean Distance

The Within-groups Linkage method tends to combine clusters with small within-cluster variations, and is somewhat biased toward the production of clusters with similar variance. Ward's method, on the other hand, tends to combine clusters with a small number of observations, and is biased towards the production of clusters with approximately the same number of observations. The Squared Euclidean Distance measure was selected to compensate for multicollinearity in the data. To reduce the impact of outliers and differing scales across the indicators, all indicators were converted into standardized z scores, and cases with z scores in excess of + or - 3.3 on any of the variables were recoded.

Selection of variables is one of the most important aspects of cluster analysis as the solution is totally dependent upon the variables used to develop the similarity measure (i.e. the derived clusters reflect the inherent structure of the data as defined by the variables). Therefore, it was decided to review the initial 15 HILDA indicators that were used in the principal components analysis (see section 8.2.3) and include only direct measures of key social capital dimensions. In addition, indicators that were essentially measuring the same thing as

¹⁰⁷ The distance between the two clusters as the average of the distance between all pairs of cases in the clusters that would result if they were combined.

¹⁰⁸ The distance between the two clusters as the sum of squared deviations from the mean of the cluster.
another indicator were considered for exclusion. In total, four of the original 15 HILDA-based indicators were excluded from the cluster analysis.

- The behavioral measure of isolation (Only get together socially once a month or less with friends or relatives) was excluded as it correlates very strongly with frequency of social contact.
- 'Health barriers to social participation' and 'language barriers to participation' were excluded. These two indicators are of interest due to the potential of such barriers to restrict various forms of participation, but in themselves do not constitute direct measures of any particular dimension of social capital.¹⁰⁹
- Similarly, the transience/mobility indicator was primarily of interest due to its potential linkage to community belonging and community involvement, rather than as a measure of social capital in its own right, and was excluded from the cluster analysis.

Two of the remaining 11 indicators relate to a deficiency in social capital (I often feel very lonely; Inability to obtain emotional and general support from others) and have been reverse coded for the purposes of the cluster analysis. As a result, each of the included indicators has a straightforward interpretation — holding other factors constant, a higher value of the indicator would be expected to be associated with increased social capital.

The cluster analysis was based on a reduced set of 10 659 HILDA observations that had valid responses for all 11 indicators. After comparing the largely similar results from the two clustering methods, a six cluster solution¹¹⁰ using Ward's Method with a Squared Euclidean Distance measure was selected.

Multiple Discriminant Analysis (MDA) indicated that the overall correct classification of cases into the clusters was a high 84%. The variables that best predicted group membership were: active membership, volunteering, labour force participation, emotional and general support received from others, inability to obtain support, frequency of social contact and satisfaction with family relationships.

¹⁰⁹ In addition, inclusion of these indicators may have resulted in a typology that was unduly influenced by socio-demographic characteristics rather than being based on behavioural and attitudinal measures of key social capital dimensions.

¹¹⁰ The agglomeration coefficient schedule showed equally small coefficients (indicating that fairly homogeneous clusters are being merged) for all the solutions between 5 to 11 clusters. The six cluster solution was selected as it presented a good differentiation between groups and also provided a manageable basis for further analysis.

