

CHAPTER 7

Summary of observations

Introduction

This chapter summarises the broad changes and trends that occurred between 1911 and 2006 and considers some of the factors that might have driven them.

Key spatial changes at the national level

Earlier chapters have made observations about changes (or lack thereof) at national, regional and even local levels. This chapter steps back from this detail and summarises the key national movements and some of the underlying reasons for them. Nine key observations describe the origins and movement towards the current (2006) distribution of population.

Geography and natural resources

The underlying geography and the location of natural resources had an obvious impact on settlement patterns. Most often this impact had already played out in earlier times and was evident in the settlement patterns of 1911. The climate, soils and distance were key factors in the early development of Australia. However, geography continued to be important in shaping subsequent development. It determined, for instance, the location of irrigation areas and presented transport challenges such as mountain ranges, wet seasons and islands.

Natural resources have always been important and have initiated the development of many of Australia's industries and towns. Over time, improvements in the knowledge of resource location and advances in technology for their exploitation and transport changed the effective environment for town development. While in the past this knowledge led to the creation of new towns, expectations of depletion of natural resources is also an issue which in recent years has led to the development of alternatives such as fly-in/fly-out workers.

The impact of history

Many of Australia's towns today were established before 1911 and the settlement pattern in 2006 broadly reflects the pattern of 1911, although population relativities are very different. The existence of a substantial town in 1911 with its existing infrastructure would seem to be a strong factor in the presence of a substantial town in 2006. The overall pattern of development is basically the same and, although there have been considerable variations in the sizes of towns; the pattern has been commonly built on the historical structure. This suggests that history has played an important part in determining current settlement patterns.

Metropolitan primacy

Australia's settlement pattern has developed a metropolitan primacy structure. The capital cities of Australia's states are very much bigger than the next largest city within the structure. At the beginning of the twentieth century, regional Australia had more people than all capital cities combined. This situation was overturned in 1954 (see Figure 4.5) and by 2006 there were around 13 million people living in capital cities and 7.5 million in regional Australia.

Decline of inland towns

The maps of towns in 1911 (Maps 4.9 and 4.10) show the large numbers of relatively evenly-spaced towns across the agriculturally-important south east and south west areas of the continent. The equivalent maps for 2006 show a decline in the number of these towns. There has been roughly a halving of the number of small towns and a net overall loss of towns of between 200 and 1000 people. Some of the existing towns were absorbed into nearby centres and others grew larger; and there was a decline in the number of towns despite the development of new towns. These figures support the anecdotal evidence of the loss of small towns from rural Australia, particularly from the inland.

Reductions are particularly evident in the wheat-sheep zones, and also in the pastoral areas of western Queensland. The fall in the number of wheat-sheep towns corresponded with the general decline of agricultural employment throughout the century as a result of productivity gains, emphasising the historical link between the fortunes of towns and the industries that supported them.

The rise of regional centres

There has been a big increase in the number of large regional centres. In 1911, there were only two towns (Ballarat and Broken Hill) of more than 30 000 people and only nine with more than 15 000. By 2006, there were nine towns of more than 90 000 and the largest (Gold Coast) had over 400 000. Large centres are especially common on the coasts, but there are many examples of large inland regional centres.

These two observations—the fall in the number of small towns and the rise of regional centres—are interlinked. The interaction between small and larger centres is part of the process that has been re-shaping of the settlement pattern. Within the Australian context, this phenomenon has been referred to as 'sponge cities', a term coined by Bernard Salt (Salt 2001).

New towns associated with irrigation

Employment in dry-land agriculture declined from 1911 to 2006, despite this being a period of government investment in dams for irrigation. Regions and towns that were created or which noticeably expanded because of the more intensive agriculture included the Murrumbidgee Irrigation Area (Griffith, Leeton), the Coleambally Irrigation Area, the Murray Valley (Robinvale, Mildura, Berri, Loxton, Renmark) and the Eastern Kimberley (Kununurra). These towns, and those hosting defence facilities, are notable examples of direct government action leading to the establishment and/or growth of settlements.

