Strategic policy responses to population decline: A synthesis of regional approaches and outcomes with policy recommendations for consideration from a Tasmanian context

A report for the Tasmanian Department of State Growth prepared by the Institute for Social Change, University of Tasmania

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Executive Summary

As part of the Population Research Project between the Tasmanian Department of State Growth and the Institute for Social Change at the University of Tasmania, an extensive review of the range of policies in response to population decline and their outcomes was undertaken. The objective of the review is to identify possible policy interventions appropriate for Tasmania, based on its demographic profile, welfare state and economy.

Key Recommendations

As a state, while Tasmania’s population has been growing, it is also ageing; it is the oldest of all states and territories in Australia and is ageing at a faster rate than the national average. Within the state, there are already local government areas which have been experiencing population decline or are on the cusp of imminent decline. Over the past three years, Tasmania has slowed its rate of ageing associated with increased migration to the state, either from interstate or overseas, and the age profile of those migrants. This migration has contributed to Tasmania recording its highest population growth rates this Century. However, with migration contributing to over 80 per cent of this population growth, the current situation of the COVID-19 global pandemic, with the state and national borders effectively closed to migration, it is likely that population growth will slow considerably in the short to medium term and that the rate of population ageing will intensify.

Future economic and social policy development for Tasmania will therefore need to be positioned in the context of a population with low or no population growth and ageing rapidly.

This report provides the evidence base to capture opportunities associated with an ageing population, while also providing for the needs of the population; a combined countering and accepting policy approach.

Three key policy themes are recommended for consideration, noting that while these themes could be considered in isolation, they are also complementary to each other. Importantly, these themes should also be considered through the lens of peripheralisation, whereby the inter-connected relationship between urban centres (cities or major towns) and their periphery (rural and regional social economy) are focal.

1) Embracing and investing in the White Economy
2) The regeneration and repurposing of the built environment
3) Establishing Special Economic Zones (SEZs)

Under-pinning the development and implementation a policy framework is the need for a clear place-based approach including governance, inter-regional co-operation, leadership and community engagement.

Overview

Population ageing and eventual decline (depopulation) is a reality facing all but a handful of developing countries. More diverse combinations of population change; ageing and migration, occur at the regional and urban level than observed at the state and national level. Moreover, the geographically larger the country, or in Tasmania’s case, state, the greater the opportunity for inter-regional migration. As such, the potential for considerable variations in ageing profiles within the state is high. Given this, there are no ‘off-the-shelf’ or ‘one-size-fits-all’ policy solutions aimed at economic and social viability in the context of population ageing and decline, which are applicable to all cases; policy responses need to be tailored to the context.
As migration and population growth are increasingly concentrated in cities, depopulation usually occurs in regional communities first. However, the causes of depopulation are complex and vary considerably across regions, explained largely by the interrelationship between the local economy, socio-demographic profile, migration (including the stock, and flow, of human capital) and geography.

Managing population ageing and projected decline is an increasingly common policy challenge for governments, but it is also without precedent. The greatest challenge being the long-term economic viability of an area and the need to provide age-related health and social services care within the underlying fiscal position.

In Tasmania’s case, while the state experienced its strongest rate of population growth in a decade, dominated by increased migration, this growth was concentrated in the south of the state, creating its own set of challenges. Despite this growth, Hobart and its surrounds continues to experience population ageing. During this time of strong growth, other regions in the state continued to experience economic and social challenges accompanying peripheralisation¹ including population ageing and decline, creating within state policy challenges associated with uneven economic and demographic change.

While the longer-term impact of the COVID-19 global pandemic is unknown, with the effective closure of Tasmania’s, and Australia’s, borders, it is unlikely that population growth in Tasmania will continue at the same rate in the foreseeable future. The population may even enter into decline, with the 29 Local Government Areas (LGAs) likely to experience varying degrees of population change.

For the decade until June 2019, twelve LGAs experienced annual population decline; twelve had been experiencing population growth above the state ten-year average of 1.0 per cent per annum. Three of the latter groups were experiencing hyper-ageing, whereby 20 per cent of the population is aged over 65 years, pointing to imminent natural decline. The remaining LGAs were teetering on the cusp of depopulation. Until ABS regional population data is released in 2021, the impact of the COVID-19 pandemic on the LGAs populations will be unknown but will likely be apparent to those in the respective communities.

The distinct and varied nature of population change within Tasmania has different implications at a local level, leaving policy and planning authorities facing diverse challenges. The issue is further complicated by demographic change within an area which is often caused by factors beyond its spatial and administrative boundaries. This means policy responses need to be coordinated and based on shared experiences beyond LGA boundaries.

There are three broad types of policy responses to population ageing and/or decline:

- strategic intervention to mitigate depopulation (known as countering strategies),
- acceptance strategies to manage decline and its consequences or,
- doing nothing (non-intervention).

¹ Peripheralisation describes the mechanisms that drive periphery and centre relations; reflecting either a strong connection or the logical consequence of centralisation
On their own, countering and accepting strategies have limitations given populations that are experiencing depopulation, or are projected to decline, are likely to also be experiencing population ageing. For countering only strategies, the failure to acknowledge that population ageing occurs concurrently with population growth strategies, fails to address the needs of more older people in a society. For accepting only strategies, responding to the risk of depopulation with a focus on managing decline, contains the risk of becoming a self-fulfilling prophecy.

The positive for Tasmania exists in recognising and acting on the opportunities presented by an ageing society; a new customer profile, from older working-age people, to elderly, to older consumers, all of whose needs are different and require a different public or private response; the silver and/or white economy. Recreation, leisure and health complement each other as the end of the life cycle approaches. This offers potential for both the economy and society in the form of new business opportunities and changing occupations and careers, age-friendly places and urban spaces. These opportunities should be addressed in terms of governance, scale, pace and spatial differentiation.

For the purposes of this report as directed by the Department of State Growth, the synthesis of policy responses will focus on acceptance strategies as well as those countering strategies that incorporate accepting strategies, i.e. a combined approach.

Introduction

This report provides a detailed overview of Tasmania’s demographic challenges and regional disparities, explains the causes of population ageing and population decline from an economic, demographic and spatial perspective. It then provides a synthesis of a range of policy initiatives implemented in regions worldwide to respond to the needs of an ageing and/or declining population from an accepting, or combined countering and accepting strategies, perspective. It concludes with a number of case studies.

To do this, an extensive scan of a diverse range of academic research, policy documents and grey literature pertaining to demographic change, population ageing, shrinking cities and regions, regional development, urban planning and migration was undertaken. The purpose was to identify the range of potential policy responses to the challenges of depopulation and, where possible, any outcomes and/or evaluation following policy implementation.

Apparent from this extensive scan, there is little evidence of a holistic approach in response to the challenges of population decline, from either a countering or accepting strategy perspective. Rather, policy initiatives tend to respond to one consequence relating to the challenges of population decline, or an opportunity, as opposed to a collective suite of policy responses by one region. While a few regions do present a suite of policy responses, these tend to focus on achieving population growth through countering strategies only².

An additional limitation throughout this extensive scan was that not all literature and policy documents were available in English, constraining the depth of information available regarding policy interventions. Best efforts have been applied to source as much information as reasonably possible.

² See the countering strategy case studies in the Appendix of this report.
Tasmania’s population

As at 30 June 2019, Tasmania’s population was 534,281 persons and grew at a rate of 1.1% over the previous year, the highest growth rate since 2009.

The composition of Tasmania’s population growth has shifted over the past five years to be dominated by migration, rather than natural increase (more births than deaths). Compared with 2014 when natural increase contributed more than half (53.0%) of the state’s population growth, in 2019, more than four in five new Tasmanians (80.6%) were migrants (33.6% from net interstate migration and 47.1% from net overseas migration). Compared with 62.5% nationally, net migration provided the greatest contribution to population growth than any other state or territory.

While Tasmania’s population has been growing, it is also ageing\(^3\). For the previous five years, the average annual growth rate of those aged 65 years and older was 3.3% compared with the annual population growth rate for Tasmania of 0.8%.

Tasmania’s Vital Index\(^4\), an indicator of demographic development, has been declining for four decades, with the gap widening further between Australia since the early 2000s\(^5\).

One in five Tasmanians are aged 65 or over (20.1%), indicating what demographers refer to as ‘hyper-ageing’\(^6\), the point at which longer term population growth is not considered possible, leading to the likelihood of eventual population decline, following the onset of natural decline.

As a consequence of population ageing, Tasmania’s population has been projected to enter decline by mid-21\(^{st}\) Century in at least one series of the last three Australian Bureau of Statistics (ABS) population projections in 2008, 2013 and 2018 as well as the most recent Tasmanian Department of Treasury and Finance (Treasury) population projections\(^7\).

Despite relatively strong population growth since 2016, the nature of aggregated state-wide data masks the true picture of how the population is changing within the State; the situation differs substantially between the 29 Local Government Areas (LGAs).

Prolonged economic restructuring has manifested in uneven patterns of regional development and thus demographic development – the size and structure of a population – leading to large-scale, differential population change within Tasmania.

Since 2015, and prior to the COVID-19 pandemic, of the 29 LGAs in Tasmania\(^8\):

- All are experiencing population ageing (except Brighton)
- 20 LGAs have a median age\(^9\) older that the State’s median age of 42.3 years

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\(^3\) Population ageing is defined as an increase in the median age of a population over time and whereby at least 10\% of the population is aged over 65. See Demographic Snapshot – January 2020 for more details.

\(^4\) The Vital Index is an indicator of demographic development and the ability of a population to replace itself into the future, in the absence of migration. The Vital Index is measured as the ratio of births to deaths.

\(^5\) See Demographic Snapshot – December 2020 for further details.

\(^6\) when 20 per cent or more of the population is aged 65 or older.

\(^7\) See Treasury’s population projections.

\(^8\) See Institute Insight Six and Institute Insight Nine for more detailed analyses of Tasmania’s population and regional disparities.

\(^9\) The median age is the age at which half the population is older and half the population is younger.
• 12 are experiencing growth, 10 of them driven by migration from interstate or overseas.
• 8 are on the cusp of population decline.
• 6 are in population decline.
• 28 are increasing their median age.
• 16 of Tasmania’s LGAs are experiencing hyper-ageing, indicating imminent natural decline.
  o 3 LGAs experiencing migration-led growth are also experiencing hyper-ageing.
• Over the next 25 years to 2042, it is projected that the populations for 14 LGAs will grow, while the remaining 15 LGAs will experience population decline.\(^{10}\)
  o Only four LGAs are projected to experience natural increase by 2042, all others are expected to experience ongoing natural decline.

It is important to note that this data reflects a period prior to the COVID-19 global pandemic and that the projections are based on assumptions informed by historical trends for five years prior to 2017. It is not possible to predict the impact of COVID-19 on Tasmania’s population over the medium to longer term at this stage. In the short term, it is likely that population will experience low or no population growth for the foreseeable future, due to the cessation of migration from interstate or overseas due to the effective closure of both state and national borders (however, less Tasmanians may also leave the state for the same reasons). The population will also age more rapidly than it has done for the past five years and the impact will be exacerbated in the State’s regions.

Population decline and its causes

Population decline - depopulation - does not occur in a uniform manner and is the result of the complex interplay of several drivers at local, regional, national and international level. The spatial variation in population change also has profound implications at a regional and local level. Population decline occurs first at a sub-state level (local government area or regional) before becoming a state issue, and then a national one.

The short-term drivers of demographic change include economic cycles or shocks, policy decisions and changing spatial patterns. Longer-term drivers are demographic trends and increasing globalisation, impacting an economy’s industry structure. Over the past five decades, globalisation has been the key driver in the spatial redistribution of capital and people. When short-term drivers occur in parallel with longer terms structural causes of population decline, the ability to recover from population decline is diminished.\(^{i}\)

Population decline can be further examined through three key lenses: demographic, economic and spatial.

Demographic

From a demographic perspective, population ageing, particularly hyper-ageing, is an indicator of the imminent onset of population decline, driven by lower fertility rates, increases in life expectancy and the age profile of inward and outward migrants of a region.

\(^{10}\) See Treasury’s population projections
Population ageing

Population ageing causes a fundamental shift in the population, resulting in a trend towards an older age structure, as measured by the median age of a population. Population ageing usually precedes population decline, and, as such, it heralds the end of population growth.

Population ageing can be further defined and described as either numerical or structural ageing. Numerical ageing refers to the absolute increase in the number of elderly and is primarily caused by improvements in life expectancy. Additionally, the large number of baby boomers creating a bulge in the population age structure is contributing to numerical ageing (baby boomers, those born in the years post the Second World War, are now aged between 55 and 75 years). Structural ageing refers to the increase in the proportion of the population that is older and is primarily caused by declining fertility rates at a national level. However, in Tasmania’s case, it is the age profile of interstate migration movements which decreases the size and proportion of the population that is young (and of reproductive age) which is the greatest contributor to structural ageing. Numerical ageing drives up the numbers of elderly and thus increases the demand for, and cost of, retirement income support, health, and aged care services, while structural ageing constrains governments in their ability to raise tax revenue to fund pension schemes and aged related services.

Both numerical and structural ageing are evident in Tasmania and its LGAs.

This has been predominantly caused by age selective migration, that is, the loss of younger people and gain of older people to an area, rather than declining fertility rates or increasing life expectancy.

Economic

From an economic perspective, economic restructuring and changing labour market opportunities contribute to migration; the movement of people in and out of a region, the process of ageing and then eventual population decline.

Long-term economic drivers of population change include the effects of globalisation and economic restructuring, where political processes have changed the distribution of people and capital across the world. Specifically, population change has occurred where the economies of regions shift from industrial to post-industrial. Globalisation processes have driven concentrations of financial and human capital in globally competitive metropolitan and urban centres, while other smaller cities, towns and regions on the peripheral have suffered decline. In response to post-industrialisation, policies were implemented to deregulate the economy, reduce tariffs, and privatise government services which had the effect of slowing primary production and manufacturing, facilitating outward migration in response to an increasing lack of employment opportunities. While Australia as a whole became more competitive and urban centres were growing, the benefits of deregulation were experienced unevenly across regions. Conversely, the financialisation of the economy influenced growth in metropolitan and major urban areas and a services, information and knowledge based economy emerged, accompanied by wealth generation, gentrification and urban renewal and growth in consumption based industry sectors such as construction and retail.

Consequently, Australia’s economy has been described as a patchwork economy, with much variation in economic performance between regions and cities.
The population impact on regions experiencing economic restructuring is caused by migration movements associated with a lack of economic, education and/or employment opportunities, changing spatial trends (i.e. urbanisation or suburbanisation), and/or lifestyle choices (i.e. retirement or seachange/treechange migration). Migration occurs at three levels; international, inter-regional, and intra-regional, however the consequences are usually most apparent at a sub-national or regional level.

Regional and rural areas often experience an out-migration of young people due to a lack of education and employment opportunities. A net loss of young migrants changes the age structure of a population and impacts on future reproduction. In some areas, natural decline is not only occurring simultaneously with net migration losses but is being driven by it. Conversely, some regions, particularly coastal areas in regional areas, may experience retirement in-migration which further contributes to the ageing effect. In urban areas, in-migration of overseas migrants has contributed to population growth, however in the long-term this will contribute to the ageing effect as immigrants grow older.

The key consequences of globalisation processes and economic restructuring is out-migration and the changing age-structure of the region, which drives the loss of human capital, under-utilisation of the available labour force, lower than average share of highly skilled labour force, competition over workers and skill shortages. This also means decreasing opportunity for businesses to invest in regional areas, which may result in stagnating economic growth and a lack of labour market mobility. Alongside this, ageing and declining populations place pressure on local governments with a declining tax base, a high age dependency ratio and increasing demand for high cost services. As such, economic restructuring leads to a self-perpetuating situation of population change, ageing and decline for many regions.

Spatial

While both demographic and economic factors influence population change, a spatial perspective considers how this change occurs unevenly between and within regions. The consequences of population change are not uniform as some areas experience growth, while other nearby areas experience decline.

Spatial differences in population change is explained by concepts such as shrinkage, urbanisation, suburbanisation, and peripheralisation.

Shrinkage

Shrinkage is a spatial consequence of depopulation, evident by the physical decline or degradation of built environments, in addition to statistical demographic evidence. Shrinkage is characterised by ‘an interplay of different macro-processes at the local scale’ which are often interdependent and self-reinforcing*. The trajectory of shrinkage in both cities and regions is not linear, and this contributes to how decline occurs unevenly, in fact, ‘there can be growing cities in shrinking regions, shrinking cities in growing regions and shrinking places right next to growing places’*.