Satisfaction with family relationships		22.8	-3.7	4.3	2.3	0.3	-26.5	-18.4	-20.4	-22.5	8	6	4	-2	-4.1	-2
Emotional & general support received from others		-4.1**	-27.8**	-29.3**	-26.7**	-25.4**	-23.7**	-25.2**	-22.6**	-21.4**	-1.5	1.1	2.3**	2.6**	3.8**	1.2
Frequency of social contact		**6.9-	-23.8**	-22.0**	-27.0**	-21.7**	-13.9**	-12.1**	-17.1**	-11.8**	1.8	-3.2**	2.1^{*}	-5.0**	0.3	5.3**
Labour force par- ticipation rate		-6.3**	64.6**	-22.2**	-25.3**	9.6 **	70.9**	-15.9**	-19.0**	15.9**	-86.8**	-89.9**	-55.0**	-3.1	31.9^{**}	34.9**
olunteering rate		-17.0**	1.5*	1.1	1.5*	-98.5**	18.5**	18.1^{**}	18.6**	-81.4**	-0.4	0	-100.00**	0.5	-99.5**	-100.00^{**}
How com- V monly do neighbours help each other out?		9.5**	-5.4**	Ţ	-4.7**	-11.4**	-14.9**	-10.5**	-14.2**	-20.9**	4.4**	0.7	-6.0**	-3.7**	-10.4^{**}	-6.7
Integration into the community		4.2**	-7.1**	-5.6**	-7.2**	-15.7**	-11.3**	-9.8**	-11.4**	-19.9**	1.6*	-0.1	-8.5**	-1.7*	-10.1^{**}	-8.4**
Active nembership rate		-24.8**	-26.4**	4.7**	-94.3**	-66.3**	-1.6	29.5**	-69.4**	-41.5**	31.0^{**}	-67.9**	-39.9**	-98.9**	-70.9**	28.0**
Inability to obtain sup- r port from others		29.7**	-5.0**	-11.8**	-12.8**	-8.4**	-34.7**	-41.5**	-42.5**	-38.1**	-6.8**	-7.8**	-3.4**	Ŀ	3.4**	4.4**
I often feel very lonely		38.4**	0.6	-6.2**	-7.9**	-3.4*	-37.8**	-44.5**	-46.3**	-41.8**	-6.8**	-8.5**	4	-1.8	2.8*	4.5**
Capacity to raise \$2000 in emer- gency		25.2**	13.9^{**}	-4.4**	÷	-4.7**	-11.3**	-29.6**	-26.2**	-29.9**	-18.3**	-14.9**	-18.6**	3.4*	-0.4	-3.8*
aring X luster	Y	2	З	4	S	9	3	4	ŝ	9	4	ŝ	9	Ś	9	9
Comp: cluster with cl Y	×	г					7				ъ			4		ŝ

 Indicates that the coefficient is significant at the 5% confidence level and ^m indicates that the un A This item is reverse coded.

Source: Hilda and 2001 Census Population and Housing

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APPENDIX VIII REGIONAL CLUSTER ANALYSIS DETAILS

Research design of the cluster analysis

The objective of cluster analysis at the regional level was to identify sub-groups within the set of 69 BTRE defined regions which have a distinctive social capital profile.

We examined the data for outliers using Mahalanobis distance to the mean to identify outliers. We found a number of regions with high Mahalanobis distance (such as Northern Territory; Fairfield-Liverpool; Logan City LGA; Gippsland & East Gippsland; Moreton SD Balance; Yorke, Northern & Eyre SA; Northern & North West NSW; and Blacktown) that were potential candidates for deletion. However, outliers were seen as having value for this research, in that they identify regions which are reasonably unique in terms of their social capital characteristics. Therefore, it was decided to retain those outliers and to examine the cluster solutions in the later stages to assess how those regions clustered.

As we were interested in similarities in patterns (the patterns of dips and rises across the variables) as well as similarities in magnitudes (the mean score of the case over all of the variables) we have used the Between-groups Linkage method with a Squared Euclidean Distance to group regions on the social capital indicators. Hierarchical procedures involve the construction of a hierarchy of a treelike structure. In the Between-groups Linkage method, the criterion for clustering is the average distance from all individuals in one cluster to all individuals in another. Therefore, this method does not depend on extreme values as partitioning is based on all members of the cluster. Furthermore, this method tends to combine clusters with small within-cluster variation and is biased towards producing clusters with approximately the same variance rather than clusters with approximately the same number of observations. The use of Squared Euclidean Distance measure was selected to compensate for the multicollinearity in the data. As the magnitude of the different aspects of social capital is an important element of the clustering objective it was decided not to undertake within-case standardization of variables. However, all measures were expressed to a 0 to 100 scale.

Selection of indicators

The selection of variables is one of the most important aspects of cluster analysis as the solution is totally dependent upon the variables used as a basis of the similarity measure (that is the derived clusters reflect the inherent structure of the data as defined by the variables). The set of 11 social capital indicators which formed the basis of the individual-scale cluster analysis (Section 8.3) also form the basis for the region-scale cluster analysis.¹¹¹ However, for the region-scale cluster analysis, the labour force participation indicator was sourced from the census rather than HILDA, due to the census data being more reliable at the regional scale.

Selecting the cluster solution

The agglomeration coefficient was used to select the number of clusters. This evaluates the changes in the coefficient at each stage of the hierarchical process. Small coefficients indicate that fairly homogeneous clusters are being merged, while joining two very different clusters results in a large percentage of change in the coefficient. The ten cluster solution presented itself as most suitable for further investigation.