The mixed fortunes of mining towns

Some of Australia's most significant towns and cities were built on mining. Ballarat, Bendigo, Kalgoorlie and Broken Hill are iconic mining towns that have prospered, sometimes outlasting the mines on which they were founded. On the other hand, as noted in Chapter 5, mining provided the basis for the establishment and subsequent demise of many towns, particularly in remote regions. The phenomenon of towns opening and closing depending on the fortunes of a nearby mine was common until the 1980s. The close connection between mine and town declined towards the end of the twentieth century with the advent and popularity of fly-in/fly-out and drive-in/drive-out mining arrangements.

The drift to the coasts

A key feature of Map 4.9 was the emergence of large settlements on the coasts of mainland Australia by 2006, in locations where in 1911 there was no more than the small settlements associated with agriculture and commercial fishing. This change was characterised by an increase in the size of settlements as the population of coastal Australia grew much faster than the inland. However it is also associated with the growth of these centres as tourism destinations and more recently with the migration of older people in their retirement years.

New towns in the north and west

New towns have emerged in the north and west of Australia that were not evident in 1911. While the lack of accurate counting of Indigenous residents no doubt led to a substantial underestimation of the number of settlements in more remote regions in 1911, there has been a significant growth in the number of towns in the north and west of the continent by 2006. This growth was often associated with new towns developed to support mining operations and/or transport and communications infrastructure (see Map 4.8).

The timing and pace of change

The changes between 1911 and 2006 were not evenly spread across time. Most of the population change occurred in the second half of the century. In particular, the dramatic shift of regional populations to the coast and the reduction in the number of very small towns (with populations of between 200 and 500) mostly happened in the later part of the century (see Figure 4.2), with comparatively smaller changes in the fifty years between 1911 and 1961.

The context of change

Spatial re-organisation was only one change among many. There were a number of other fundamental economic, social and technological changes moulding regional Australia over the period.

Big move to urbanisation

The growth of Australia's major cities reflects a more general movement towards urbanisation. The transition to a highly urbanised structure has been a major demographic trend of the past 100 years in Australia. It has been widely recognised as a long-term and inevitable result of the move away from an agricultural-based economy to a service-based one. Although conspicuous in Australia, this pattern of urbanisation is a worldwide phenomenon.

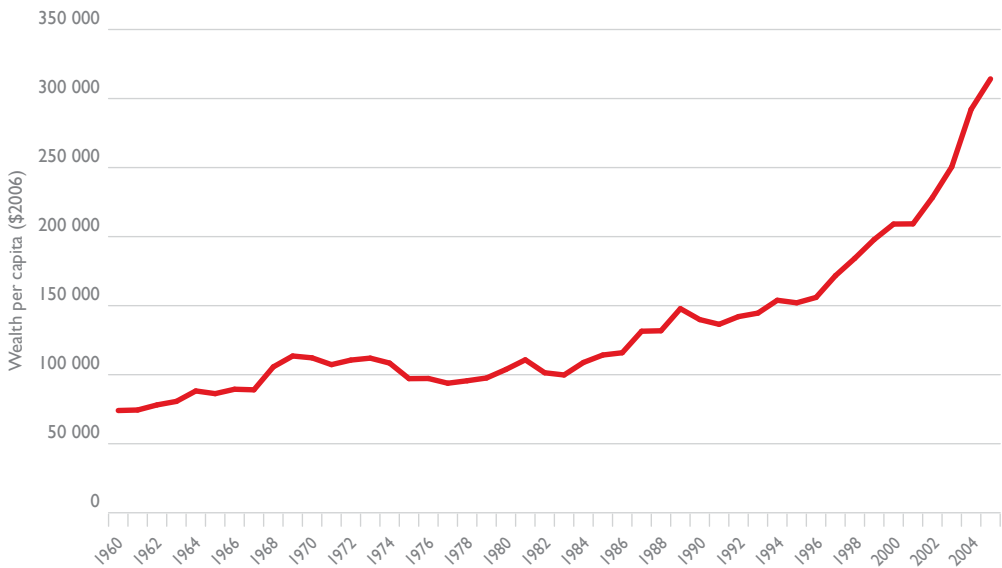
Social changes

A number of important social changes characterised the twentieth century. These changed both the profile and attitudes of the population. As outlined in Chapter 6, the population became older (we lived over 20 years longer), more wealthy, more educated, developed a sophisticated welfare system, we expanded the population through immigration from many countries and women and Indigenous Australians increasingly became directly involved in the workforce, commerce and government. Many of these changes impacted on settlement patterns.