While shrinkage is a consequence of economic and demographic change, there are also specific outcomes which directly relate to spatial change, for example a mismatch between supply and demand in the housing market, empty lots and vacant housing, and underutilised infrastructure (sewerage, water supply, electricity, heating etc) which can lead to an increase in cost for public
services. There are also several perceived positives of shrinkage, including a relaxed housing market, more space available, less traffic, less pollution, less growth pressure, the ability to catch up with demands for new infrastructure and counter-development.

Localised shrinkage scenarios point to the need for place-based strategies and responses, as there is considerable variation depending on where decline occurs and also what economic and demographic factors are driving the change.

Urbanisation, suburbanisation and counter-urbanisation

Three key mechanisms of population change from a spatial perspective are urbanisation, suburbanisation and counter-urbanisation, which describe population shifts to and from urban areas.

Urbanisation describes the movement of people into cities from rural areas or other smaller cities or towns. Reasons for urbanisation are mostly related to economic drivers, for example migration into cities for employment or to pursue education, alongside migration for lifestyle, cultural or social reasons.

Suburbanisation is the redistribution of people into areas within commuting distances of urban centres. Often, people will continue to work in urban areas and travel between their homes and employment. Counter-urbanisation is the migration of people away from urban centres to rural areas and small towns. However, it differs to suburbanisation as it leads to growth that is detached from urban cores. Counter-urbanisation can transform rural areas as population growth leads to the development of new housing estates, services and infrastructure.

Drivers of both suburbanisation and counter-urbanisation include changes in preferences (more attractive living environments, spacious houses in quiet settings, family formation etc.), transport and technological improvements, competitive housing prices, and changes in the economy and redistribution of employment. Dissatisfaction with urban areas for reasons such as pollution, traffic congestion, and poor-quality houses/buildings are also significant push factors.

From a regional perspective, urbanisation, suburbanisation and counter-urbanisation all contribute to spatially uneven population trends as cities, suburbs or towns either grow or decline, often at the expense of other places in the region. As such, any future population growth potential is shaped by the changing age structure resulting from these migratory movements.

Peripheralisation

Peripheralisation describes the mechanisms that drive periphery and centre relations; reflecting either a strong connection or ‘the logical consequence of centralisation’. While some cities and metropolitan areas which undergo economic restructuring also attract population growth, their periphery regions often experience decline and thus become both ‘disconnected from, and dependent on’ nearby urban centres. Whereas, for other multi-functional regions a strong periphery supports a strong urban or service centre. The relationship between the centre and the periphery is often characterised by uneven economic, political, geographical, social and demographic development.

As is the case for Shepparton in Victoria, Australia – see Institute for Social Change case study
In the past, peripherals have been defined by their physical distance from urban centres. Peripheralisation, on the other hand, is a process-oriented concept which focus on the economic, social, demographic and political processes that either drive centre-periphery inequalities or multifunctionality, rather than the rigidities of distance. Peripheralisation is therefore useful for exploring regional population change as it helps to unpack the interactions between these multi-dimensional processes and relationships.

As peripherals are not dictated by geographical boundaries, from a peripheralisation perspective, peripheries are socially and economically produced. How a particular region is portrayed and/or perceived influences for the decision-making process of individuals, households and organisations to leave the region or stay, whether to (dis-)invest and also whether to establish, maintain or abandon services. Often, perceptions of peripherals are embedded in discourses of deficit and negativity which can contribute to further population decline.

As peripheralisation can affect whole regions, specific areas or even individual people, it is considered a multi-level phenomenon that has the potential to link processes and developments at the macro level to their consequences at the micro level. A multi-level approach allows for an understanding of interactions between multiple domains. Thus, strategies and responses to population decline associated with peripheralisation can incorporate different perspectives at these levels.

Peripheralisation is underpinned by interactions between multi-dimensional drivers from economic, social, spatial, demographic and political domains which interdependently influence population change. Examples of economic drivers include centralisation processes such as economic productivity in urban centres disadvantaging other areas of the region, economic restructuring and lack of integration of peripheral areas in business networks and the global markets. From a social perspective, population change can be driven by negative perceptions about the region which may influence decisions to migrate, invest or maintain services. Spatial drivers include geographical isolation and remoteness, poor transport links, and poor infrastructure. Political factors which influence population decline in peripheral regions include a dependency on the centre due to a lack of decision-making powers.

A combination of these drivers may result in the following outcomes: a restricted region with structural deficits (economic, demographic, social, cultural and political), a lack of opportunity for residents, selective out-migration (youth, females of reproductive age, brain drain), a disconnection from infrastructure, a lack of economic and social innovation including regional innovative capacities, little provision of higher education, a low skilled labour force, a reliance on funding from government, low fiscal revenue and high welfare dependence.

Types of depopulation

There are two types of depopulation. The old type is largely linked to short-term economic drivers, resulting from natural increase not being sufficient to offset a decline from net migration losses. This type of depopulation can be reversible, provided the demographic profile of the area is favourable. The new type of depopulation is underpinned by long-term demographic drivers resulting in natural decline. It can be demographic only (when natural decline is greater than migration gain) or absolute (when there is a combination of natural decline and net migration loss). It is unlikely that an area would be able to recover from this new type of depopulation.
The proposed tipping point for sustained population decline is when an area reaches the onset of natural decline. From this point, the area is unlikely to ever achieve long-term population growth\textsuperscript{xii}. This is likely to occur once an area begins to experience ‘hyper-ageing’ – when more than 20 percent of the population is 65 or older.\textsuperscript{xiii} It is self-perpetuating, as natural decline tends to occur due to age-selective migration rather than low fertility rates. This situation, known as migration-accelerated ageing or migrant-driven natural decrease\textsuperscript{xiv}, has been occurring in almost all of Tasmania’s non-urban LGAs.

This new type of population decline is already a reality for several LGAs in Tasmania and is an imminent likelihood for many others within the next decade which will also possibly be expediated by the impact of the COVID-19 global pandemic.

Types of policy approaches to population ageing and/or decline

Although population ageing and decline trajectories are difficult to reverse once hyper-ageing is evident, management of the consequences and opportunities associated with the demographic transition is possible. Smart policy intervention needs to respond to the unique interplay of the myriad of political, economic and social factors at different spatial scales. Addressing population change requires policy that runs both horizontally and vertically across different policy sectors and levels of government, alongside addressing both short and longer-term challenges\textsuperscript{xv}.

There are three broad types of policy responses to population ageing and/or decline:

- strategic intervention to mitigate depopulation (known as countering strategies),
- acceptance strategies to manage decline and its consequences or,
- doing nothing (non-intervention).\textsuperscript{12}

On their own, countering and accepting strategies have limitations given populations that are experiencing depopulation, or are projected to decline, are likely to also be experiencing population ageing. For countering only strategies, the failure to acknowledge that population ageing occurs concurrently with population growth strategies, also fails to address the needs of more older people in a society. For accepting only strategies, responding to the risk of depopulation with a focus on managing decline, contains the risk of becoming a self-fulfilling prophecy.

Countering strategies

Countering strategies tend to focus on stimulating both economic and population growth, largely through proactive measures to attract or retain people and investment. They aim to increase spending in the area (e.g. tourism and international students) on the basis that this will lead to job creation and as an incentive to live in the area.

Countering strategies can be viewed from within the three different lenses of population decline. From a demographic perspective, policies designed to stimulate demographic growth may include in-migration policies, integration policies to retain immigrants, strategies to target skill shortages, increased accessibility of child-care, kindergartens and schools to attract young families, and place-

\textsuperscript{12} For a full explanation and assessment of types of policy responses to depopulation, see commissioned report by Rachel McMillan “Strategic Interventions to Population Decline” for the Local Government Shared Services, University of Waikato, Hamilton, New Zealand.
promotion strategies. From an economic perspective, strategies designed to increase economic growth and labour market opportunities may include investment into new businesses and industries, diversification of local economy, innovation (knowledge/technology) and entrepreneurship, and incentives for business to relocate to regions. From an urban planning perspective, strategies include those that support the development of the built environment e.g. building attractive houses, public spaces and facilities, and transport infrastructure for increased accessibility to attract people and economic growth.

Countering strategies have been found to slow population decline, but not reverse it, given underlying population age structures. The success of any intervention depends on the location and the economic and demographic profile of the area. However, employment alone is not enough to offset migration out of an area; the provision of social services and improved amenity has also been identified as having a greater impact than investment in infrastructure.

Examples of countering strategies at a regional scale are available in case studies in the Appendix of this report.

1) Poland – Katowice
2) New Zealand – Southland
3) Canada – Newfoundland and Labrador

Accepting strategies

Accepting strategies focus on maintaining the quality of life for the existing population by continuing, or strategically downsizing, services and infrastructure to meet the needs of a changing population. While demographic policies aim to maintain or increase the quality of lives of current residents and/or older people by investing in health and aged care or active ageing, economic policies tend to take a political or governance standpoint. These policies aim to restructure service provision to increase efficiency, such as closing or merging facilities, inter-municipal co-operation, changing governance procedures or collaborating with the private sector. Policy interventions include investment in social services and networks and changing governance structures to enable consolidation, economies of scale and greater flexibility of assets and services. However, these types of depopulation strategies have also been shown to become a self-fulfilling prophecy.

Non-intervention

The third type of policy response, non-intervention, may be the result of denial or ignorance, or it can involve an active decision to allow the free market to determine whether an area survives or not.

*Whichever path is chosen, an ageing population and eventual depopulation is the most likely trajectory that will affect sub-state areas first. How an area responds to the challenges associated with population ageing will depend on local context, governance and the community and political will to respond.*

Combined approach

A combined approach to population ageing and decline utilises policy initiatives that aim to encourage growth, both economic and demographic (countering strategies), but also respond to the needs of a changing, and likely, ageing, population (accepting strategies).
The key objective of a combined approach is to collectively grow the economy, slow the rate of population ageing (or decline) and meet the needs of an older population by identifying areas of economic opportunity associated with an older population.

More specifically, in a combined approach, new drivers of economic growth are identified and prioritised in terms of the demographic, economic and spatial profile of the region. Economic opportunities associated with an older population are often referred to as the silver and/or white economy. This involves reassessing, and resetting, the economic base of the region which may differ considerably from the traditional industry sectors of the region, reforming labour markets as well as maintaining the standard of living for the population on an age-related needs basis, including access to infrastructure, services and amenities.

Strategic policy responses: accepting and combined initiatives

This section provides examples of strategic initiatives according to type of policy response.

Accepting only strategies

Policy interventions accepting the process of ageing and the changing needs of a population either in decline, or projected to decline, aim to deliver appropriate services, amenities and infrastructure to meet the needs of the population as it changes. Interventions focus on maintaining the quality of life in the community, including older people, families and young people by providing access age-appropriate infrastructure, services and amenities, and encouraging social cohesion. To do this, restructuring of governance arrangements may also be required.

Populations that are declining or projected to decline are most likely also ageing. An ageing population will typically have different needs compared with a younger age structure, for example older people need increased access to aged and health care, transport, flexible employment opportunities and different types of community organisations i.e. senior clubs.

Positive ageing

Positive approaches to ageing include policies which support initiatives such as ‘active ageing’ and ‘age-friendly cities’.

Active ageing policies are strategies that provide older people with the opportunity to engage with their community and access age-friendly facilities and services\textsuperscript{\textbullet}. The primary aim of active ageing is to support people to age successfully and prevent social exclusion. Examples include providing subsides and discounts for facilities (such as gyms and swimming pools), access to community facilities (e.g. libraries), holding senior events, supporting seniors clubs and providing local transport options. However, regions which are spatially isolated and characterised by lower socio-economic status (SES), are less likely to implement active ageing policies due to lack of resources.

Fostering age-friendly cities also involves urban planning for ageing; ensuring that the urban environment is suitable for a growing older population in terms of community construction, public (and private) transport and living facilities.

Service provision restructuring

As populations change and age, demand for public services also change. Older populations require increased accessibility to services such as health and aged care, while other services such as primary
schools are in less demand. At the same time, revenue for public service providers is diminishing so efficiency of service provision is required while maintaining an appropriate level of service.

Responses to ensuring provision of services in an efficient manner include the clustering of services in multiple facility buildings, coordinating with other municipalities or nearby regions to deliver high quality services, relocating funding (e.g. from declining school to aged care),

A key aspect of service provision restructuring is place-based policy driven by flexible and agile governance structures. Consequently, local governments should be able to respond to challenges in contemporary or novel ways.
### Table 1 - Examples of positive ageing

<table>
<thead>
<tr>
<th>Region/Policy</th>
<th>Objective/Issue</th>
<th>Approach/Policy</th>
<th>Outcome</th>
<th>Comment/Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beijing, China</strong>&lt;sup&gt;xvii&lt;/sup&gt;</td>
<td>To provide services to assist older people to improve/maintain their quality of life.</td>
<td>The Measures of Preferential Treatment for the Beijing Aged People is a policy which provides free transport, entertainment and cultural activities, medical and healthcare to improve the quality of life for elderly people</td>
<td>1.7 million aged people above 65 were granted preferential cards</td>
<td>While the program would likely improve the quality of life for over 65s, it is likely to be expensive. Funding: local government</td>
</tr>
<tr>
<td><strong>United States, Australia and Europe (~200 villages)</strong>&lt;sup&gt;xviii&lt;/sup&gt;</td>
<td>To provide the means and support for older people to stay in their homes.</td>
<td>An ageing-in-place model that offers services to assist older people to remain in their homes to retain independence alongside fostering social networks. The village model program provides a range of services, including transport, housekeeping, social support, referrals for other health and social services.</td>
<td>A survey of Village members in California (n=282) found that the model was successful for fostering social engagement (79% knew more people, 59% felt more socially connected) and 89% had used at least one village service in the previous year (social or educational events were the most used, followed by information and assistance, and driving and transportation services).</td>
<td>Good initiative to foster social cohesion amongst older people. Leadership and community engagement: grassroots groups Funding: annual memberships</td>
</tr>
<tr>
<td><strong>Naturally Occurring Retirement Communities, (NORC)</strong>&lt;sup&gt;xix&lt;/sup&gt;</td>
<td>The provision of ageing-in-place services for older people.</td>
<td>NORC provides health and social services to low income elderly</td>
<td>A survey of NORC employees (n=62) found that access to services was</td>
<td>As a significant proportion of participants needed help with personal care, the</td>
</tr>
<tr>
<td>Local Government Areas, NSW&lt;sup&gt;xx&lt;/sup&gt;</td>
<td>To determine strategies that exist to assist older residents to age actively and participate in their community, and the differences between LGAs.</td>
<td>Developed strategies to encourage active ageing include subsides for council accommodation, hall hire, entry into facilities (gyms and pools), access to community facilities such as libraries, community centres and sport and recreational facilities, access to community transport for shopping and attending health care appointments etc.</td>
<td>Socio-economic status has a significant influence on the ability of LGAs to provide active ageing resources and infrastructure. Older, more rural LGAs with lower SES status will have more difficulty providing resources. For example, less community transport services exist outside of metropolitan areas, even though there is less public transport and larger distances in these areas.</td>
<td>Inequity of access is a significant problem for providing resources to older people to age actively and successfully. Thus, there needs to be an integrated response involving federal, state and local governments to provide necessary resources.</td>
</tr>
<tr>
<td>Opole, Poland&lt;sup&gt;xxi&lt;/sup&gt;</td>
<td>To increase access to aged care services, promote ‘Golden Autumn’ strategies included senior events, etc.</td>
<td>Local governments were surveyed to determine how</td>
<td>Findings show that active ageing strategies and digital</td>
<td></td>
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<tr>
<td>Area</td>
<td>Focus</td>
<td>Strategies</td>
<td>Funding</td>
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<tr>
<td>Active Ageing and Develop Digital Literacy</td>
<td>Activities, training sessions, educational projects, job seeking techniques, and digital literacy.</td>
<td>Golden Autumn was implemented across municipalities (n=40). Holding events for seniors, activities that encouraged hobbies and training for computer use were the most popular strategies for active ageing and digital literacy. Others included senior clubs, courses and training for seniors and senior educational projects. Training for job seeking techniques and formal education qualifications were offered by only a few of the municipalities. Providing new aged care services or improving the quality of existing ones was also less likely to be implemented.</td>
<td>Funding: regional government.</td>
<td></td>
</tr>
<tr>
<td>Brussels, Belgium</td>
<td>To develop evidence-based policies to support age friendly cities.</td>
<td>The Belgian Ageing Studies project aimed to identify several domains of city life important for positive ageing (community safety, housing, mobility, social life, socio-economic). A seniors service for older city residents was one initiative which included social meeting places for older people, portal for volunteers with various activities, sports card with access to facilities and Community engagement: older people held a key role in setting the agenda and making decisions for age friendly cities.</td>
<td>Community engagement: local government and other</td>
<td></td>
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<tr>
<td>Development, information, and health</td>
<td>leisure activities. In 2017, 11,287 participated in the programs (68% women).</td>
<td>stakeholders (the Senior Advisory Council, local social services). Funding: local government.</td>
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</table>
Table 2 - Examples of service provision restructuring