Interpretation of the 10 cluster solution

Table VIII.1 contains the indicator profiles for the ten cluster solution. It also lists the univariate F ratios, which compare the differences between the cluster means for each indicator. The ten cluster solution provides a well-defined structure and a good variation (i.e. patterns of low versus high values) in terms of the social capital indicators. Furthermore, the solution differs in a statistically significant manner (even when we exclude outlier clusters) on all indicators, except frequency of social contact and satisfaction with family relationships. Of the ten clusters, five clusters were outliers, all of which had a very high Mahalanobis value (clusters B, G, H, I and J).

HSD post-hoc contrast analysis¹¹² of statistically significant differences between those clusters that weren't identified as outliers (i.e. Cluster A, C, D, E and F) showed that the indicator means of those clusters were statistically different, at

¹¹¹ Indicators of health barriers, language barriers and transience/mobility were not included in the cluster analysis as their inclusion may have resulted in a typology that was unduly influenced by the socio-demographic characteristics of regions, and less likely to reflect social capital behaviours and attitudes. The behavioural measure of isolation was also excluded, due to its close links with the frequency of social contact indicator.

¹¹² Multiple Discriminant Analysis (MDA) could not be applied due to the low ratio of cases over predictor variables. Diekhoff (1992) recommends that the smallest group should have more cases than there are variables, and that the total sample size should have at least ten times as many cases as there are variables.

the 5% confidence level for 27% of comparisons. Satisfaction with family relationship and frequency of social contact did not show a statistically significant variation between the clusters. Three other indicators (labour force participation rate, feelings of loneliness and inability to obtain emotional and general support) showed a small variation, with only one cluster pair reaching a statistically significant difference. The variables that showed the highest variation between the clusters were volunteering, active membership, integration into the community and capacity to raise \$2000. The clusters that were the most different from each other were Clusters A and F, which were significantly different on 5 of the 11 indicators. Clusters C and D were the least different clusters, with the only significant difference being in terms of the capacity to raise \$2000 indicator.

Table 10.5 provides a description of each cluster, and details of its regional membership.

Cluster	Capacity to raise \$2000	l often feel very lonely^	Inability to obtain support ^	Active member- ship	Integration into the community	How often do neighbours help each other out?	Volunteering rate	Labour force particip- ation rate	Frequency of social contact	Ability to receive support	Satisfaction with family relationships
А	65.5	70.2	77.0	35.0	65.9	59.9	18.4	63.8	62.0	74.4	81.2
В	53.1	63.4	69.5	23.5	64.9	57.9	16.3	61.9	56.7	72.5	82.7
С	62.2	67.8	74.3	42.5	67.5	62.8	25.1	64.3	59.8	71.7	80.7
D	74.7	68.5	76.3	50.2	65.8	56.9	25.4	69.3	61.3	72.2	80.0
E	76.3	73.0	79.3	40.2	71.4	64.8	26.1	62.7	61.9	76.9	83.4
F	66.6	71.6	75.8	46.1	71.5	69.8	28.2	59.8	60.2	75.3	82.4
G	64.6	59.7	70.3	51.3	74.3	74.3	37.4	58.2	61.5	72.9	82.7
Н	52.9	69.5	76.6	36.0	58.9	53.6	24.7	66.9	57.3	77.3	81.1
I	66.0	71.3	75.5	35.3	70.3	74.6	24.7	59.4	48.4	72.6	80.1
J	51.0	66.7	71.8	48.0	75.5	70.2	29.8	59.4	60.3	73.4	83.5
F ratio	9.8*	3.6*	4.4*	24.7*	13.5*	20.5*	23.4*	4.5*	1.3	5.4*	3.0
Overall~	65.7	70.0	76.1	39.7	68.1	63.4	23.0	62.7	60.9	74.4	81.7

TABLE VIII.1 PROFILE OF MEAN VALUES OF SOCIAL CAPITAL INDICATORS, TEN CLUSTER SOLUTION TO REGIONAL CLUSTER ANALYSIS, 2001

Note * indicates that the underlying coefficient is significant at the 1% confidence level.

~ This is the average across the regions, not the average national value for the indicator.

Source BTRE analysis of data from HILDA and ABS Census of Population and Housing, 2001.

[^] This item is reverse coded.