Wealth

A feature of the twentieth century has been the spectacular increase in the wealth of Australians overall. Department of Treasury figures show the growth in nominal wealth has been rapid, averaging 10.6 per cent per annum, between June 1960 and June 2005³⁷. Even when wealth is discounted for inflation and population change is taken into account, the second part of the twentieth century shows substantial growth. As Figure 7.1 shows, real wealth per capita more than doubled between 1960 and 1996, although this growth is overshadowed by a further doubling by 2005.

³⁷ As a point of comparison, Australia's GDP in nominal prices grew at an average annual rate of 9.3 per cent over the same period (ABS 2011a).

Figure 7.1 Wealth per capita, Australia 1960–2005

Source: The Treasury (2006).

Cars and transport

The 95 years from 1911 saw advancement literally from the horse and buggy. Car ownership rose from virtually zero to over 11 million by 2006. The size and quality of the road network was improved enabling faster, safer travel. The numbers and size of trucks and articulated vehicles also grew dramatically and freight moved from the rail system to roads.

Industry, technology and markets

Industry changed significantly as technological changes and shifting markets created different employment patterns and ways of working (for example, transport and machines enabling economies of scale and increased productivity). There was a shift away from agricultural employment towards manufacturing in the first half of the century, as well as a continuing rise in the employment share for services. There was a reduced demand for a dispersed agricultural workforce. Manufacturing industry became more concentrated, and services were increasingly important for town economies. Government has a mainstream role in delivering key services such as health and education, benefits access, social services and the regulation of network-type services such as communications (telephone, internet) and universal postal services. However many of these are now delivered through larger centres, whereas in earlier times courts, schools, hospitals and telephone exchanges were typically located in both small and large centres. Similarly there has been a consistent trend to amalgamation of local government towards larger regions.

World events

Two world wars and the Great Depression marked the 1911 to 1950 period. This contrasted with the period of relative stability and growth in economic activity and trade that followed. In the light of the relative amounts of change in the two periods it is reasonable to suggest that adverse events are not the great direct drivers of change (at least in terms of settlement patterns in Australia) that might have been expected. While they no doubt influenced subsequent events (such as higher post-war immigration), the key to long-term change seems to be associated more with changes to underlying circumstance. The development of irrigation capacity, increases in overall wealth and improved technology seem to be more important than the impacts of war or depression.

Government policy

Explicit decentralisation interventions have been undertaken in some regions, but like the closer settlement interventions of earlier eras, they sometimes were viewed as failures. This may be because of overly ambitious expectations and/or an underestimation of the costs of real change through direct intervention. Regional impacts of mainstream policies (especially industry and defence) have been considerable, and because they had wider objectives did not suffer from the same level of expectations. Perhaps for the same reason, they were viewed as having more fundamental and lasting impacts on the local economy. The infrastructure associated with the delivery of services (particularly health and education) also had significant spatial effects, although these often seem to mimic existing patterns with facilities placed in the larger centres.

Functions of towns

A key function of towns was, and to a large extent remains, the provision of goods and services to locals. Therefore, any changes in the way consumers access goods and service affect towns. Since 1911 there has been a growing diversity in town size with the gradual emergence of large regional centres and a decline in the services offered in smaller towns. This latter group is now less of a retail service centre and more focussed on providing social services such as pubs, clubs, food services and sporting facilities. The regional centres, on the other hand, have developed large, sometimes specialised, stores (often linked to national chains) that provide a wide range of goods in a competitive environment. These towns provide goods and services beyond the local area to a regional market.

Possible explanations of growth patterns

Until now, this chapter has looked exclusively at changes in settlement patterns and some economic and social changes and events that could be linked to them. How or why these might be linked has not been fully explored.