<table>
<thead>
<tr>
<th>Region/Policy</th>
<th>Objective</th>
<th>Approach</th>
<th>Outcome</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ostrava, Czech Republic</td>
<td>To address the oversupply of social infrastructure in a shrinking city and fiscal implications.</td>
<td>The project involved repurposing closed kindergartens and primary schools for more appropriate use (e.g. tertiary education or aged care).</td>
<td>The allocation of vacant buildings to new university faculties, i.e. Faculty of Civil Engineering in Poruba. The number of university students in the city have tripled between 1990-2010. Aged care facilities and more diverse housing options for elderly people were constructed in response to increased demand for appropriate housing for seniors.</td>
<td>Secondary schools are also decreasing and may need to be downsized or re-allocated/purposed. Leadership and funding: State and local governments in collaboration with EU structural funds.</td>
</tr>
<tr>
<td>Südburgenland, Austria</td>
<td>Some public services were no longer cost effective as the number of inhabitants and GDP per capita were both decreasing in the shrinking region.</td>
<td>To adapt the provision of services to those needed in shrinking areas, including potential cessation of services.</td>
<td>Most kindergarten facilities and public transport lines closed (except for school bus routes). Local retail stores co-funded by municipalities and thus have lower rents, allowing them to remain open.</td>
<td>With the closure of public transport lines – this could create issues in equity, particularly for older, disabled or disadvantaged people. Leadership and funding: regional and local governments.</td>
</tr>
<tr>
<td><strong>Northeast Scotland, UK</strong>&lt;sup&gt;xxv&lt;/sup&gt;</td>
<td>As the region experienced population decline, the quality of services (such as schools) were also declining and infrastructure was becoming degraded.</td>
<td>The Reorganize, Renovate and Rebuild policy was implemented which aimed to retain and maintain a high quality of services for the existing population through a private/public partnership.</td>
<td>Multiple schools experiencing declining enrolments were merged into new schools with modern facilities to maintain quality of education services. Public buildings were repurposed to provide multiple services such as library, police station or social work services.</td>
<td>The 3Rs project was expected to cost £120 million, however £412 million in loans was still owed from the council to the private company 6 years after completion. This was partially due to the GFC and issues with the bank. However, it is argued that costs to maintain numerous older and degraded schools would have been much higher. Leadership and funding: private company and local government (public-private partnership)</td>
</tr>
<tr>
<td><strong>Östergötland County, Sweden</strong>&lt;sup&gt;xxvi&lt;/sup&gt;</td>
<td>To ensure quality of public services remains high despite shrinkage</td>
<td>Inter-municipal cooperation (IMC) agreements were implemented. These were formal agreements between municipalities aimed at avoiding the reduction in quality of services and adapting to a shrinking population.</td>
<td>Outcomes included lowered maintenance of streets, parks and facilities, and the reallocation of funding from declining schools to aged care as well as merging of schools.</td>
<td>In countries like Sweden (high tax, publicly funded services), delivering high quality services is a priority Leadership and funding: regional government Governance: inter-municipal cooperation.</td>
</tr>
</tbody>
</table>
Combined Accepting and Countering Strategies

The key objectives of a combined approach are to collectively grow the economy, slow the rate of population ageing (or decline), meet the needs of an older population by identifying areas of economic opportunity, and to provide high quality services and infrastructure to the broader population.

Two policy frameworks which support a combined accepting and countering strategy approach to ageing populations are the silver economy and the white economy. Collectively, these can be broadly explained as the eco-system of products and services for older people and includes:

- existential needs of older people
- needs of older consumers
- needs of older employees
- needs of employers/organisations providing and servicing older people’s needs

The Silver Economy

The development of a silver economy is an opportunity for increasing regional economic activity by an older population. Silver economy initiatives have two key aims, first, to foster economic growth by tapping into opportunities presented by an older population and second, to provide goods and services to address the growing needs of older consumers.

Investment in the silver economy can assist in combating negative rhetoric and assumptions of economic downturn as a consequence of ageing. Previously, the silver economy has been perceived as a low profit and high-risk industry, with its value largely overlooked. Older people have generally been viewed as unproductive consumers of resources, however the industry is now increasingly acknowledged for its market potential. The silver economy encourages older people to live a more meaningful and quality life in their later life stages, driven by consumption of leisure activities, participation in society and the economy, as well as the provision of products and services for an older population. The silver economy is based on providing goods and services for an older consumer and can range from recreation and leisure, entertainment and tourism, health-care products (crutches, glasses, hearing aids, adult diapers), mobility scooters, transport, and accommodation and assisted living.

Employment initiatives for older people that are designed to increase participation in, and stimulate, the economy are also considered part of the silver economy, including education, training and skill development. Policies may include creating incentives for businesses to employ older people or encouraging workplaces to implement age management policies such as flexible working hours, opportunities for older workers to update their skills and better health and safety.

Universities of the Third Age (U3As) is an international program that promotes lifelong learning for retired seniors. While there is an International Association of UTAs, there are many different approaches to the program. Since 1998, an online network called U3A Online has been established which has acted as an informal network between countries and regions. Some programs also have established links to traditional universities which often have access to university courses and offer open lectures and study groups.

Economic growth within the silver economy is contingent upon three factors: an increase in the proportion of elderly consumers, their relative wealth and related spending habits, and policy decisions which initiate and support growth within the silver economy.
However, the perception also that some goods and services are geared towards wealthy older people, may influence government decisions to facilitate and/or promote investment (or not) in this sector.
### Table 3 - Examples of Silver Economy strategies

<table>
<thead>
<tr>
<th>Region/Policy</th>
<th>Objective</th>
<th>Approach</th>
<th>Outcome</th>
<th>Comment/Evaluation</th>
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</thead>
<tbody>
<tr>
<td>Europe</td>
<td>To develop competitive tourism products and services for elderly people.</td>
<td>Developed a five-unit training program for tourism providers (e.g. travel agencies and tourist information offices).</td>
<td>The program provides a foundation for understanding the needs of silver tourists and how to design and market appropriate products and services.</td>
<td>Funding: European Commission</td>
</tr>
<tr>
<td>Canada</td>
<td>To address high unemployment rates in older people and the need for older workers to remain in the workforce for longer.</td>
<td>A national policy, Targeted Initiative for Older Workers, designed to support older (55-64 years), unemployed workers to find employment, with a focus on regional communities. Programs include employment assistance training, skills training, peer mentoring and wage subsidies for employers.</td>
<td>An evaluation was conducted and 53% of respondents found employment during or immediately following the program. 75% of respondents found employment within two years following their participation in the program.</td>
<td>Upskilling and skills training are crucial to support an older workforce, alongside providing wage subsidies as an incentive for employers. Funding: national government.</td>
</tr>
<tr>
<td>Mid-East Region, Ireland</td>
<td>To support older people into entrepreneurship to keep them economically active and increase productivity and employment.</td>
<td>The Senior Enterprise Initiative provides training, workshops and networking opportunities to over 50s to assist with starting their own businesses or investing in existing businesses.</td>
<td>Between 2010-2012, over 600 people aged over 50 years participated in workshops and courses.</td>
<td>As entrepreneurship involves risks and uncertainties, greater awareness and engagement can provide incentives for business ambitions. Leadership: European Commission</td>
</tr>
<tr>
<td>Country</td>
<td>Summary</td>
<td>Initiative Details</td>
<td>Funding</td>
<td>Notes</td>
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<tr>
<td>United Kingdom</td>
<td>To provide older, unemployed people with access to finance and services to become self-employed.</td>
<td>The Prince’s Initiative for Mature Enterprise (PRIME) offers start-up finance and services for unemployed over 50s. Services include workshops, training, networking events, business advice and mentoring.</td>
<td>European Commission, regional government, private companies and charity organisation (public-private partnership).</td>
<td>Older people who are unemployed are less likely to start their own businesses and therefore require extra support. PRIME also has a regional focus, with projects occurring in places which have experienced deindustrialisation and structural employment. Leadership: charity organisation established by the Prince of Wales. Funding: charity organisations and corporate donors.</td>
</tr>
<tr>
<td>Germany</td>
<td>To increase employment of over 50s and find regional solutions to unemployment or gaps in labour market.</td>
<td>The Perspective 50plus: Employment Pacts for Older Workers in the Regions (50-64 years). supports employers of older workers with an integration subsidy</td>
<td>National government.</td>
<td>Incentives for employers to boost the employment of older people. Leadership and funding: national government.</td>
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</tbody>
</table>
of 50% of wages with an agreement to employ workers for a mandatory period.

<table>
<thead>
<tr>
<th>United Kingdom</th>
<th>The need for a policy to encourage the employment of older workers and improve their working conditions.</th>
<th>A large-scale supplier in the UK has implemented an Age Management Policy. An ageing awareness program has provided all employees with training and information about the ageing population and implications.</th>
<th>The company offers flexible or reduced working hours, pre-retirement leave, and carers leave for older people. Mentoring programs for older people to play a role in developing the skills of the younger workforce. Apprenticeship schemes and graduate programmes have no age limit.</th>
<th>Policies should be in place to encourage the employment of older people, with flexible working conditions. Education/awareness is also very important so that older employees are accepted in the workplace. Leadership and funding: private company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nowy Sacz, Poland</td>
<td>To provide retirees with the opportunity to reskill and then volunteer.</td>
<td>The University of Third Age Initiative enabled retirees to undertake free diplomas to become medical assistants. Both theoretical and practical skills training in rehabilitation hospitals and social welfare houses.</td>
<td>After obtaining their medical assistant diplomas, three graduates became volunteers in a local hospice.</td>
<td>Retirees can contribute to productivity if provided with opportunities. Funding: Banking Education Association</td>
</tr>
<tr>
<td>Australia UK</td>
<td>To provide retirees with lifelong educational opportunities and/or to maintain mental stimulation in the third age.</td>
<td>In Australia and New Zealand, U3As started a grassroots movement in the 1980s but has progressively become more formal with time, and in 2008 won a $15 million grant from the Australian Government to provide Broadband for</td>
<td>In Australia: 250 U3As with approximately 85,000 students enrolled. In UK: 1000 U3As with 350,000 people enrolled, running 36,000 courses.</td>
<td>U3As are usually run by volunteers, and participants are mostly awarded certificates instead of formal qualifications. Some U3As collaborate with other educational providers to provide formal education.</td>
</tr>
<tr>
<td>Seniors throughout the country. In Britain, UTAs follow a more flexible and independent model which has lower membership fees, flexible timetables and courses and limited academic requirements or constraints.</td>
<td>Leadership and funding: mostly run by volunteers supplemented by membership fees and donations (community engagement).</td>
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| **Sweden/Austria**¹² | Employment agencies specifically for older people. | The Seniorjobbarna initiative provides work in areas such as crafts, cleaning and gardening. The Austrian Senior Expert Pool provides consultancy services in highly specialised technical areas. | Targeted employment agencies can provide elderly people with the support and resources to find employment. |
The White Economy

The white economy refers to ‘products, services and activities related to healthcare and care including the dependent, disabled and elderly’xlii. White economy initiatives include investing in health care and its workforce including doctors, nurses and other health care specialists to adapt to the needs of an ageing population and related conditions, alongside new technologies and types of services which is fundamentally different to what is understood to be mainstream healthcare. The increasing demand for health care services resulting from ageing may include shifting the focus of health care from prevention and curing to one that emphasises management of symptoms and the variability of symptoms, as demands on the health sector increase.

The white economy extends beyond just the provision of health-related services, to transport and logistics, new product development and manufacturing, research and development and the expansion of such initiatives such as telemedicine, remote monitoring and rehabilitation as well as career upskilling.

Essential to the white economy are the innovative technologies that have emerged as creative solutions to address the needs of the elderly, including roboticsxliii, driverless carsxliv, and ICT/smart living solutions.xlv More recently in response to the COVID-19 global pandemic, contemporary manufacturers have responded with the production of medical equipment such as ventilators, Personal Protective Equipment (PPE) and other innovative products.

See the Appendix for a Case Study on the North Denmark region which successfully imple telehealth initiatives.
### Table 4 - Examples of White Economy policy initiatives

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<thead>
<tr>
<th>Region/Policy</th>
<th>Objective/Issue</th>
<th>Approach/Policy</th>
<th>Outcome</th>
<th>Comment/Evaluation</th>
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<tbody>
<tr>
<td><strong>Saxony, Germany</strong></td>
<td>To ensure that appropriate medical services are accessible to residents to provide medical services in a declining region.</td>
<td>The AGnES: mobile nursing program supports nurses to travel to the homes of older residents who cannot travel themselves and provides them with health and aged care services, such as medication management, blood samples, wound care and observation of symptoms, alongside liaising with doctors. Nurses are required to obtain an extra qualification to be employed under the program.</td>
<td>Has alleviated pressure on doctors and reduced waiting times in local GP clinics.</td>
<td>Program also had social implications as many elderly people suffer from loneliness and enjoyed the extra support. Leadership: The University of Greifswald initiated and supervised the project. Funding: the state government.</td>
</tr>
<tr>
<td><strong>Aberdeen City, Northeast Scotland</strong></td>
<td>To reform aged health and social care services and focus on delivering high quality services and promoting independence and wellbeing for ageing populations</td>
<td>Policy measures have included anticipatory care planning, centralised referral processes, development of preventative services, carers assessments for unpaid carers and addressing delayed discharges from hospital. Anticipatory care planning involves GPs working with elderly people to pre-plan for health and palliative care.</td>
<td>Decreased strain on health system as less elderly people are admitted to emergency.</td>
<td>Although progress was made with anticipatory care planning, care at home provision is a significant challenge and there is not sufficient staff to meet these growing demands. Funding: £11.8 million in funding from the national government to the city council.</td>
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<tr>
<td>Location</td>
<td>Objective</td>
<td>Strategy</td>
<td>Outcomes</td>
<td>Notes</td>
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<tr>
<td><strong>North Denmark</strong></td>
<td>To ensure access to health services from remote locations.</td>
<td>The introduction of telehealth services to provide high quality, patient-centred healthcare in an ageing population using technological solutions. An example includes home monitoring to allow patients to self-measure indicators, such as blood pressure or pulse rate, while healthcare professionals monitor the data externally.</td>
<td>Home monitoring was used for 1,400 patients with a chronic disease. Patients reported improved quality of life and number and length of hospitalisations decreased.</td>
<td>Telehealth is a solution to improve efficiency in health care and provide good quality services, particularly in spatially isolated areas. Leadership: strong collaboration between national, regional and local governments with health care providers. Governance: cooperation between different levels of government.</td>
</tr>
<tr>
<td><strong>Beijing, China</strong></td>
<td>To ensure that older populations have access to age-appropriate services in their homes.</td>
<td>A home-based care initiative provides elderly people with home-based care. Home-based care services include daily care, housekeeping, recovery care, mental health support and education.</td>
<td>Since 2010, all aged people above 80 years are provided with a monthly coupon to exchange for six types of services.</td>
<td>This service supports an ageing-in-place model. Leadership and funding: local government</td>
</tr>
<tr>
<td><strong>China</strong></td>
<td>To address the growing demand for aged care.</td>
<td>National five-year plan to provide more aged care services and improve living environments in nursing homes.</td>
<td>80% of towns and villages and 50% of urban communities launched more aged care facilities over the 5 years, with a significant increase in number of beds (62% increase). In China, there is a total of 38,060 nursing homes providing a</td>
<td>Despite efforts, China continues to experience rapid ageing with large gaps between rural and urban areas. Leadership and funding: national government.</td>
</tr>
<tr>
<td>Region</td>
<td>Description</td>
<td>Initiative Details</td>
<td>Outcomes</td>
<td>Funding Sources</td>
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<tr>
<td>Western Australia</td>
<td>Increase the capacity and services of the aged care workforce in regional locations.</td>
<td>The Social Assistance and Allied Health Workforce Strategy outlines the need for funding for aged care workers (Certificate IV in Ageing and Certificate III in Individual Support), training programs for school-aged students and incentives for employers to upskill their workers.</td>
<td>Between July- November 2019, funding for more than 3,500 aged care training places was provided.</td>
<td>A good example of policy that anticipates an increasing need for aged care workers. As strategy was only released in 2018 outcomes are yet to be determined.</td>
</tr>
<tr>
<td>Australia</td>
<td>A need for more allied health workers in rural areas.</td>
<td>The Allied Health Rural Generalist Workforce and Education Scheme was designed to incentivise allied health professionals to take up employment in regional areas. Extensive training for rural practice was also provided.</td>
<td>An evaluation of a trial in QLD found that investing in high quality training and support for health workers was highly beneficial for recruitment and retention. This also increased service capacity and improved service quality in rural areas of QLD.</td>
<td>To incentivise health workers to take up employment in rural areas, high quality training programs are essential.</td>
</tr>
<tr>
<td>Europe</td>
<td>To provide assistance for the elderly.</td>
<td>Under the CompanionAble project a robot was developed which provides</td>
<td>An evaluation of the robot found the robot to be useful for elderly with mild dementia.</td>
<td>Innovative technologies such as robots have the potential to generate significant benefits.</td>
</tr>
<tr>
<td>Assistive technologies for elderly people with mild cognitive impairment, including facilitating contact with family members, detecting accidents and falls, social assistance and greetings, cognitive stimulation and reminders for medication or events.</td>
<td>Cognitive impairment or early dementia with high reliability, and low maintenance costs.</td>
<td>Significant economic outcomes when designed properly. Funding: 7.8 million euros from the EU for the trial project.</td>
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</table>
Revitalisation and repurposing of the built environment

As regional populations age and/or decline, their town centres and public spaces also deteriorate, creating a fragmented and under-utilised spatial structure. This can result in a disconnect between the changing needs of the community and the provision of public infrastructure, services and amenities.