APPENDIX IX SMALL AREA INDICATORS AND PROXIES

The regional analysis in this report is undertaken at a relatively aggregated scale (i.e. for the 69 BTRE defined regions). However, there is considerable interest in social capital indicators at more disaggregated scales, such as for particular LGAs, SLAs, suburbs, urban centres and localities.

Some of the state-specific data sources described in Appendix II are potential sources of information at a small area level although such indicators are generally not comparable across State borders. Most notably, Department for Victorian Communities (2005) has recently published indicators of community strength for 79 Victorian LGAs — the report provides small area data relating to volunteering, group membership, support, feelings of safety, efficacy, community involvement and acceptance of diversity, amongst other indicators.

While purpose-designed surveys are generally the preferred approach when measuring social capital, a survey approach to develop social capital indicators for *all* Australian SLAs or LGAs would require a large sample and be very resource intensive. This appendix concentrates on social capital indicators and potential proxies that are *currently available* at a small area (SLA, LGA or SSD) level on a consistent and nationwide basis. There are a number of possible sources of such small area indicators and proxies:

- Census or survey data;
- Administrative data; or
- Synthetic estimation techniques.

Only the first two possible sources are explored in this appendix.

ABS CENSUS OF POPULATION AND HOUSING

Due to the inclusion of new questions on voluntary work and caring responsibilities, the 2006 census will be a very valuable source of small area data relevant to social capital. However, the 2001 census provides limited information of relevance to social capital.

Of the BTRE's set of 33 social capital indicators, only the three census-based indicators are available at a small area level on a consistent, nationwide basis:

- Labour force participation rate;
- Language barriers; and
- Proportion who live in same SLA as they did 5 years ago.

The labour force participation rate is a useful indicator of economic participation, but it is not strongly spatially related to other aspects of social capital.

Chapters Seven and Eight provided some evidence that poor English proficiency was acting as a barrier to participation, and that regions with a high incidence of language barriers tended to have low volunteering (-0.48), active membership (-0.46) and neighbourhood reciprocity (-0.41). However, these regional associations are no longer evident when the focus is restricted to non-metropolitan regions. In any case, the regional correlations are not sufficiently strong to support use of language barriers as a proxy for other aspects of social capital at a small area scale.

BTRE defined regions with a highly stable population tend to have more satisfying family relationships (0.45) and higher integration into the community (0.47). The relationship between the census-based measure of mobility and integration into the community has a sound conceptual grounding, and is evident at the scale of the individual, as well as the regional scale. However, the reasonably large variation in integration into the community scores for regions with a similar level of geographic mobility, suggests the census mobility indicator will probably only be useful as a small area proxy for integration into the community if used in conjunction with other relevant factors.

The census also provides other small area data of potential relevance to social capital:

- The census measure of religious affiliation is not spatially correlated with religious participation (as measured by the GSS), and should not be used as a small area proxy for religious participation.
- The two internet-related GSS indicators in the BTRE's set of social capital indicators (i.e. usage of e-mail or chat sites in last 12 months, used internet to access government services over past 12 months) were extremely strongly correlated with the census-based measure of internet usage (correlations of 0.88 and 0.87 respectively) across the state remoteness classes. In practice, the two GSS indicators are dominated by the same underlying factor (access to and usage of the internet), and do not reflect regional differences in the specific purposes for which this technology is used (e.g. communication, information sharing).

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Consequently, the census internet usage measure should provide a reasonable small area proxy for the internet *communication* mode. However, it does not provide a proxy for other elements of social capital.

- Information on the proportion of people who live at the same address as they did 5 years ago provides an alternative measure of mobility/transience which is highly correlated with the 'same SLA' indicator at the SLA scale (0.84).
- It has been proposed that home ownership may enhance social capital formation (Winter 2000, Glaeser 2001). Chapter Eight noted that regions with a high proportion of home owners tend to have more satisfying family relationships (0.41), but there was no significant relationship between the census-based measure of home ownership and integration into the community, neighbours helping each other out or volunteering. Consequently, there was little evidence to support the use of home ownership rates as a small area proxy for social capital.
- Population density is a proxy for rurality which is readily available for SLAs, LGAs and SSDs.¹¹³ At the regional scale, population density is strongly associated with the community involvement summary scale (-0.60), neighbours helping each other out (-0.51), satisfaction with family relationships (-0.48) and the volunteering rate (-0.47). However, population density does not appear to be a useful means of identifying differences in community involvement between metropolitan regions, which limits its value as a small area proxy for this social capital dimension.
- Chapter 11 provided evidence that the ABS' SEIFA index of disadvantage is significantly correlated with the general support summary scale (0.58) across the BTRE defined regions. Since access to support is considered to be an important aspect of disadvantage alongside other factors such as unemployment, financial hardship and limited education (ABS 2004g), the link with the general support summary scale has a sound conceptual basis. However, the correlation between the SEIFA index of disadvantage and the general support scale was not observable for non-metropolitan regions, which limits the value of the SEIFA index as a small area proxy for this social capital dimension.