This section now considers theories of location discussed in Chapter 2 and their relevance in the Australian context, in the light of the empirical evidence of change in Chapters 4 and 5.

Theories of location

Although history, geography, natural resources and path dependence are important contributors to the location of activity, economic literature tends to focus on the location of industrial activity.

New Economic Geography, agglomeration economics and Porter's clusters are among the theories that attempt to consider the concentration of industrial activity (see Chapter 2). However, in an empirical study of industrial agglomeration, Ellison and Glaeser (1999) found that at least half of the concentration of industry was due to natural advantages.

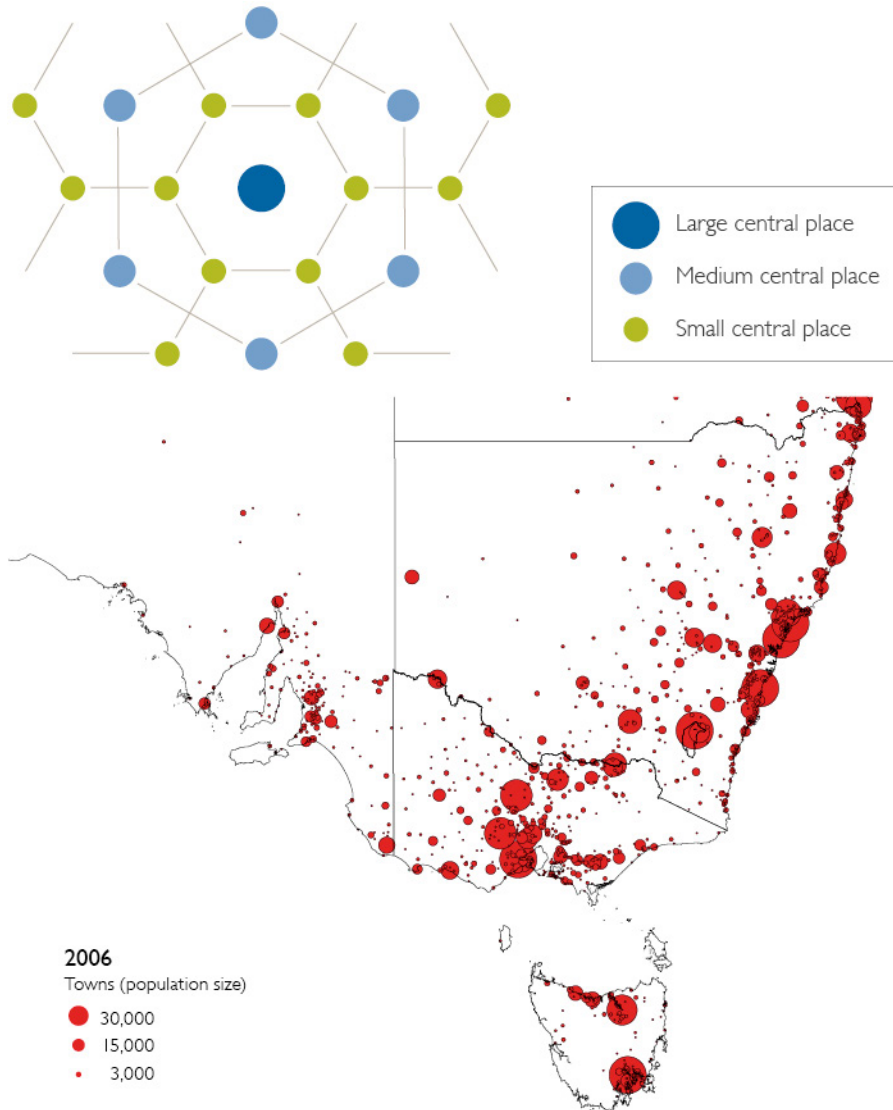
In growing a town, Economic Base Theory emphasises the export base (basic component) of a town to promote local economic activity. This activity enables local growth and investment because of demand for locally-produced goods and services (the non-basic component). The theory provides a foundation for the growth and establishment of many towns to 1911, as basic industries such as agriculture, mining and manufacturing were the source of funds to promote town development. However, with the increasing role of services the concept of what makes a basic industry for a town has evolved. This is examined further in Chapter 9.