The visible degradation (including vacant premises) of the built environment, for example houses, buildings and other public infrastructure can impact the perception of the place and detract people from living there. Policy initiatives that target the revitalisation of a town centre and its periphery in response to shrinkage have two main aims; to improve standards of living through urban renewal while maintaining cultural heritage and to improve social cohesion. This requires a shift from supply planning to demand planning. Regeneration encourages a focus on the existing built environment and includes the demolition or restoration of vacant, old or non-energy efficient buildings as well as historical landmarks; the revitalisation, repurposing and ‘right-sizing’ of public infrastructure and streetscapes; the development of brownfield and greenfield sites within urban zones; and, restrictions to curb suburbanisation and urban sprawl as well as appropriate scaling to ensure both improved service provision and liveability in the region.

Another form of restoring built environments is within the context of ageing. For older populations and smaller household sizes, changes in infrastructure and services provision will be required, including urban design, transport and amenities which increasingly focus on quality of life, well-being and social cohesion issues. Larger numbers of older people now live alone, and these new household formations pose additional challenges in terms of access to health care and social assistance as well as recreation and leisure activities and community involvement.

See the Appendix for a Case Study on the Parkstad Limburg region in the Netherlands region which successfully revitalised and repurposed its built environment using a range of initiatives.

Special Economic Zones

Traditionally a countering only strategy used in Poland to address population ageing and decline, the concept of a special economic zone (SEZ) can be equally applied to a silver or white economy policy framework.

The key aims of SEZs are to attract foreign investment, create employment in regional areas, develop and maintain post-industrial infrastructure and provide non-financial support (i.e. information on regulatory frameworks and administration processes). Major aspects of SEZ policy include more liberal economic laws, providing state aid to investors through tax exemptions, and support with development of land (brownfield sites etc) and infrastructure.

See the Appendix for a Case Study on the Katowice region in Poland which successfully developed a Special Economic Zone.
<table>
<thead>
<tr>
<th>Region/Policy</th>
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<th>Outcome</th>
<th>Comment/Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parkstad Limburg, The Netherlands&lt;sup&gt;iv&lt;/sup&gt;</td>
<td>To improve the quality of life of current residents by addressing the degradation of neighbourhoods due to depopulation.</td>
<td>A Neighbourhood redevelopment Project involved demolishing old, vacant and non-energy efficient houses and buildings. A focus of the redevelopment was right-sizing; better quality, insulated and appropriate houses.</td>
<td>Between 6,000 and 14,000 houses needed to be demolished, and around 12,000 needed to be restructured. Improved neighbourhood liveability</td>
<td>Figures regarding actual number of houses demolished are not available. Leadership: regional authority Funding: It was estimated it would cost around €285 million to redevelop houses in the five neighbourhoods most affected by shrinkage, and around €2.6 billion to redevelop houses in the entire region.</td>
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<tr>
<td>The Netherlands&lt;sup&gt;iv&lt;/sup&gt;</td>
<td>To restore town centres. In declining town centres, shop closures have left vacant properties adjacent to operating shops, resulting in fragmented spatial structures. Outdated business facades, public spaces, bad sewerage and parking issues are also significant issues.</td>
<td>An initiative based on urban land readjustment involved areas with high levels of vacancy and enabled private property owners to voluntarily exchange sections of their property with other owners to assist with redeveloping the area. This initiative is a collaboration between private developers, the municipality and landowners, where local government acts a broker.</td>
<td>Two towns experienced different outcomes. The approach was successful in Deventer as local retailers were active and engaged with the process. In Dordrecht, property owners could not come to an agreement.</td>
<td>Public-private partnership/community engagement: outcome is dependent on whether the collaboration between the public, government and private developers is successful. Leadership and funding: local government.</td>
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*See Appendix for case study*
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<thead>
<tr>
<th>Leipzig, Germany&lt;sup&gt;lvi&lt;/sup&gt;</th>
<th>To restore architecturally important but vacant and decaying houses in the inner-city.</th>
<th>Through a guardian houses program, through an organisation, renters signed a contract with the owner of the house they lived in and instead of paying rent they maintained or renovated the house.</th>
<th>An inner-city house that had been vacant for many years was converted into studio lofts for students at nearby Academy of Visual Arts.</th>
<th>Leadership/community engagement: A good example of a bottom-up program as it was initiated by a group of local architects and planners.</th>
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<tr>
<td>Leipzig, Germany&lt;sup&gt;lvi&lt;/sup&gt;</td>
<td>To address prevalence of vacant land in a shrinking city.</td>
<td>Through an interim land use agreement, the facilitation of temporary activation of vacant land into green spaces was undertaken to revitalise neighbourhoods, enhance the attractiveness of inner-city areas and create spaces for public use.</td>
<td>Resulted in 130 agreements and 160,000 square metres of land transferred into green spaces for public use. For private owners, cost to clear derelict sites was subsidised.</td>
<td>Temporary measures can be successful policy responses to improve quality of life and neighbourhoods in the short-term. Leadership and funding: local government and private owners (public-private partnerships).</td>
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<tr>
<td>Leipzig/Halle-Saxony/Saxony-Anhalt, Germany&lt;sup&gt;liii&lt;/sup&gt;</td>
<td>To manage land sustainably under shrinkage conditions as the local land-use policy was not sufficient enough to address the challenges of a high prevalence of degraded land and brownfields. A high proportion of areas designated for development had not been used, which signalled the need for a reorganisation of land policy between the two states. A shift from supply planning to demand planning and</td>
<td>The KoReMi project was established as a sustainable land-use policy to specifically re-organise land use. Regional cooperation was needed to address spatial challenges.</td>
<td>Although land use targets were set, Saxony and Saxony-Anhalt failed to devise concrete land use management policies. Use of green fields continued to be encouraged. In the urban areas of Halle and Leipzig, re-urbanisation occurred, and the cities grew, taking advantage of cheap real estate. However, the sustainable development of both regions consecutively has not occurred as no</td>
<td>Governance: demonstrates that nearby regions may need to collaborate on policy if local solutions are not successful (inter-regional cooperation). Leadership and funding: regional governments.</td>
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<td>Location</td>
<td>Barriers and Initiatives</td>
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<tr>
<td>Ventspils, Latvia&lt;sup&gt;lxx&lt;/sup&gt;</td>
<td>To improve accessibility for older people within the town as in 2012, 23% of the total population was over 65.</td>
<td>Developed a senior-citizen friendly town initiative to inform the development of infrastructure for aged citizens.</td>
<td>Infrastructure investment included wheelchair accessible public transport and public buildings, street infrastructure (traffic lights with audible signals, wheelchair accessible sidewalks, brightly marked road signs).</td>
<td>Leadership and funding: local government, $1 million - $5 million.</td>
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<tr>
<td>Potsdam, Germany&lt;sup&gt;lx&lt;/sup&gt;</td>
<td>After WWII, the historic areas of Potsdam experienced depopulation as inhabitants moved from degraded buildings and into modern houses in city outskirts.</td>
<td>Established an urban revitalisation programme to restore historical monuments and cultural heritage in town squares and historical quarters. Basic rule for revitalisation of historical centres: mixed used of residential, employment, trade, services and tourism, with at least 50% residential. A focus on social and culture life: music and theatres, renovation of education and sports facilities, and restoration of churches.</td>
<td>Numerous revitalisation projects were undertaken. Between 1992-2004, around half of historical buildings were completely renovated and 70% of public spaces were redeveloped. Transport systems were also reorganised with focus on pedestrians and bicycles.</td>
<td>Revitalisation projects can help to reclaim a city’s identity. Funding: national government and EU funds.</td>
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<tr>
<td>Czech Republic&lt;sup&gt;lx&lt;/sup&gt;</td>
<td>Barriers to redeveloping brownfields for the private sector due to high costs involved.</td>
<td>A National Strategy of Brownfield Regeneration was developed whereby local governments were required to initiate and lead the regeneration of brownfield sites.</td>
<td>As of 2017, 489 brownfield sites were registered within the data base with information for business and regeneration purposes. In 2016, 19 brownfield sites were</td>
<td>Leadership and funding: national and local governments and EU structural funds (vertical cooperation).</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
<td>Details</td>
<td>Funding/Leadership</td>
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<tr>
<td>Genoa, Italy (lxii)</td>
<td>To limit developments on urban fringe or on green fields.</td>
<td>An integrative neighbourhood agreement was developed that focused on urban renewal and social cohesion projects. These were carried out by municipal governments in conjunction with private landowners and NGOs.</td>
<td>Funding: national and EU funding Leadership/public-private partnerships: local government worked with private landowners and NGOs</td>
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<tr>
<td>Broken Hill, NSW (lxiii)</td>
<td>NSW state government has a standard template for planning policy that does not acknowledge population decline.</td>
<td>Using discretion, local planners/policy makers are focusing on urban renewal and redeveloping within existing areas of the city, While official planning documents are still growth-oriented, (e.g. Broken Hill 2030 with an emphasis on attracting new residents,</td>
<td>Shows that local governments use discretion to enact their planning policies.</td>
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<td>opposed to developing outskirts. Local council needs to be entrepreneurial to increase quality of life for existing residents (as opposed to focusing on growth strategies).</td>
<td>reflected by growth in NSW as a whole), local officials are more pragmatic about the town’s state of decline.</td>
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Key factors contributing to successful policy outcomes

Throughout the extensive literature relating to the diversity of responses to the challenges of population decline (shrinkage) and/or population ageing, clearly evident are three key themes which facilitate successful outcomes.

1) Governance
2) Leadership
3) Community engagement

Underpinning each of these success factors however is a comprehensive ‘place-based approach’. All regions, cities and towns have a uniqueness to them which defines their identify as a place and should be the focus policy responses value and preserve.

These place-based identities encompass the intersect of economic, social, cultural and political elements. Importantly, there is no ‘one-size-fits-all’ solution to the challenges associated with population decline and/or ageing; a place-based approach is required and must be informed by evidence-based research.

These success factors are evident in the Case Studies found in the Appendix of this report as well as highlighted in the various tables of examples throughout the relevant sections of this report.

Governance

To be able to develop and implement a place-based approach, an appropriate governance structure is required. The governance structure needs to have the ability to make decisions in relation to the ‘place’ it represents in both a regulatory and legislative manner as well as fiscally.

The unprecedented challenges associated with population decline and/or ageing often require an unprecedented approach and often involves different and difficult, yet informed, decisions.

To support a place-based approach, there needs to be flexibility and agility in establishing the best governance structure for the place. This may require the restructuring of governance and the decision-making responsibilities to be better able to respond effectively to the challenges being experienced by regions, cities and/or towns.

Although regional authorities usually work within frameworks dictated by central governments, they often have a unique insight into local problems, and through collaboration can incorporate broader policy agendas to address issues. To do this, regions need to have increasing political autonomy and access to financial resources to provide adequate policy responses.

A governance structure could be informal, or it could be formal and legislated.

Informal governance structures, described as ‘soft spaces’, challenge existing political-territorial boundaries and levels of government, often taking the form of co-operation and collaboration in response to issues such as shrinking tax bases, high maintenance costs of infrastructure and amenities, high services provision costs and inter-regional competition.

Cooperation and collaboration strategies can involve changing governance procedures to collaborate on decision-making or the pooling of resources to deliver services across larger geographical areas. Effective strategies need to expand beyond geographical boundaries and be implemented at the most appropriate level.
Strategies may be horizontal, such as intra-regional cooperation (between local areas within a region), inter-regional (between regional areas within a country or between cross-border regions) or vertical cooperation (between different levels of government: local, regional, state and national).

Restructured governance arrangements could also include public-private partnerships (PPP) whereby government/s collaborate/s with the private sector to provide services, invest in infrastructure or shape policy.

*See the Appendix for a Case Study on the Kainuu region in the Finland which successfully restructured its governance to improve the efficiency in the provision of a range of public services.*

**Leadership**

Within a place-based approach to population decline and/or ageing, strong, local leadership is paramount. Policy approaches to this unprecedented scenario require a shift in the mindset of decision makers from a more administrative and compliance focused approach to one which is more innovative, and solution focussed, with an appetite for change, measured by outcomes.

To do this, leadership must be defined and have the confidence and authority to explore policy options to achieve a common goal informed by an agreed, clear and strategic objective. To achieve this, leadership will need to be flexible and able to negotiate.

Leadership may be in the form of a formal, governing body or institution, an individual, community organisation or a collective group of stakeholders. Regardless, the leadership must have the support of the public and community it represents.

**Community Engagement**

Success of policy responses to population decline and/or ageing is dependent on community engagement; either as leaders, by being involved or through a support role.

Involvement of the local community in policy development can lead to empowerment of the community so that they are not just passive receivers of policy decisions. Not only that, but the local community is likely to have the best knowledge and understanding of local concerns and issues and be better positioned to contribute unique or innovative ideas and alternative policy approaches to address the challenges for the community in less conventional ways.

Importantly, community engagement and empowerment are more likely to result in an acceptance, and understanding, of difficult decisions made for the community.
<table>
<thead>
<tr>
<th>Region/Policy</th>
<th>Objective</th>
<th>Approach</th>
<th>Outcome</th>
<th>Comment/Evaluation</th>
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<tbody>
<tr>
<td>Kainuu, Finland&lt;sup&gt;lev&lt;/sup&gt;</td>
<td>To improve the efficiency of public service provision.</td>
<td>A regional self-government experiment involving inter-municipal cooperation was undertaken to provide for decision making relating to investment and delivery of public services with the aim of increasing the efficiency of public services. Decision-making regarding provision of health care, social welfare and secondary education was rescaled from local and national levels to a regional level.</td>
<td>By rescaling local services into one regional organisation, public service costs were reduced by almost 50%, health care expenditure was below the national average and the quality and availability of services increased.</td>
<td>The regional council changed the way services were provided to respond to the changing needs of the ageing and declining population. Leadership and funding: funds and decision making was redirected from local and national levels to regional level</td>
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<td>Parkstad Limburg, The Netherlands&lt;sup&gt;lxxvi&lt;/sup&gt;</td>
<td>To improve public services, transport and housing.</td>
<td>Eight municipalities in the South Limburg region formed a voluntary inter-municipal arrangement called Parkstad Limburg, specifically to collaborate in the areas of housing, infrastructure, transport and urban development. The Pact of Parkstad, an informal regional authority, was formed to collaborate on spatial planning and housing policies in the</td>
<td>Between 6,000 and 14,000 houses needed to be demolished, and around 12,000 needed to be restructured. Improved neighbourhood liveability.</td>
<td>After the national government (and provincial government) identified and acknowledged that depopulation was occurring and needed to be addressed at a local level, managing/accepting policies were developed by local governments. This demonstrates the importance of leadership in higher levels of government</td>
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region, leading to an agreement to demolish and redevelop housing to match demand and improve the quality of housing stock. However, figures regarding actual number of houses demolished are not available.