The BTRE's *Social capital indicators database* includes the following census-based information for each SLA, LGA and SSD for 2001:

- Labour force participation rate;
- Language barriers;

¹¹³ ABS Cat. No. 1379.0.55.001 *National Regional Profile* contains population density data and can be downloaded for free from <www.abs.gov.au>

- Proportion who live in same SLA as they did 5 years ago;
- Proportion who live at same address as they did 5 years ago; and
- Proportion of individuals who accessed Internet in week prior to census.

While none of these census-based measures should be used as a direct measure of the overall level of social capital in a particular region, each measure helps to inform at least one aspect of social capital.

VOLUNTARY ORGANISATIONS

The Bureau of Rural Science's (BRS) *Access to Services Database* (BRS 2003) provides small area data on the location of selected service organisations. The Commonwealth Department of Transport and Regional Services (DOTARS) commissioned the BRS to develop a database of wellbeing and access to services indicators. This database provides information on the location of Meals on wheels, Rotary clubs, Apex clubs, Lions clubs and Police Citizens and Youth Clubs (PCYCs), and the proportion of the population within each CCD and SLA who had 'reasonable access' to the service (defined as living within 40km of the service location). The data represents a snapshot as of mid-2002.

The five listed organisations only represent a subset of the range of voluntary groups which might be operating within a community, so the data cannot provide a complete picture of group presence in a region, nor can it tell us anything about the number of volunteers or their degree of involvement. However, given the general absence of small area information relating to social capital, it was worthwhile exploring whether this dataset could provide any insights into the spatial patterns of voluntary organisations, or social capital more broadly, across Australia.

In the major cities, the entire population typically has reasonable access to all five organisation types.¹¹⁴ Moreover, an organisation located in one suburb is likely to draw volunteers from and provide services to a much wider area. Therefore, this data source cannot provide any insight into differences in volunteering, active membership or community support within larger cities. Nevertheless, it may provide some insight into spatial differences in organisational presence for non-metropolitan areas.

Use of the 'number of voluntary organisations per unit of population' as a measure of social capital is an established practice. To compare the average level of social capital across American states, Putnam (2000) used the number of

¹¹⁴ There are no PCYCs in South Australia or the NT, while the only APEX club in the NT was in Alice Springs. Such results probably reflect historical factors rather than any underlying absence of social capital, so the data needs to be interpreted with considerable caution.

non-profit organisations per 1000 population, alongside other measures. He found that the number of non-profit organisations per 1000 population was highly correlated (correlation=0.82) with his overall social capital index at the state level.

The total number of voluntary organisation per 100 000 population was calculated for each Australian SLA by dividing the total number of voluntary organisations in that SLA (summed across the five organisation types) by the ABS' Estimated Resident Population of the SLA in 2001, and then multiplying by 100 000.

The obvious advantage of this measure is its availability at a small area level. At the same time, this measure has a number of disadvantages. The major limitation is that it only includes five types of voluntary organisations. Another limitation is that it only captures the number of organisations and not the size of those organisations or the level of involvement in those organisations. Also, there are some gaps in the dataset itself. Namely, the Victorian Meals on Wheels Association was unable to provide a valid measure of the number of meals on wheels services due to the arrangements in place for this service in Victoria (i.e. the service is centrally administered by each local council).¹¹⁵ The missing Meals on wheels data for Victorian SLAs, and a total absence of information for several other SLAs, means the data quality is not high at the SLA level — however, these issues have a lesser influence on estimates at the SSD level.