Central Place Theory, developed in the 1930s by Walter Christaller, is based directly on understanding urban systems. It focuses on the provision of goods and services as a basis for understanding the structure of regional towns and cities. It suggests an orderly distribution of towns and cities of different sizes providing a range of goods and services, based on observations of Southern Germany.

As observed in Chapter 3, many Australian towns were established to provide goods and services for their hinterland. The structural shift towards service industries over time means the provision of goods and services, and hence the proximity of towns to customers, remains important. While the concept of proximity may have changed dramatically over time with improved personal transport, this change is consistent with Central Place Theory. Figure 7.2 brings together the classic Central Place Theory expectations (the marketing principle) from Figure 2.3 and the 2006 snapshot of south eastern Australia from Map 4.10. The similarities are notable even if the real world does not reflect the mathematical regularity of the theory. This would be expected given the geographical and historical unevenness underpinning the real world regional economies. As noted in Chapter 5, centralisation processes are subject to the natural geography (particularly physical features and ore deposits) and history (such as the position of transport hubs) that underlie particular regions.

The similarities of the patterns in Figure 7.2 do not 'prove' that Central Place Theory is the explanation for the empirical pattern. The most that can be said is that the patterns are similar to those that would be expected under the theory and that the underlying rationale would seem plausible. As Central Place Theory rests heavily on the delivery of goods and services, it is consistent with the underlying function of towns in 1911 and 2006.

Figure 7.2 Comparison of expected Central Place Theory patterns and 2006 distribution for South Eastern Australia



Note: The capital cities of the five mainland states are excluded.

Source: BITRE, adapted from Christaller (1933) and BITRE analysis of the ABS 2006 Census.

Of the theories discussed in Chapter 2, the ones that seem to provide the most reasonable explanation and best fit of the empirical structures in 1911 (see Map 4.9 and 4.10) are the basic industry theories. These emphasise the importance of basic industry for providing economic activity in a given location. However, by 2006, a plausible explanation and fit is provided by Christaller's Central Place Theory. This suggests that the perhaps the most appropriate theories can vary over time, and that each offers a good explanation for the formation of settlement patterns at a particular juncture. That seemingly competing theories could provide plausible explanations at different times is quite feasible, but implies there has been a fundamental

change in the underlying circumstance. In this case, the difference would seem to be a shift in the power dynamics away from industrial location as the main driver of town position, towards decision-making by the household. As noted above, this is what has happened over the twentieth century as households became wealthier and transport became faster, more reliable and affordable.

It has been more and more possible for people to live away from the centres of production. The ability of households to choose to live further from their place of work has increased substantially. In addition, people live longer and consequently have many more years of retirement during which they can choose to live where they wish. As a consequence it is logical that Central Place Theory, which is based on the provision of services is now more prominent and that the industry-driven models that were central in 1911 are potentially less important.

It is also clear that people have the time and money to enjoy more holidays and a more comfortable and desirable retirement. Areas of high amenity (particularly on the coast) have become more popular, while improved technology and productivity reduced the number of people employed in rural pursuits.

While the idea of separate theories can be attractive, the reality is that no theory provides a satisfactory, comprehensive explanation of modern settlement patterns in regional Australia. On the other hand, all of the theories outlined in Chapter 2 seem to have some application. Each theory is based on particular perceptions and assumptions regarding how the economic system works, or more correctly which processes are the more important in the particular circumstances of regional Australia in the twentieth century.

Characteristics of the drivers and mechanisms of change

The far-reaching changes in settlement patterns described in Chapters 4 and 5 were costly and difficult for residents, consumers, workers, business and government. The extent of change involved suggests that many regional Australians lost money on investments and that the changes fundamentally altered the way many people lived. Even over a long period we would expect considerable inertia and resistance to change on this scale. That this has been somewhat overcome indicates powerful and persistent drivers of change.