### Hesse, Germany

| **To provide public goods and services in shrinking rural areas.** | The establishment of inter-municipal cooperation (IMC) agreements facilitated ways to address challenges with inter-regional competition and providing public goods and services in shrinking rural areas. | In a survey of 1,413 people from 59 rural municipalities, those who opposed IMC believed that they their political influence would be reduced as a result. However, the municipalities which were experiencing demographic and economic decline were more likely to support IMC. | IMC agreements are viewed as a less radical way to provide services compared with voluntary mergers or amalgamations/ reforms. Governments that establish IMC agreements must address issues relating to loss of citizen control over decisions. |

### Pirmasens, Germany

<p>| <strong>To actively steer development and address problems related to economic development.</strong> | As local government authorities were struggling to facilitate economic development on its own, a public-private partnership with a city marketing agency was established in the late 1990s which included policymakers, business representatives and other stakeholders (voluntary organisations and citizens), to address issues. | The partnership resulted in a targeted use of state subsidies which focused on creating and promoting established businesses (as opposed trying to attract external investors), which is still used to guide actions today. Business representatives mostly included local companies owned by local families who wanted to invest in their community. | Partnership between private and public actors working towards common goals at the local level can benefit policymaking. Success factor: public-private partnership |</p>
<table>
<thead>
<tr>
<th>Location</th>
<th>Objective</th>
<th>Description</th>
<th>Results</th>
<th>Success factors</th>
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<tr>
<td>Heerlen, The Netherlands&lt;sup&gt;lxix&lt;/sup&gt;</td>
<td>To address vacancy in the city centre by facilitating communication between government and other stakeholders in order to develop spatial policies.</td>
<td>A public-private partnership between Heerlen Mijn Stad (Heerlen My City; HMS) and URBACT Local Group (ULG) was developed to revitalise the shrinking urban centre of Heerlen between the municipality, retailers and other stakeholders such as citizens. Examples of policy included reducing retail and office spaces in the city centre with the aim to reduce vacancy.</td>
<td>Through collaboration between different stakeholders, around 40,000m² of retail and office space was reduced, and 50% shop vacancy was removed.</td>
<td>While the municipality led the initiatives, for successful interventions to occur there needs to be involvement from all other stakeholders. Success factors: Community engagement; public-private partnership</td>
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<tr>
<td>Kyoto Prefecture, Japan&lt;sup&gt;lxx&lt;/sup&gt;</td>
<td>To address local, social problems related to depopulation.</td>
<td>The CUANKA (Community and University Alliance for regeneration of Northern Kyoto Area) was established as a collaborative system of industries, governments, academia and citizens. Led by Universities, mutual partnerships between different sectors of the community are utilised to address the needs of communities that are facing significant depopulation, in particular by promoting urban-rural networking to solve local issues.</td>
<td>Community-based projects are undertaken such as the introduction of renewable energy projects to rural communities to support growth in green markets. An example is an eco-tourism project that developed motor driven bicycles powered by renewable energy, in collaboration with universities, industry, tourist offices. Students can gain knowledge and training to solve local issues and formulate local policy and</td>
<td>To address problems at the local level, partnerships with different sectors of the community such as universities and industry can revitalise shrinking communities. Funding: national government, local grants, local municipalities and private donations. Success factor: Community</td>
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<tr>
<td>Location</td>
<td>Objective</td>
<td>Initiative/Description</td>
<td>Success Factor</td>
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<td>Jaslo, Poland</td>
<td>To improve public service provision and disparities of access through a participatory approach.</td>
<td>A civil forum the ‘Agora of Jaslo’, Jaslo Public Service Zone was established in each local government area to determine differing levels of demand for services.</td>
<td>Community engagement</td>
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<td>Initiatives have been undertaken in areas of local transport infrastructure, water and sewerage and education. Citizens and non-governmental actors were involved resulting in more holistic, bottom-up approach to governance.</td>
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<tr>
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<td>A step towards a more advanced participatory approach to governance.</td>
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<td>*See Appendix for case study</td>
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<tr>
<td>Parkstad Limburg, The Netherlands</td>
<td>To collaborate on spatial policies for themes including renewable energy, re-use of sites and materials, and temporary land use.</td>
<td>Establishment of IBA (Internationale Bau Ausstellung) which was a bottom-up/citizen led projects- e.g. Superlocal which aims to reuse resources from three vacant ten story flats to construct new social houses and public spaces in the city of Kerkrade.</td>
<td>Community engagement</td>
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<td>Three new houses made of 90% reused and remanufactured materials from the former flats were constructed as a pilot project, with financial and economic benefits reported.</td>
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<td>Alternative policy approaches led by citizens have the potential to address the consequences of shrinkage in less conventional ways.</td>
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<td>Success factor: Community engagement</td>
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Recommendations

In response to the evidence base presented above, to capture opportunities associated with an ageing population, while also providing for the needs of the population; a combined countering and accepting policy approach is recommended.

Three key policy themes are identified as appropriate for Tasmania based on its demographic, economic and spatial profile. While these themes could be considered in isolation, they are also complementary to each other.

Importantly, these themes should be considered through the lens of peripheralisation, whereby the inter-connected relationship between urban centres (cities or major towns) and their periphery (the rural and regional social economy) are focal.

Peripheralisation is underpinned by interactions between multi-dimensional drivers from economic, social, spatial, demographic and political domains which interdependently influence economic activity, the community and population change.

The three themes are:

1) Embracing and investing in the White Economy
2) The regeneration and repurposing of the built environment
3) Establishing Special Economic Zones (SEZs)

Underpinning the development and implementation of a policy framework is the need for a clear place-based approach including governance, inter-regional co-operation, leadership and community engagement as outlined in the Success Factors section above.

Embracing and investing in the White Economy

Given that more than 1 in 5 Tasmanians are aged 65 or older, and that the proportion and number of elderly people in Tasmania is only going to increase over time, perhaps more so as the impact of the COVID-19 global pandemic on the population becomes more known, demand for aged and health related products and services will also only increase. This situation presents an economic opportunity to pursue.

The white economy encompasses a new collective for economic growth based on the increasing demand for aged-focused needs; an eco-system of products and services for older people. More specifically, the white economy refers to ‘products, services and activities related to healthcare and care including the dependent, disabled and elderly’. These products, services and activities include the meeting the existential needs of older people, needs of older consumers, needs of older employees and the needs of employers and organisations providing and servicing older people’s needs.

White economy initiatives include investing in health care and its workforce including doctors, nurses and other health care specialists to adapt to the needs of an ageing population and related conditions, alongside new technologies and types of services which are fundamentally different to what is understood to be mainstream healthcare. The increasing demand for health care services resulting from ageing may include shifting the focus of health care from prevention and curing to one that emphasises management of symptoms and the variability of symptoms, as demands on the health sector increase.
Of critical importance, however, is that the white economy extends beyond just the provision of services, to transport and logistics, research and development, contemporary manufacturing, innovation and technological advancements, including the expansion of initiatives such as telemedicine, remote monitoring and rehabilitation as well as career upskilling.

Increasing the capacity of the health sector over the longer term; investing, identifying, prioritising and streamlining services around the state as well as providing logistics and transport services will provide much needed economic stimulus over the years to come as well as providing for the needs of an older population. So too will incentivising research and development for product and service innovation in the white economy as Tasmania recovers from the unprecedented, global scenario of COVID-19 and provides for the on-going unprecedented, global scenario of population ageing.

The regeneration and repurposing of the built environment

Many of Tasmania’s regional town centres are experiencing the degradation of their built environments, alongside economic restructuring, changing demographics, ageing and population decline. Local built environments with considerable heritage value are often disconnected, under-utilised and no longer fit-for-purpose for the communities they serve.

A number of major towns could benefit from urban renewal projects which focus on the regeneration of the existing built environment and the revitalisation, repurposing and right-sizing of public and private infrastructure, services, amenities and housing to meet the needs of their changing populations.

A focus on quality of life, well-being and social cohesion will also create economic activity, provide opportunities for the community, inform and improve service provision and provide for greater liveability in the region.

Appropriate towns to consider for fit-for-purpose urban renewal projects are those with transport corridors and access to other towns within their periphery, as well as to towns and major urban centres outside their immediate periphery which may provide larger-scale public services to their community. In Tasmania, towns like Smithton, St Marys and Queenstown could be considered.

Ensuring fit-for-purpose infrastructure, service delivery and connectedness within a community and within its periphery is key to successful regeneration and repurposing of the built environment in regions experiencing population ageing and/or decline.

Creating Special Economic Zones (SEZs)

The aim of a Special Economic Zone (SEZ) is to attract investment to a specific geographical area on the basis that the investment will create employment, provide infrastructure and attract people to that region. Investment is targeted and attracted using a range of levers such as liberal economic laws, providing financial assistance to investors through tax exemptions, and support with development of land (brownfield sites etc), infrastructure investment and the provision of non-financial support (i.e. information on regulatory frameworks and administration processes).

While Governments at all levels in Tasmania are active in attracting and facilitating investment in the state, these activities and specific sectors could be prioritised through the development of a SEZ, through the lens of peripheralization and also incorporate the white economy (as outlined above) as well as other sectors experiencing a comparative and/or competitive advantage.
Two approaches to complement and inform the establishment of SEZs are increasing Tasmania’s economic complexity through smart specialisation and expanding the product and supply chain for existing products and services.

**Smart specialisation**

Smart specialisation is policy framework designed to assist regional areas to boost their competitive advantage by prioritising innovation and research\(^{lxxiii}\). A key feature of smart specialisation is its bottom-up approach, underpinned by partnerships between governments, businesses and research institutions. The framework encourages regions to focus on their strengths and to strive for “smart, sustainable and inclusive growth”\(^{lxxiv}\).

The core elements of smart specialisation include:

- **Entrepreneurial discovery**: an interactive process between the private sector and the government and a more exploratory approach to producing knowledge and innovative solutions.
- **Investment in activities (opposed to entire sectors)**: activities that are generally connected to specific technologies or natural assets/capabilities.
- **Flexibility to diversify**: unexpected pathways may emerge which can lead to innovative solutions.
- **Evidence-based monitoring and evaluation**: clear/measurable goals are needed as there is strong focus on policymakers and researchers evaluating progress. Flexibility in policymaking is required to adapt to the outcomes of this process and any successes/failures.

**Economic Complexity**

The Harvard University Kennedy Business School maps the economic progress and opportunities of the industrial and non-industrial world in a database of 133 economies; The Atlas of Economic Complexity\(^{lxxv}\). Economic growth, according to this model, is driven by a process of diversifying know-how to produce a broader, and increasingly more complex, set of goods and services which ultimately leads to increased wealth and income. Essentially, the ability of a region to achieve relatively strong growth is dependent on the productive knowledge that goes into making products (know-how or productive capabilities) and diversity, and the number and breadth of products the region is able to make. Over the longer-term, economic growth is driven by diversification into new products that are incrementally more complex.

Research by the Harvard University Kennedy Business School identified that diversification and economic expansion results from moving into nearby and related products or into those that require similar knowhow to build on existing capabilities. The Atlas of Complexity identifies potential growth opportunities for all 133 countries, based on their export profile. These strategic new product opportunities aim to balance connectedness with existing capabilities, complexity and the opportunity for further diversification and are further diversified according to a realistic indicator of either; ‘low-hanging fruit’, balanced portfolio or a ‘long jump’.

Using the framework of economic complexity and smart specialisation, The BankWestCurtin Economic Centre developed a strategy for future-proofing the Western Australian economy\(^{lxxvi}\). The report recommends the implementation of a ‘smart specialisation’ approach to regional diversification, to ensure that new development opportunities build on existing regional capabilities and capitalise on local conditions and networks. A fundamental element of smart specialisation is to support those industries that regions are leading in. But the smart specialisation policy is also useful to encourage diversification into new industries that build on existing advantages.
References


Appendix – Case Studies
Countering Strategies

Newfoundland and Labrador, Canada

Newfoundland and Labrador is the most easterly province of Canada, with a population of 528,817 in 2017 (Newfoundland & Labrador Statistics Agency 2017). St John’s is the largest city in Newfoundland with a population of 108,860 in 2016. In the first three months of 2018, Newfoundland and Labrador was the only Canadian province to experience population decline, dropping to just under 526,000 (CBC News 2018). Newfoundland and Labrador started to experience a population decline between 2016 and 2017 (Newfoundland & Labrador Statistics Agency 2017). Estimates show that the population could decline to between 523,000 and 492,000 by 2036, with a large increase in median age (Roberts 2019).

In 2016, Newfoundland and Labrador had a total fertility rate of 1.42 (national rate was 1.60) (Roberts 2019). In 2014, the median age in Newfoundland was 44.6 years whereas Canada was 40.4 years. The average number of people per square kilometre is 1.4, compared to 4.0 for Canada as a whole so this creates unique challenges for employment recruitment and retention (Department of Health and Community Services 2015).

Newfoundland and Labrador Economic Profile

In 2017, the top five industries in Newfoundland and Labrador were:

1) Mining, Quarrying, and Oil and Gas Extraction (24% of GDP)
2) Construction (12% of GDP)
3) Real Estate and Rental and Leasing (10% of GDP)
4) Health Care and Social Assistance (8% of GDP)
5) Public Administration (8% of GDP)

A Population Growth Strategy

In 2015, Newfoundland and Labrador released a 10-year strategy to grow the population, alongside supporting the individuals and families who already live there. In 2020, the Government will release a review and an updated plan for the next 5 years.

Four key areas:

1) Workforce development 2) Families 3) Communities 4) Immigration
1) Workforce Development Action Plan

**Aim:** Reduce out-migration.

Supports job growth and assists people in finding jobs and utilising skills of the individuals in the labour market. Providing current information on in-demand occupations to facilitate securing employment in the province.

**Example:** Train Here (Government of Newfoundland and Labrador 2015)

- A renewed vision for apprenticeships

**Actions/Outcomes:**

- Harmonising training across provinces so individuals can gain the work experience required in other provinces but remain living in N&L
- Ensure apprentices can find employment opportunities in N&L when qualified
- The initiative began in 2007, with a 94% increase in number of registered apprentices. Following a renewed vision, it is expected this will continue to increase.

2) Families Action Plan

**Aim:** Create conditions favourable to an increased birth rate.

Breaking down barriers for families who want to, or already have, children. Putting families first (birth, foster and adoptive). Also seeking to support individuals who care for adult family members.

**Example:** Caring For Our Future: Quality and Affordable Child Care (Department of Child 2012)

- Quality and affordable childcare reduces barriers for parents to participate in the labour force.

**Actions/Outcomes:**

- The Early Learning and Child Care Directory for parents to access information about child care.
- Between 2014-2016- over $20 million invested into childcare centres to help offset the costs for parents- particularly low-income parents.

3) Communities Action Plan

**Aim:** Foster economic growth and provide services to meet the needs of residents.
Strong emphasis on economic development. More activities, services and supports for all ages and types of families. A focus on immigration retention and diversity in the communities.

**Example:** Newfoundland and Labrador Strategic Health Workforce Plan 2015-2018 (Department of Health and Community Services 2015).

- An ageing population will see changes in the health workforce alongside increased demands on health services.

**Actions/Outcomes:**

- Expansion of places in University programs for health programs (e.g. nursing).
- Ensure a sufficient supply of health workers are available in the region.
- Increase productivity to result in better patient care and satisfaction.
- Partnered with industry and increased the number of long-term beds (for the elderly) through the construction of several long-term bed facilities, and a new regional hospital in the West (Osborne 2018).
- These major health care infrastructure projects will generate more than 4,600 person years of employment and half a billion dollars in economic activity (Osborne 2018).

4) Immigration Action Plan

**Aim:** Increase number and retention of immigrants.

Increasing attraction and retention of immigration by promoting economic and lifestyle opportunities. Investments in immigrant settlement and retention services.

**Example:** Immigration Action Plan 2017-2022: Enhance Foreign Qualification Recognition Processes (Department of Advanced Education 2017a)

- Increase recognition of foreign qualification of occupations to allow more immigrants to work in the region.