To validate the use of this measure as a potential small area proxy for key aspects of social capital, we have investigated its relationship with other social capital indicators across the 69 BTRE defined regions. This measure was highly correlated with the community involvement summary scale (0.75), and each of its components, at the regional level. In addition, a moderate, but significant, correlation was found with satisfaction with family relationships (0.40). The correlations were generally stronger in the non-metropolitan regions.

The above results show that the 'voluntary organisations per 100 000 population' measure is closely linked to some of BTRE's social capital indicators at the regional scale, particularly in non-metropolitan regions. Despite its numerous limitations, the strong correlations with integration into the community (0.72), volunteering (0.70) and active membership (0.61) provide some evidence that this measure is actually reflecting regional differences in the intensiveness of voluntary effort. However, it needs to be recognised that a sizeable proportion of the correlation with community involvement is due to a

¹¹⁵ The number of Meals on wheels organisations in each Victorian SLA was imputed based on the national average values per 100 000 population for Meals on wheels (excluding Victoria). As prior analysis of the distribution of each voluntary organisation established a different pattern between capital city SLAs and other SLAs, our imputation rule used different values for the SLAs in Melbourne SD and those outside the Melbourne SD.

common dependence on metropolitan status. That is, non-metropolitan areas are more likely to have greater numbers of smaller organisations rather than fewer numbers of large organisations. Chapter Nine established that nonmetropolitan areas tend to have relatively high volunteering and high integration into the community.

In summary, the number of voluntary organisations per 100 000 population seems to be closely related to the community involvement aspects of social capital. While it has a number of shortcomings, its relatively high correlation with particular aspects of social capital does make it a strong candidate as a small area proxy of volunteering, active membership and integration into the community for SSDs located outside of the capital city regions.

The existing 'number of voluntary organisations per 100 000 population' measure was not considered reliable enough to be included in BTRE's set of regional social capital indicators. However, the analysis does suggest that use of administrative data from voluntary organisations is a potentially valuable source of small area information on social capital, and with methodological improvements could provide a viable approach to collecting small area information on social capital on a nationwide basis. The reliability and construct validity of such a measure could be improved through more comprehensive coverage of different voluntary organisations and collection of additional data on the size of organisations.

The BTRE's *Social capital indicators database* includes experimental estimates of the 'number of voluntary organisations per 100 000 population' for each SSD. This small area proxy has been included in the database based on evidence of a strong overall association with the key aspects of community involvement — however, the data should be used with caution, as there will be exceptions to such patterns.

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ABBREVIATIONS AND ACRONYMS

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AES	Australian Election Study
AIFS	Australian Institute of Family Studies
ARTI	Aggregate Real Taxable Income
Bal	Balance
BRS	Bureau of Rural Sciences
BTRE	Bureau of Transport and Regional Economics
Cat.	Catalogue
CCD	Census Collection Districts
DHHS	Department of Health and Human Services (Tasmania)
DTF	Department of Treasury and Finance (Victoria)
FACS	Australian Government Department of Family and Community Services
GDP	Gross Domestic Product
GSP	Gross State Product
GSS	General Social Survey
HILDA	Household, Income and Labour Dynamics in Australia
HSD	Honestly Significantly Different
IALS	International Adult Literacy Survey
ISSP	International Social Survey Program
LFS	Labour Force Survey
LGA	Local Government Area
MDA	Multiple Discriminant Analysis
NELS	National Educational Longitudinal Study

No.	Number
nr	Not relevant
NSSS	National Social Science Survey
NSW	New South Wales
NT	Northern Territory
OECD	Organisation for Economic Cooperation and Development
р	significance level
PC	Productivity Commission
PCYC	Police, Citizens and Youth Clubs
PQ	Person Questionnaire
QLD	Queensland
RIPT	Real Income Per Taxpayer
RSE	Relative Standard Error
SA	South Australia
SAT	Standard Aptitude Test
SCBS	Social Capital Benchmark Survey
SCQ	Self-Completion Questionnaire
SDAC	Survey of Disability, Ageing and Carers
SEIFA	Socio-Economic Index For Areas
SEM	Structural Equation Modelling
SLA	Statistical Local Area
SD	Statistical Division
SSD	Statistical Subdivision
SVW	Survey of Voluntary Work
TAS	Tasmania
UKONS	United Kingdom Office of National Statistics
USA	United States of America
VIC	Victoria
VPHS	Victorian Population Health Survey
WA	Western Australia
WVS	World Values Survey