The mechanisms for change on this scale must motivate business, investment, consumers and workers. If the benefits of change were not spread across these sectors, then we would expect evidence of significant transfers to compensate those who were disadvantaged. For example, the implementation of fly-in/fly-out and drive-in/drive-out work practices has been characterised by significant transfers through wages to mining workers to compensate them for disrupted living arrangements. Similarly, we can see that attempts at decentralisation and rural reconstruction in Australia have typically involved considerable transfers from government—often with less than hoped-for impact. That no such transfers are obvious in the process of regional urbanisation suggests that the mechanisms of change inherently provide enough incentives across the economy and society to ensure at least the tacit support of all sectors. That is not to say there are no losers in the process—clearly there have been—but rather that the process provides sufficient incentives across the key participants for change to continue despite the losses.

Therefore, when trying to identify the mechanism(s) we should look for a powerful and persistent driver and a broad distribution of benefits. In addition we need to look for mechanisms that explain the centralisation process across the broad range of geographic and economic landscapes where we have observed it. To understand these powerful drivers we first need to consider the functions of towns.

The functions of towns

Towns have a number of functions—locations for particular industries, residential areas, commercial and social centres, transport hubs etc. Most will serve many purposes. Since we are looking for broadly based phenomena, it may be useful to consider what the generic characteristics of towns were in 1911 and in 2006 and how they have changed.

1911

Towns provided a range of manufacturing activities to service local needs. Even small towns had their own butcher, baker, dairy, blacksmith/mechanic, saddlers/harness repairers and abattoir and commonly had brickworks and sawmills, as well. In some towns, especially larger centres, these were supplemented with flour mills, breweries and other industries supplying a local and regional market. The overall focus of these businesses was on producing goods for the local market which effectively was the town itself and all those for whom the town was the closest centre. Describing life in the Western District of Victoria in the years up to 1921, Keneley (2005) says: 'The expansion in the number of settlements was not necessarily associated with a sophistication of their economic function. No urban settlement of less than five hundred inhabitants had any secondary industry of significance, aside from a creamery. Most small townships continued to primarily be service centres for the surrounding rural area. These services were limited to those connected with transport, communications and banking. Within the next level of the hierarchy—townships with populations between 500 and 1000—there was a limited degree of manufacturing. However this was largely restricted to simple food processing, building and construction.'

The towns also typically supported a range of service industries beyond small-scale manufacture. These included food, hardware, furniture, clothing and general stores, churches, local government services, legal services, hotels (which often also served as the labour exchange), Post Offices, banks, schools (often only to primary level), transport terminals (railways or horse drawn), telecommunications, stock and station services, newspapers, dentists, doctors and hospitals.

The focus of these towns was to provide inputs to industry in the area (usually agriculture or mining) and goods and services to residents. The goods sold and the level of service were basic. Small towns supported primary schools but often not high schools—tertiary education was focussed in the state capitals. Higher level education was often undertaken by correspondence or through boarding schools in larger centres. Medicine in towns was delivered by GPs and local community supported hospitals. Specialist services in medicine, the law or other fields were generally only found in the cities. Similarly, more sophisticated manufacturing was city and/or overseas based.

Towns were also the focus for social activity. Churches, hotels, community halls and schools were the centres for the day to day social and sporting activity of the town and surrounding

districts. As Keneley (2005) describes, 'Although the majority were small, they were thriving centres of community and social activity. The breadth of activity is evident both in notices in local newspapers and in almanacs and directories. In particular, sporting associations provided a cohesive focus for community interaction. The existence of many other societies and associations is indicative of the diversity and sophistication of these small centres'.

These small towns both nurtured and limited the businesses that resided in them. The generally poor transport services to the outside world (car travel was in its infancy) meant that the local population was a captive market. However, the same poor transport ensured that it was difficult for businesses to expand beyond the local market.

2006

By 2006, towns of different sizes had different functions. The smaller ones had lost many of the functions they had in 1911, while larger centres had expanded theirs. Much of the manufacturing was now done on a regional basis, or faced regional competition. For example, much of the bread consumed in regional Australia is typically supplied to supermarkets from large regional suppliers who have taken much of the market from local bakers. Meat is often supplied to small town stores and supermarkets from out of town butchers. Similarly, supplies of dairy products are imported to most towns. Abattoirs are invariably regionally based as are livestock saleyards. Small towns support fewer mechanics and garages than in earlier times and manufacturing to support base rural and mining industries is more often undertaken in larger regional centres or in major cities.