**Actions/Outcomes:**

- Foreign education, experience, knowledge and skills recognised through a two-year agreement with Government.
- 11 projects were approved for funding in 2017-18 (Department of Advanced Education 2018).
Example 2: Survey Expatriate Newfoundlanders and Labradorians to Gain Insight on Ways to Entice Them to Return (Department of Advanced Education 2017b).

- Expatriate Newfoundlanders and Labradorians are a valuable resource for potential population and economic growth.
- Aim to better understand reasons for leaving and to gain insight on what would entice them to return.

**Actions/ Outcomes:**

- $22,800 funding for a survey with over 3,700 individuals and face-to-face interviews with 60 individuals.
- Data collected but yet to be analysed/released.

**Take home messages:**

- Focused on growth. Mostly countering or strategic intervention (McMillan 2015), but also some accepting.
- Addresses the ageing population through the Strategic Health Initiative.
- Addresses challenges for working mothers through child care initiatives.

**What’s missing?**

- Some projects/policies have only just been established, thus outcomes are too early to measure.
- Little mention of environmental impacts/sustainability.

Despite the Population Growth Strategy, 2019 reports show that the demographic challenges in the region are worsening. 2018 saw a new low point for births, with 900 fewer births than deaths (Roberts 2019). In 2017-18, there was a net loss of people from Newfoundland and Labrador to nearby provinces (Ontario, Alberta and Nova Scotia). While statistics show that 1,035 new residents arrived in Newfoundland and Labrador in 2018, losses through outward migration and natural decline have resulted in a decline (Roberts 2019). Rob Greenwood, the executive director of Memorial University’s Harris Centre, has argued ‘we have to stop equating development with population growth. We have to start thinking about how do we make the most with the population we have’ (Roberts 2019).
References


Southland, New Zealand

Southland is New Zealand’s most southern region, with a population of 93,339 in the 2013 census. Southland’s largest city is Invercargill with a population of 51,696 people (Statistics New Zealand 2013). Population estimates for 2018 are 99,100 and 55,300 for Southland and Invercargill, respectively (Ministry for Business 2019a). Between 2006-2013, Southland grew by 2.7 percent (Statistics New Zealand 2013). Southland’s peak population was 99,000 in 1996, however the region experienced a decline until 2007, at an average rate of -6.3%. Southland consists of 2.2% of New Zealand’s total population (Statistics New Zealand 2013), however if the regional population remains static for the next 10 years, it would decrease to 1.8% of New Zealand’s population (Southland Regional Development Strategy 2015).

In 2013, the median age in Southland was 39.6 years (an increase from 38 in 2006) and 15.7% of people are over 65 years (The median age of NZ was 38 years, 14.3% were 65 years and over) (Statistics New Zealand 2013). In 2019, in-migration exceeded out-migration (+400) and births exceeded deaths (+400), therefore the region is experiencing sustainable growth. However, with current trends, i.e. little population growth and the ageing effect, it is likely that Southland will face challenges associated with population decline. It is expected that the population of Southland will continue to rise until 2028 (100,600), before stagnating and then experiencing a decline in 2038 (Ministry for Business 2019a).

Economic Profile

In 2017, Southland’s GDP per capita was $60,937 ($56,441 for NZ) (Ministry for Business 2019a). Although Southland consists of only 2.2% of New Zealand’s population, 70% of Southland’s GDP is exported and 15% of New Zealand’s tradeable exports are produced in Southland (Southland Mayoral Forum 2015). Thus, Southland experiences strong economic development compared with other regions in New Zealand. The unemployment rate in 2018 was 4% (Ministry for Business 2019b).

In 2016, the top five industries in Southland were:

1) Agriculture: Grain, sheep and beef cattle farming ($487M)
2) Meat and meat product manufacturing ($420M)
3) Forestry, fishing, mining, electricity, gas, water and waste services ($182M)
4) Transport, postal and warehousing ($149M)
5) GST on production, import duties and other taxes ($137M)
Drivers of population change

Southland experienced population decline between 1996-2007, due to an increased out-migration to other regions of New Zealand (predominately youth aged 15-24 years) (Roskruge & Pawar 2015). The region’s population began to grow again in the late 2000s, mostly due to economic growth and increased employment in the dairy industry (Roskruge & Pawar 2015).

The drivers of population change in Southland are predominately economic. However, as Southland experiences strong economic growth relative to the national economy and a low unemployment rate, it is lack of diverse employment opportunities which drives out-migration, fuelled by a reliance on the primary sector.

In 2013, Southland’s birth rate was slightly above the national average, however, it is decreasing at a faster rate than other regions in New Zealand. Thus, natural decline is likely to contribute to population change in the future.

Other contributing factors to population change include the geographical isolation of the region and its small urban centre.

Outcomes and implications

A lack of diverse employment opportunities and reliance on the primary sector has driven the out-migration of youth from the region. While youth out-migration has slowed since the overall population decline experienced in the early 2000s, the age group of 15-24 years continued to decline between 2008-2013 (Roskruge & Pawar 2015). A 2017 study found that most high school students from region planned to leave as job opportunities were largely limited to the farming industry (Cain et al. 2017). The implications of out-migration include loss of human capital, a shrinking workforce and smaller talent pool (Southland Regional Development Strategy 2015). Out-migration in Southland has contributed to a below average population growth on the trajectory for decline, and an increasingly ageing population (Southland Regional Development Strategy 2015). The implications for ageing in Southland is a declining tax base and higher age-dependency ratio.

A reliance on the primary sector also means that the region has economic vulnerability. Although the region is currently experiencing strong economic growth, future fluctuations in the industry may exacerbate future population change.

The geographical isolation of the region and its small urban centre impact on the opportunity for investors and new business. Even though the region experiences relatively strong economic growth,
it is limited by its small population. This further drives the lack of labour market opportunities and the out-migration of youth.

Policy response

Southland Action Plan


The Action Plan focused on three key areas:

1) Grow population: 10,000 more people by 2025 (within 10 years)
2) Diversify the Regional Economy
3) Strengthen local business

Diversify the Regional Economy

a) Aquaculture

Aim: Invest in aquaculture and establish an internationally significant industry.

Southland’s climate and water conditions are right for delivering a sustainable and efficient means of producing quality protein. Aquaculture is labour intensive, but a low emitter of greenhouse gases (Venture Southland 2012).

Example: Finfish aquaculture (Venture Southland 2012)

- Southland Aquaculture Strategy was developed in 2012 (Venture Southland 2012).
- A successful industry with high environmental standards could contribute economically to the region (Venture Southland 2012).

Actions/Outcomes:

- In 2018, received $2 million from the Provincial Growth Fund to study the feasibility of salmon hatchery and a research facility (Morris 2018).
- If successful, could deliver $400 million in export earnings and create 550 jobs in both primary production and research (Morris 2018).

b) Tourism

Aim: Develop Southland’s tourism industry.
Southland has unique natural and cultural assets. Milford Sound is already a tourist attraction but seen as an extension of Queenstown, not Southland. Southland possesses a wild and natural landscape which is untapped (Venture Southland 2019).

**Example: Destination Strategy**

- Positions Southland as a destination to drive tourist numbers. In conjunction with Southland’s story development.
- Works with businesses to develop their tourism products to attract tourists to the region (Venture Southland 2019).

**Actions/Outcomes:**

- 23.5% increase in the tourism sector between 2015 and 2018 (Brown 2018).
- A range of employment opportunities as the sector increases

c) International Students

**Aim:** Continue to increase number of International Students, with a clear focus on attracting working age population students with young families to complete post-graduate studies and then take up employment in the region.

**Example:** Southland Regional International Education Alliance (Southern Education Alliance 2016)

- Initiative to provide a collective regional response to the opportunities in international education.
- Bring in 3,850 more international students by 2025 and support them to stay in the region (with their families).

**Actions/Outcomes:**

- Each international student studying in Southland contributes an average of $39,290 to the regional economy.
- In 2015 there was a 20% increase in the enrolments of international students, it is expected over time this has continued to increase.
- International economic contribution to the region is around $60 million.

**Key findings**

- Southland is experiencing ageing and growth, projected to decline
- Experiences strong economic growth relative to national economy
- The region has identified the potential of future decline and its implications
- Countering policy strategies to stimulate economic and population growth
- One of these strategies is to diversify its economy, to provide different employment opportunities, reduce the out-migration of young people and attract young families.

References


Strategic Policy Responses to Population Decline: Institute for Social Change
Katowice, Poland – special economic zone

The Katowice region is in Southern Poland, covering 3329 km² with a total population of 2.5 million in 2018 (Runge et al. 2018). Katowice’s population was growing until 1991, where it reached its peak of 2.839 million (Spórna 2018). In 1993, out-migration exceeded in-migration, and in 1996, natural decline began to occur, and thus the region is in absolute decline (Runge et al. 2018). The Katowice region is Poland’s most urbanised area, consisting of 33 cities and towns - described as having ‘a distinct polycentric functional and spatial structure’ (Spórna 2018, pp. 59-60). The density of the population was four times higher than the national average in the 1990s. The largest city is Katowice with 298,100 people in 2018, however there also are eight other cities with populations over 100,000 (Spórna 2018). Poland has three levels of government, voivodeships (similar to state/provinces), powiats (counties or districts) and gminas (municipalities/ local government areas).

The fertility rate in the Silesian Voivodeship in 2016 was 1.35 (Sojka 2016) and the median age is ??.

Economic profile of Silesian Voivodeship

In 2017, the GDP per capita was €21,600 which is the above the national average of €20,900. The unemployment rate is 4%, compared to 3.27% in Poland as a whole (2019).

In 2018, the top 5 industries in Silesia were:

1) Manufacturing (42.4 M €)
2. Motor vehicles (12.6 M €)
3. Mining and quarrying (5.8 M €)
4. Electricity, gas and steam (3.7 M €)
5. Transportation and storage (0.3 M €)

Drivers of population change

A key driver of population change in the region was Poland’s transition from socialism to capitalism in the 1990s, which led to broad political and economic changes (Runge et al. 2018). Prior to this, national economic policy supported the development of heavy industry, and a large proportion of Poland’s industrial production was situated in the Katowice region. Up until the end of the 1980s, Katowice experienced intensive industrialisation specifically in coal and iron mining, and metallurgy (Runge, Kłosowski & Runge 2003). Thus, due to growing opportunities in labour intensive industries such as manufacturing, most areas of the Katowice region experienced in-migration and population growth.
As a result of rapid growth and industrialisation, the region formed several distinct but connected urban cores within a 500km radius (Krzysztofik, Kantor-Pietraga & Kłosowski 2019). These urban centres in Katowice had highly specialised mining and industrial functions, and demographic growth was driven by employees of industry and their families. During the socialist era, heavy industry was under state ownership and urban centres were centrally organised (Krzysztofik, Kantor-Pietraga & Kłosowski 2019). While urban areas were growing, smaller towns were also growing as they offered employment in the industry and better housing conditions compared with cities (Runge, Kłosowski & Runge 2003).

However, the region was economically concentrated, with environmental degradation, low educational capital and chaotic spatial planning (Suchacek 2005). In the 1990s, transforming from a centrally planned to a market economy alongside globalisation processes and de-industrialisation resulted in the shrinking of traditional industry and subsequent economic restructuring. The liberalisation of the economy led to many Polish industries experiencing financial trouble as they were unable to compete in a global market (Schaefer 2018). For example, in the Katowice region, coal production decreased from 177.4 million tons in 1990 to 106 million tons in 1999 (Suchacek 2005). Thus, 1990-2000 saw the onset of negative demographic trends triggered by widespread structural unemployment (Runge et al. 2018).

Outcomes and implications

The economic crises and subsequent restructuring within the Katowice region had economic, demographic and spatial implications.

Economic

A key outcome of transitioning to a market economy and decline in industry was a high unemployment rate. Economic decline and restructuring led to an initial decrease of 15% in employment in traditional industry between 1989 and 1995 (Suchacek 2005) and a 10.2% decrease over the longer term (47.9% in 2000 to 37.7% in 2017) (Runge et al. 2018). Mining was the industry affected the most, with the number of employees falling from 280,000-300,000 in 1989-1990, to around 47,000 to 50,000 in 2018-2019. Average unemployment rate grew to around 15-20% in the 1990s and 2000s (Runge et al. 2018). The greatest unemployment rates were found in the mining towns (26.9%-25.7%) and the lowest rate was in Katowice city (7.1%), likely due to a rise in employment in services. However, similar trends were observed within Poland as a whole, and the region’s unemployment rate never exceeded the national rate (Suchacek 2005).
However, there has been great spatial variation within the region and similar post-industrial towns have not followed a uniform pattern in terms of economic transformation and population change (Krzysztofik, Kantor-Pietraga & Kłosowski 2019). Krzysztofik, Kantor-Pietraga and Kłosowski (2019) argue there are five economic drivers within the Katowice region, including coal mining, industry, service, research and development, and residential functions. However, cities and towns within Katowice have followed nine different trajectories, or combinations of functions, none of which have achieved residential functions in conjunction with modern economic functions for example high-tech services or research and development (Krzysztofik, Kantor-Pietraga & Kłosowski 2019).

For example, two towns in the region, Ledziny and Razionkow were very similar in terms of economy and population before the 1990s, with mining and production plants as central features of both economies. In Ledziny, growth is still based on mining, with over 3000 people still employed in coal mining and 3500 people in a large industrial plant, producing around 11% of Polish’s coal (Krzysztofik, Kantor-Pietraga & Kłosowski 2019). However, the Ledziny economy is still economically concentrated, with 75.6% of employment found in industry and only 24.2% in services.

Conversely, Razionkow has a more even share of employment, with 47.2% in industry and 52.6% in services. The closing of a mine in the 1990s drove economic decline, changes in the labour market and high unemployment rate. This led to economic restructuring, and in the 2000s, a fuel company, meat industry and lighting manufacturer were established on former mining brownfields. Other services the town has established more recently include museums, and the Silesian Botanical Garden and the Kanlux Tech Park Technological and Exhibition Centre (Krzysztofik, Kantor-Pietraga & Kłosowski 2019). Thus, while Ledziny has enjoyed continued economic development in the mining industry, Razionkow has diversified its economy and is working towards investment in more high-tech industries (Krzysztofik, Kantor-Pietraga & Kłosowski 2019).

Overall, Ledziny has experienced better demographic outcomes when compared with Radzionkow— with a larger proportion of working-age population (64.4% compared with 61.3%), a higher rate of natural increase (57 vs -16) and lower migration balance (-12 vs -33). This is likely due to a continued employment in the mining sector and buffer of economic security. However, this may not be sustainable over the longer term and towns that have diversified and serve different functions will likely experience better demographic and economic growth the future (Krzysztofik, Kantor-Pietraga & Kłosowski 2019).
Demographic and spatial

High rates of unemployment triggered an outmigration of the working-age population resulting in a changing age-structure of the population. In particular, urban centres depopulated and remaining population were mostly post-working age (Krzysztofik et al. 2017). Rapid urbanisation in the industrial era led to poor urban planning, and thus depopulation has resulted in one of the most degraded metro areas in Europe with rundown housing, public areas and transport infrastructure. Further, post-industrial areas are characterised by brownfields, polluted water ways and mining damage.

Overall, between 1991-2016 large urban centres decreased by a combined total of almost 400,000 people, and despite some growth in rural areas, the region overall has experienced depopulation. Between 1990 and 2016, Katowice city experienced a decline of 68,700 people (Spórna 2018). Since 1990, the rural areas surrounding urban areas experienced some growth due to suburbanisation and the construction of new housing developments (Spórna 2018). While other European cities experienced suburbanisation earlier (in the 19??), it occurred later in the Katowice region. This is largely due to rapid urbanisation prior to 1990, as multi-storey buildings and flats in block estates were built that expanded urban cores, for employees of the mining and metallurgy sector (Spórna 2018). Following de-industrialisation, these inner-city areas started to decline, and suburbanisation occurred in the Katowice region.

More recently, while urban cores are declining, areas close to urban centres described as ‘inner city suburban zones’ have experienced growth, characterised by good transport accessibility, access to green areas and competitive prices for real estate (Spórna, Kantor-Pietraga & Krzysztofik 2016).

Policy response: Special Economic Zone

In response to changes in its political economy, the Katowice region has undergone efforts to restructure and revitalise its economy through policy interventions which aim to diversify the economy (Magda-Żabińska 2014).

Economic restructuring was a relatively slow process in Katowice (Suchacek 2005). Lobbyism from industry and local institutions drove the slow pace of restructuring despite market declines, with strong regional actors, local institutions and also foreign investors playing a role (Suchacek 2005). In 1995, a contract was drawn between the region and the central government in attempt to transform the region in terms of industry, education, environment and infrastructure (Suchacek 2005). As the region was important for the Polish economy and was densely populated, the national government provided financial support for the transition (Suchacek 2005). Metallurgical and mining companies
received loans from central institutions to ease financial pressures. Alongside this, the region received EU funding through various programs such as the integrated regional development fund and the structural regional development programme (Suchacek 2005).

Poland’s transition to a free market economy resulted in ad hoc measures and much of the state subsidies provided in the early 1990s were not connected to any long-term policy goals (Schaefer 2018). In 1994, Special Economic Zones (SEZs) were introduced as a long-term policy response in Poland, designed for areas that were economically concentrated in traditional industries with existing infrastructure and brownfields, and large numbers of unemployed workers. In the 1990s, these areas were affected by de-industrialisation, high unemployment rates, and out-migration, and subsequent population and economic decline. The key aims of SEZs are to attract foreign investment, create employment in regional areas, develop and maintain post-industrial infrastructure and provide non-financial support (i.e. information on regulatory frameworks and administration processes) The original SEZs were designed for 20 years (until 2014), however were recently extended until 2026.

The Katowice SEZ was the second in Poland, consisting of four sub-zones within the Silesian and Opolskie Voivodeships. Key aspects of SEZ policy include more liberal economic laws, providing state aid to investors through tax exemptions, and support with development of land (brownfields etc) and infrastructure.

Specific policies include:

- Corporate Income Tax Relief for investment costs (10% - 50% for large enterprises, 20% - 60% for medium enterprises, 30% - 70% for micro and small enterprises)
- Tax relief for two-year labour costs (up to 25%)
- A variety of investment plots, production and manufacturing warehouses, office buildings available for purchase or lease.

Initially, preference was given to investors in specific manufacturing industries, including precision engineering, electronics, car industry, food processing, medicine and medical instruments (Suchacek 2005). Recent investments in the Katowice SEZ have focused on the automotive industry and as a result, a car industry cluster has formed.
Key outcomes

- In 2017, the Ministry of Development has estimated that the 14 SEZs across Poland attracted €5 billion in investments and around 16,000 jobs that year (Schaefer 2018)
- Good public confidence and support for SEZs (Schaefer 2018).
- Internal stakeholders (regional government, local NGOs and communities) were not heavily involved in the development of the SEZ as the national government was required to create the legal environment for tax exemptions etc. The Polish Investment and Trade Agency (PAIH) which operated at a national level developed and promoted the zones (Schaefer 2018).
- SEZs are in competition with other zones in Poland and thus have an imperative to provide good services and business-friendly environments (Schaefer 2018)
- Additional investment incentives have been provided by the European Development Fund to encourage jobs and infrastructure in regional areas.
- A combination of both greenfields and brownfields

Katowice region:

- In 2019, Katowice SEZ rated 2nd most successful special economic zone in the world by Financial Times group.
- In 2018-19, 66 new projects and 1.14 billion in new investments (e.g. automotive, metallurgical, chemical, synthetic substances and food processing)
- In total, 350 new businesses, mostly in automotive industry (Krzysztofik, Kantor-Pietruga & Kłosowski 2019)
- Over 76,000 new jobs created in total (Krzysztofik, Kantor-Pietruga & Kłosowski 2019)
- Has good transport infrastructure- two highways (German-Poland-Ukraine connection and Poland-Czech Republic connection), a rail network and three international airports, an inland port and a reloading terminal.

As of June 2018, all of Poland became a single special economic zone which is likely to have implications for regional areas. The new law offers all regions of Poland an even playing field in terms of ability to attract investors and offer employment to their citizens but may reinforce regional inequalities. However, SEZs (like Katowice) which have been in place for over 20 years, with support systems already in place are likely to offer investors a competitive edge (Soful 2018).
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Accepting Strategies

Kainuu, Finland - governance and service provision restructure

Kainuu is a north-eastern region of Finland, with a total population of 73,061 in 2018 (Statistics Finland 2019). Between 1990-2018, the population of Kainuu declined at an average annual rate of -0.80% (compared with a national population growth of +0.4%) (Statistics Finland 2019). Kainuu has eight municipalities and the capital, Kajaani’s population was 36,973 in 2018 (declining at an average rate of -0.2 since 1990). Kainuu’s median age is 46.4 (2017). Since 1998, the number of deaths has exceeded the number of births, and out-migration exceeded in-migration, thus the Kainuu region is experiencing absolute decline (OECD 2017). Kainuu is a landlocked region on the border of Russia and 83.2% of the land is forest. There are three levels of government in Finland: central, regional and local (municipalities). Finnish local government only has a single tier and they provide two thirds of public services.

Economic profile

In 2016, GDP per capita in Kainuu was €28,596.30, compared with a national average of €38,370.04 (Statistics Finland 2019). Kainuu’s unemployment rate is around 10.8% (2017).

In 2017, the top 5 industries in Kainuu were: (Regional Council of Kainuu 2018)

1) Bio-economy (renewable natural resources) (502M €)
2) Mining (300.7M €)
3) Energy (226.9M €)
4) Forestry (193.6 M €)
5) Metal (152.5M €)

Drivers of population change

After WWII, urbanisation and rapid changes in occupational structures led to migratory flows from the rural parts of Finland to towns and built up areas, particularly to Southern and South-Western Finland (Karjalainen 1989). While the 1970s saw some migration directed from centres towards urban margins, rural out-migration continued throughout the and subsequent decades (Heikkilä & Pikkarainen 2010; Karjalainen 1989).

The drivers of population change in Kainuu are predominately economic. Historically, Kainuu’s economy has relied on the primary sector, in particular, mining, paper and pulp industries. Over
time, these traditional industries have experienced pressure due to international competition, lack of demand, declining prices and negative environmental impacts (OECD 2017). As primary production has slowed, a decline of the availability of employment for the working aged population has occurred. Thus, economic factors such as negative labour market forces and unemployment are most common reasons for out-migration from Kainuu (Heikkilä & Korhonen 1995; Karjalainen 1989).

Natural decline is also driving population change in Kainuu. Aside from a rise in babies born during the post-war boom, the birth rate in Kainuu has declined rapidly (Karjalainen 1989). Between 1995-2004, falling fertility rates and rising life expectancies contributed to striking change in the age structure of Finland as a whole (Heikkilä & Pikkarainen 2010). Further, the average death rate in Kainuu has been higher than the national Finnish average since the mid-1960s (Karjalainen 1989).

Other contributing factors to population change relate to the remoteness and low density of the region and its small urban centre (OECD 2017).

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Other contributing factors to population change relate to the remoteness and low density of the region and its small urban centre (OECD 2017).

**Outcomes and implications**

While natural decline has contributed to the altering of the age structure of Kainuu’s population, out-migration has had the most profound effect on population change (Karjalainen 1989). Kainuu reached its maximum population in 1963 (108,036 people), before beginning to decline, even though Finland as a whole was growing (Karjalainen 1989). Aside from a slight population increase
between 1977-1984 due to major building project across the border in Russia, Kainuu has experienced a steadily decline (Karjalainen 1989).

Out-migration is mostly triggered by the decline in availability of employment due to a decreased demand in the primary sector. Kainuu has a high unemployment rate (10.8% in 2018) compared with the national rate (7.4% in 2018) (Statistics Finland 2019). In 1985, the unemployment rate in Kainuu was 12.7%, double that of the national average 6.3% (Karjalainen 1989). As such, the labour market in Kainuu is underperforming compared to Finland as whole (OECD 2010).

An underperforming labour market has led to a high proportion of young working aged people leaving Kainuu for work and further education (Heikkilä & Pikkarainen 2010). Additionally, the withdrawal of the University of Oulu campus in 2013 means there is no undergraduate education options in the region (OECD 2017). This has led to a lower than average share of highly skilled labour force, further contributing to population change (OECD 2017).

Limited road networks and large distances from other regions limit Kainuu’s attractiveness for investors, labour mobility and ability to participate in other economic markets. Further, potential investors and businesses face barriers in Kainuu as the region does not have a large metropolitan centre, and lacks business knowledge and services (OECD 2010). These challenges have contributed to a cycle of loss of human capital and the under-utilisation of the labour force.

Intra-regional migration from the rural areas of Kainuu to the capital Kajaani is also common, creating uneven population shifts within the region itself (OECD 2010). National trends saw rural populations migrate away from Kainuu to urban centres in Southern and South-Western Finland. However, this also occurred within the region and between 1960-1980 Kajaani was the only municipality that recorded positive net migration in Kainuu (Karjalainen 1989). The population of Kajaani grew in the early 1990s, before experiencing a decline after 1994 (Statistics Finland 2019).

High levels of out-migration as a consequence of an underperforming labour market, combined with natural decline, has led to an ageing and declining population in Kainuu. The implications of these challenges include a declining tax base and a higher demand for high cost services, and thus a dependency on government funding for the public sector. Kainuu relies heavily on subsides from the national government to service its ageing population (OECD 2010). Further, due to uneven population change within Kainuu, demands for services often differ between municipalities.

Policy response

In response to the outcomes of uneven population change across Kainuu, a new regional government was established, in attempt to increase the efficiency of public service provision and to
develop the regional economy (Haveri, Airaksinen & Jäntti 2015). Described as a ‘self-government experiment’, (Haveri, Airaksinen & Jäntti 2015, p. 1), the region rescaled decision-making from the local and national levels to an elected council at the regional level from 2003-2012. Previously, to deliver services across the region cooperation strategies between municipalities in Kainuu were undertaken. Cooperation strategies also included local economic development strategies. However, this approach often resulted in ‘slow and unreliable decision-making’ (Haveri, Airaksinen & Jäntti 2015, p. 33). The self-government experiment sought to restructure this network approach into a hierarchical governance model with more efficient decision-making powers (Haveri, Airaksinen & Jäntti 2015). Several concerns led to the self-government experiment, including population decline (absolute decline), an ageing population and a financial crisis.

Under the experiment, the regional council made decisions about services including health care, social welfare and secondary education. The ‘Happenings’ programme, based upon a client perspective model, was designed to identify health care needs across the region (OECD 2010). Open forums were undertaken in all municipals with the regional health care team, service providers and residents. The regional council worked with the residents to identify the most important health concerns. Community-tailored solutions were developed to increase the quality, efficiency and availability of health care (OECD 2010).

To develop the regional economy, the council also made budget decisions regarding funding for economic development initiatives for new businesses and new jobs (Haveri, Airaksinen & Jäntti 2015).

Under the experiment, the regional council made decisions about services including health care, social welfare and secondary education. The ‘Happenings’ programme, based upon a client perspective model, was designed to identify health care needs across the region (OECD 2010). Open forums were undertaken in all municipals with the regional health care team, service providers and residents. The regional council worked with the residents to identify the most important health concerns. Community-tailored solutions were developed to increase the quality, efficiency and availability of health care (OECD 2010).

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The experiment was successful for the increasing the quality and availability of social and health care services. As service costs differed between the municipalities, under the old model some areas
experienced problems in providing services, and this was predicted to become more severe as the population aged. By rescaling local services into one regional organisation and then distributing across the municipalities according to need, service costs were reduced by almost 50%. (Haveri, Airaksinen & Jäntti 2015). Before the experiment, health care expenditure was often higher than the national average. During the experiment, health care expenditure was below the national average. Further, within the new structure, local health care managers and workers were afforded more time to enhance the quality of their services. Overall, the regional council changed the way services were provided across the region to respond to the changing needs of the ageing population, and this model is still used in Kainuu today.

However, the experiment failed to boost the economy or support any regional economic growth over the eight years. It was found that despite the regional council gaining power to allocate economic resources for regional development, resources were allocated in much the same way as before the experiment. Decision-making powers were meant to be transferred from the central government to the regional council to aid regional development, however this was not properly implemented. Thus, no new or innovative economic initiatives were undertaken. Additionally, it was found that the allocation of resources was too heavily focused on the central areas, despite the regional council aiming to also develop rural areas. It was concluded that one model of regional governance was not suitable for both delivering services and promoting economic growth (Haveri, Airaksinen & Jäntti 2015).

Key findings

- The region is already experiencing ageing and decline
- Accepting policy strategy to manage the consequences
- Local governments can work together to provide more efficient services
- New initiatives must be backed up by actual changes (i.e. decision-making powers for regional development strategies).
- Regions like Kainuu which are declining due to ingrained economic structures (i.e. reliance on primary sector) can focus on accepting strategies to manage the effects of population change.
References


Combined Strategies

North Denmark – white economy and telehealth

Denmark has three levels of government; central, regional and municipal. At the beginning of 2020, the population of North Denmark was 589,936 (an increase of 0.98% since 2008). In 2008, Denmark underwent a reform, reducing its number of municipalities and creating five distinct regions. North Denmark is Denmark’s most northern and sparsely populated region, which has 11 municipalities and an area of 7,933 km². Aalborg, the largest city and municipality in the North Denmark region; had a total population of 217,075 in 2020, an increase of 0.89% since the restructuring of municipal areas in 2008 (Statistics Denmark 2020).

In 2018, population loss from North Denmark to other regions in Denmark exceeded in-migration (-463) however, the region as a whole was growing due to international migration (+1547). In 2018, the difference between deaths and births was 388, so North Denmark is still experiencing natural increase. However, the region’s growth is dominated by international migration. At the start of 2020, the median age in the region was 42.9 (Denmark’s median age was 41.8) and the total fertility rate for women aged 15-49 years in 2019 was 1.75, which has decreased from 1.93 in 2008 (Statistics Denmark 2020).

Denmark enjoys a universal health system with free and equal access to public health and social care, funded by proportional income tax from national and local budgets (Forde et al. 2016). Denmark spends around 10.6% of its GDP on health care, which is one of the highest of OECD countries (the average is 9.0%) (Forde et al. 2016). In Denmark, the responsibility for the provision of health care and social services is shared between regions and municipalities. The responsibilities of the region include hospital and psychiatric treatment, primary health care and public health (GP, private practising specialists, adult dental etc), while the municipalities are responsible for social services, aged care and long-term care and rehabilitation (Forde et al. 2016). Denmark has a history of innovation in health care, with less hospital time and faster discharge times compared with other OECD countries, and close cooperation between health services and governments (Forde et al. 2016).

Economic profile

In 2020, North Denmark’s GDP per capita was €44,300, compared with a national average of €52,000 (Eurostat 2020). In 2018, the unemployment rate in North Denmark was 4.4%, compared to a national rate of 3.9% (Jürgensen 2019).

In 2020, the top five industries in North Denmark: (Statistics Denmark 2020)
1. Public administration, education and health (551M €)

2. Trade and transport (396M €)

3. Manufacturing (323M €)

4. Dwellings (211M €)

5. Construction (197M €)

Drivers of population change

North Denmark is a spatially isolated peripheral region, and around one third of the population live in rural areas, i.e. towns with less than 1000 inhabitants (Vestergaard et al. 2011). North Denmark experiences spatially uneven population change across the region. While growth is occurring in the urban municipality of Aalborg, eight of the eleven municipalities have declined since 2008 (Statistics Denmark 2020). This is mostly due to youth out-migration to Aalborg and larger urban centres of Denmark for education and job opportunities (Vestergaard et al. 2011).

Another significant challenge for North Denmark is ageing. The total proportion of the population aged over 65 in the region has increased from 16.7% to 21.7% from 2008-2020 and those aged over 80 has increased from 4.4% to 5.2% (Statistics Denmark, 2020). The median age for the region of North Denmark is the third highest and higher than the national average (Statistics Denmark 2020). These figures are projected to grow, alongside increased life expectancy and a declining birth rate (Evans, Nistrup & Pfister 2018).

Outcomes and implications

A significant consequence of an ageing population and increased life expectancy is the growing prevalence of older people with chronic diseases and age-related illnesses, resulting in pressure on the health system (Evans, Nistrup & Pfister 2018). Specifically, a rise in noncommunicable diseases (diseases with a slow progression and long duration) which require long-term management will result in a significant strain on resources (Healthcare Denmark 2018). As Denmark’s healthcare system is predominately funded by the tax system, governments must find a way to support an ageing population with a shrinking tax base. Thus, current health care models in Denmark and the high quality of care may not be financially sustainable in the future.

The consequences of ageing also have spatial consequences, as rates of ageing is higher in spatially isolated areas. Thus, the rural areas of North Denmark will face significant challenges with maintaining their level of health care, particularly with a shrinking tax base fuelled by out-migration (Vestergaard et al. 2011).
Policy response

Telehealth (telemedicine, ehealth, digital health) is considered a pertinent solution to address the challenges of ageing and declining populations, by offering smarter, more efficient services to relieve pressure on the system (The Danish Agency for Digitisation 2012).