Likewise, retailing of goods and services has become concentrated in the larger centres. Supermarkets are dominated by larger chains which take advantage of the cost savings gained from their own large, national supply networks. The large chains (Coles, Woolworths and Aldi) are common in medium and larger towns but rare in the smaller settlements. Retailing chains including those dedicated to the sale of hardware, electrical, haberdashery, and furniture are typically confined to larger centres. A greater variety of fast food outlets, entertainment and personal services are also concentrated in the larger centres as are government services: Local Government Areas are typically larger and courts, hospitals and educational facilities (particularly secondary schools and tertiary campuses) much more concentrated in the larger centres.

The numerous small towns servicing local communities in 1911 have been replaced by larger centres in 2006 that service wider regions. The remaining small towns have a much diminished role, generally providing basic services to local areas on a small scale. Typically this includes small supermarkets, personal services, cafes and hotels/clubs acting as local social centres.

Key changes

In both 1911 and 2006, towns provided the local population with goods and services. The key difference is the emergence of regional rather than local distribution points for most of these goods and services. Small towns still exist and house many people, but have declined in importance as distribution points for most goods and services. However, they still remain important social centres in many communities.

A big difference in the lives of small town residents is their need for personal transport. The car, almost non-existent in 1911, has become an essential feature of daily life to the extent that older residents often leave their communities when faced with the prospect of losing their ability to drive. Contact with a larger regional centre is now essential. The car has allowed physical contact with a large town for goods and services, and better communications (telephones and television in particular) facilitated social contact independent of the local small town. This in turn has reduced the demand for local goods and services.

The influence of and interaction between large centres with their hinterland however, is not well understood, perhaps because each pairing or group of towns is inherently different. A model developed by Barkley et al. (1996) illustrates this complexity by considering the effect a large regional centre may have on the growth patterns of small peripheral towns. The model is based on interregional flows of people, firms, investment patterns and knowledge transfer (see Table 7.1), with large regional centres having both positive and negative effects on the development of hinterland towns. The challenge is to understand which influences are having the greatest pull at any given time in any place. For instance, a peripheral town may benefit from having access to a large market by selling produce that raises local income. But this increase in income may be outweighed by spending being transferred to the larger centre.

Table 7.1 Interregional flows stimulated by growth of a town

| Type of flows | Positive effect on small towns | Negative effect on small towns |
|--------------------------------|---|---|
| Spending on goods and services | Growing cities provide expanding markets for the hinterland. | Spending in small towns declines due to increased competition from city producers. |
| People | Labour commutes to cities for jobs. Urban families relocate to the hinterland because of cheaper housing and quality of life. | Small town residents migrate to the city for better access to jobs and urban lifestyles. |
| Firms and/or employment | Firms locate to the hinterland to take advantage of low wages and land costs. | Firms relocate in the city to benefit from larger markets and agglomeration economies. |
| Investment funds | City funds are invested in the hinterland to take advantage of relatively low labour and land costs. | Hinterland funds are invested in cities to take advantage of relatively rapidly growing goods and services markets. |
| Knowledge and technology | City centres are the generators and diffusers of information and innovation for the surrounding hinterland. | Regional to city migration is selective of better educated and skilled residents. |

Source: Adapted from Barkley, Henry and Bao (1996) cited in SAC, The Arkleton Institute and University of Gloucestershire (2005).

The interaction between larger centres and small peripheral towns is important to understanding shifts in the settlement pattern. While existing theories have provided some insight, they do not give us an explanation of the factors driving change and how they operate.

The mechanisms of change

To understand the underlying processes that have brought about Australia's current urban structure, a closer look at six key influences, along with the drivers and mechanisms underlying them, is explored in the next four chapters.

The four influences are:

- the effect of geography and history (Chapter 8);
- the role of industry and investment—particularly basic industries (Chapter 9);
- the provision of goods and services within regions (Chapter 10); and
- the role of amenity (Chapter 11).