Denmark is at the forefront of international efforts to use telehealth care. In 2012, Denmark established a national action plan on telemedicine and approximately 11 million euros was allocated for various initiatives (The Danish Agency for Digitisation 2012). In 2014, the national government established a database called the ‘Telemedicinsk Landkort’ (Telemedicine Map). The database contains information on Denmark’s progress and specific telehealth initiatives across its five regions (Kierkegaard 2015). In 2018, the national government launched the Digital Health Strategy 2018-2022 which built upon the Denmark’s internationally renowned progress for digital health solutions (Ministry of Health 2018). The Digital Health Strategy focuses on a holistic approach to health with the aim to form an integrated network between hospitals, GPs and other health services using IT solutions (Ministry of Health 2018).

Telehealth can include IT-based methods for communication between healthcare workers or with patients, via telephone or video calls, electronic monitoring equipment or online portals (Larsen et al. 2016). Telehealth has to potential to provide high quality, patient-centred healthcare, alongside reducing pressures on the healthcare system (Healthcare Denmark 2018). Telehealth care can increase the patients’ knowledge of their condition, their capacity for self-care and potentially reduce their need for hospitalisation (Healthcare Denmark 2018). Telehealth is also useful for spatially dispersed areas, as health care professionals can communicate with patients remotely (Kierkegaard 2015). However, telehealth requires significant investment into IT, strong administrative frameworks, close coordination between hospitals, GPs and specialists, and collaboration between all levels of government (The Danish Agency for Digitisation 2012).

The Telehealth North project trial was established in North Denmark in 2011, with home monitoring project for COPD (chronic obstructive pulmonary disease) patients across the region. The participants in the program included the patients, the regional authority, the municipalities, GPs and four hospitals. The aim of the project was to trial the new integrated care model with the intention to expand to other types of diseases and patients (Healthcare Denmark 2018). As COPD is a progressive disease that worsens over time and a leading cause of death worldwide (Lilholt, Hæsum & Hejlesen 2015), telehealth and home monitoring can allow patients to track their symptoms more closely which may result in early intervention (Healthcare Denmark 2018).
The program provided patients with a Telekit (a tablet, a blood pressure monitor, a fingertip pulse oximeter and a health precision scale) to self-measure indicators while health professionals monitored the data externally (Healthcare Denmark 2018). The patient also responded to health questionnaires regarding their symptoms, which was sent to health professionals in real time. GPs or nurses also attended the home if needed, eliminating the need for hospital visits and reducing the strain on the system. The initiative also included video consultations and access to training to provide patients with information about their condition. A key feature of telehealth initiatives is the sharing of information between different health services. Home monitoring allows the data ‘to follow the patient’, which requires a well-functioning framework and strong collaboration between health care providers (Healthcare Denmark 2018, p. 9).

Between 2013 and 2018, telehealth home monitoring was used for approximately 1,400 COPD patients. An evaluation found that the patients experienced an improved quality of life over the course of the program, and the number and length of hospitalisations decreased by 11% and 20% (Healthcare Denmark 2018). A majority of patients reported they felt they had more control of their disease (61.7%), found the system easy to use (96.0%) and half of the patients felt they were proactive and had a better awareness of their symptoms (50.0%) (Healthcare Denmark 2018).

Based on the success of COPD home monitoring, the telehealth program has been expanded for use with heart patients across the North Denmark region. During the initial process of treatment and medication, the hospital is involved with monitoring data collected at home and can respond to deterioration of the patients condition. After the initial process, the self-monitoring continues but the responsibility for monitoring the data is transferred to health services at the municipal level (who are responsible for long-term care and rehabilitation) (Healthcare Denmark 2018). This helps to alleviate pressure on the hospital system, and provide long-term support with symptoms that would not exist without telehealth. However, this program is yet to be formally evaluated (Healthcare Denmark 2018).

Key findings

- Denmark has a high quality, publicly funded health-care system.
- This system was projected to become financially unviable as the population experiences ageing and was anticipated to be exacerbated given spatial implications.
- Telehealth care is offered as a solution to improve efficiency in health care and provide good quality services, particularly in spatially isolated areas.
- Telehealth initiatives were introduced and led by the national government, before becoming the responsibility of the regional bodies and local municipalities.
• The initiative requires strong collaboration between stakeholders: cooperation between national/regional and local governments, and between healthcare providers and services.

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Parkstad Limburg, The Netherlands – revitalisation and repurposing the built environment

Parkstad Limburg is a southern conurbation in the province of Limburg, the Netherlands with a total area of 211 km². Parkstad Limburg consists of eight municipalities, with a total population of 244,105 in 2018 (CBS 2019b). The population of Parkstad Limburg reached its peak around 1990 with 267,989 people, however started to decline in 1997 and is experiencing absolute decline (CBS 2019b). Heerlen is the largest city of Parkstad Limburg with a population of 86,832 in 2018 (Heerlen peaked at 95,149 people in 2000). In 2016, the median age within the eight municipalities ranged between 44.2 and 46.1 years.

The Netherlands has three levels of government, national, provincial and municipality. In 1999, Parkstad Limburg formed as an informal regional authority to work together to improve public services, transport and housing (OECD 2014).

Economic profile

In 2020, GDP per capita in South Limburg was €40,776, compared to a national average of €44,920 (CBS 2020). Unemployment in the province of Limburg was 4.7 in 2017, compared to a national average of 4.4% (CBS 2017).

In 2019, the top 5 industries in South Limburg were: (CBS 2019a)

1) Government and care (public administration and services, education, health and social work) (852M €)
2) Manufacturing (706M €)
3) Wholesale trade and retail, transport, accommodation and food (543M €)
4) Business services (331M €)
5) Information and communication (295M €)

Drivers of population change

Around 1900, the southern area of the Netherlands transitioned from an economy dominated by agriculture to a region driven by mining and the export of coal (Reijnders, Krishnamurthy & van Tetering 2017; Van Bon 2016). Over the next 50 years, the population in South Limburg grew from 282,000 to 728,000 and the region was one of the wealthiest areas in the country in the 1950s (Beunen, Meijer & De Vries 2020). As a result of industrialisation and strong economic and demographic growth, the municipalities of Parkstad Limburg were transformed from small, rural townships into a fragmented conurbation.
However, in 1965 after recognising the impact of international competition on the mining sector (the region’s share of solid fuels fell from 51% to 16%), the national government closed its state mines within the region, and within 10 years private mines were also closed (Reijnders, Krishnamurthy & van Tetering 2017). As a result, around 45,000 people became unemployed and the unemployment rate was twice as high as the national average (Van Bon 2016). Initially, some government services were redirected to South Limburg (such as Statistics Netherlands) in attempt to counteract unemployment, however there was a skill mismatch between blue collar (former mine workers) and white-collar employment (Westerink et al. 2017).

The mining industry collapse and economic decline resulted in high unemployment rates and economic decline, but initially, the population continued to grow. In 1997, Parkstad started to experience decline, mostly due to an out-migration of youth for education and employment reasons (Elzerman & Bontje 2015). Areas of Parkstad have some of the lowest wages in the Netherlands, with higher educated workers receiving between 10 and 25 percent less than the national average (Westerink et al. 2017), a significant incentive for youth out-migration.

Outcomes and implications

Depopulation in Parkstad Limburg has resulted in significant housing issues, including an overcapacity of houses and a mismatch between demand and supply, changes in type of housing needed, and the decay and degradation of buildings (Verwest & van Dam 2010). Housing prices are between 25 and 50 percent lower than the national average (Westerink et al. 2017), and properties stay on the housing market much longer. Between 1999 and 2007 the average length of time properties stayed on the market increased by 384% (compared with 112% in the Netherlands) (Verwest 2011). The proportion of rented social housing that remains vacant for more than three months is also higher in Parkstad (Verwest 2011). However, a relaxed housing market can have some positives for example for housing prices, first-home buyers and low rental prices (Verwest 2011).

Population decline (alongside economic factors such as e-commerce) has resulted in shrinking city centres in the region with high rates of vacancy, degraded buildings and public spaces, and excess infrastructure (Van Bon 2016). The urbanised nature of Parkstad Limburg means that there are overlapping catchment areas between cities/towns, which has led to an oversupply of retail and increased competition between municipalities (Van Bon 2016).
Policy responses

Parkstad Limburg is an example of a region that initially ignored population decline (non-intervention). In response to deindustrialisation, governments were focused on strategies to attract both economic and demographic growth. After national and provincial governments recognised the need for local and regional governments to address depopulation, the region then started to develop strategies to accept and manage the consequences of decline, in conjunction with countering strategies (a combination approach). Since, a series of fragmented but sometimes overlapping initiatives have been undertaken by various governmental and non-governmental actors within the region.

1997-2006: Non-intervention and countering strategies

Although depopulation began within the region in the 1997, in 1990s all levels of government ignored decline. In 1999, in response to ongoing economic decline, eight municipalities in the South Limburg region formed a voluntary inter-municipal arrangement called Parkstad Limburg, specifically to collaborate in the areas of housing, infrastructure, transport and urban development (OECD 2014). Initial policy responses were growth-focused and aimed at attracting new inhabitants through events and advertising, building attractive houses and shopping malls, and creating an attractive labour market (Westerink et al. 2017). One strategy consisted of increasing the capacity of housing stock under the assumption that new houses would attract more people (Verwest & van Dam 2010). However, increasing housing stock only increased the competition between municipalities within the region, opposed to attracting new residents as it intended (Verwest & van Dam 2010).

After 2005, governments began to acknowledge population decline was also occurring (Verwest 2011). However, tensions existed between the provincial/regional governments and municipal governments, as the latter wanted to continue to grow and attract people to their local areas. In 2006, the municipalities of Parkstad Limburg coordinated their housing plans in response to oversupply, however the strategy predominately argued that less new houses were needed (Verwest & van Dam 2010). It was also identified that housing stock and spatial environments needed to be improved and redeveloped to ‘counter the exodus of existing residents and attract new people’ (Verwest 2011). In particular, the strategy focused on developing new housing concepts to attract well educated and high-income earners. However, while overall the region did intend to reduce housing stock in response to less demand, in reality, individual municipalities did not adjust their plans to reflect depopulation trends (Verwest 2011).
2007-2020: Combination strategies

In 2007, the province of Limburg identified that shrinkage within the housing market indicated that the focus of strategies should be on the qualitative growth and improvement of housing opposed to quantitative growth. In 2009, the national government developed an action plan ‘shrinking with quality’ which identified that depopulation needed to be addressed at the municipal level, in coordination with the region and province.

Also in 2009, a regional agreement called the Pact of Parkstad was formed to collaborate on spatial planning and housing policies in the region (Westerink et al. 2017). This included the demolition and redevelopment of housing to match demand and improve the quality of housing stock, an accepting policy response (Verwest & van Dam 2010). The agreement stated that between 2008 and 2020, between 6,000 and 14,000 houses should be demolished, and around 12,000 needed to be restructured (Verwest 2011). However, there are challenges associated with the private ownership of these properties (Elzerman & Bontje 2015) and it is unclear how many houses have been demolished or redeveloped in this time period. In a cost-benefit analysis, it was estimated to cost around €285 million to redevelop houses in the five neighbourhoods most affected by shrinkage, and around €2.6 billion to redevelop houses in the entire region (with the social housing and private housing sectors responsible for around 50% of costs each) (Elzerman & Bontje 2015). Elzerman and Bontje (2015) suggest that a restructuring program should be undertaken, and the provincial government is in the best position to manage a program of this scale. However, those with the weakest financial assets will have the least power to negotiate, e.g. the municipality and homeowners (Elzerman & Bontje 2015). Housing corporations and private developers are two other actors within the housing sector may hold significant negotiation power (Elzerman & Bontje 2015). As semi-public housing corporations own and manage most rentals within the region, local governments are required to collaborate with these entities on housing policy (Westerink et al. 2017). Thus, for successful interventions to occur, there needs to be support and involvement from all actors: governments at all levels, housing corporations, private developers and citizens.

Recent initiatives to address the consequences of shrinkage in the city centres of Parkstad include both government policies and collaborations between governmental and private actors. The ‘Bidboek urban Heerlen’ is a 2016 policy initiative led by the Heerlen municipal government (Eck 2019). The policy recognises that to revitalise city centres in the face of depopulation, the focus must be on adjusting land use policies and improving urban heritage. The policy aims to reduce retail floor space by 40% and transform vacant or degraded land for other uses such as housing, food facilities, multifunctional public areas, or greenspaces (Eck 2019; Urbact Local Group 2018). Further, owners
must report to municipality if their buildings are empty for 3 months or longer, and subsidies exist for companies who start a business in buildings that are vacant for longer than 6 months (Eck 2019). Further, as both shrinkage and e-commerce have changed the nature and function of city centres, customer demands have shifted from buying products to gaining experiences. Thus, strategies should focus on revitalising public and urban spaces to increasing quality of life for remaining citizens. Another way to transform urban centres is through policies that aim to regenerate and maintain cultural heritage. For example, a ‘façade fund’ of €700,000 was established in Heerlen where businesses receive a compensation of 50% of costs to improve their façades and shopfronts (Eck 2019). While these policy initiatives aim to manage the spatial consequences of shrinkage, there is still an emphasis on attracting visitors to the city centre to generate economic growth (Eck 2019).

Another policy intervention in Parkstad Limburg is governmental collaboration with stakeholders such as societal actors, private companies and citizens. For example, for projects related to the revitalisation of city centre of Heerlen, an organisation called Heerlen Mijn Stad (Heerlen My City; HMS) was formed, to facilitate communication between the municipality, retailers and other stakeholders. HMS brought together several stakeholders including public servants, representatives of the hospitality industry, entrepreneurs and business owners, and residents to form an URBACT Local Group (ULG), an initiative of The EU Regional Development Fund (Urbact Local Group 2018).

Following the release of the ‘Bidboek urban Heerlen’, HMS and ULG alongside the municipal government have worked together to implement policy designed to revitalise the urban centre. Major changes are led by the municipality, while smaller projects are undertaken by ULG (Urbact Local Group 2018).

Some initiatives include:

- Removing 40% of retail and 40% of office spaces, and reducing vacancy in the city centre (as outlined in ‘Bidboek urban Heerlen’)
- Transforming a minimum of 5000m2 of vacant real estate into spaces for creative industries.
- Redesigning squares and public spaces (urban green spaces) e.g. Hotel Park Urban- a pop up park for summer season
- Restore 12 facades and restoring and converting prominent buildings
- Adding 400 homes to the city (100-150~ for students and young people)
- Sports, leisure and recreation: Urban sports areas, street artworks/murals, a cultural cinema
• Environmental: 5000 solar panels and asbestos-free and re-use usable material for recycling during demolition or renovation, bicycle parking facility.

The outcomes as of December 2017 include a reduction of -20,000m² of retail and -20,000m² of office space and over 50% reduction of shop vacancy in city centre (Urbact Local Group 2018). While the collaboration between the municipal government and relevant organisations and societal actors is recent and therefore outcomes are yet to be released, several of the other projects are on track for completion, including the transformation of vacant real estate for creative industries, restoration of twelve facades, and both the sports and recreation and environmental initiatives (Urbact Local Group 2018).

The IBA (Internationale Bau Ausstellung) is a collaborative organisation that hosts bottom-up projects and citizen-led strategies for Parkstad Limburg at a regional level (Westerink et al. 2017). Citizens and societal actors are invited to apply to the IBA and receive support in the form of access to resources and the IBA network, and subsidies. Themes include renewable energy, re-use of sites and materials, and temporary land use (Westerink et al. 2017). An example of an IBA project is called Superlocal, which aims to reuse resources from three vacant ten story flats to construct new social houses and public spaces in the city of Kerkrade (Reijnders, Krishnamurthy & van Tetering 2017). Three new houses made of 90% reused and remanufactured materials from the former flats have been constructed as a pilot project (Durmisevic 2019). While financial and economic benefits were reported, time efficiency was less certain (Durmisevic 2019). The IBA and Superlocal project demonstrate that alternative policy approaches have the potential to address the consequences of shrinkage in less conventional ways, led by citizens.

Key findings

• Regions will most likely go through different stages of policy response types, from non-intervention, to counteracting, and then accepting approaches, or a combination of both counteracting and accepting.
• Leadership is integral, national and state/provincial governments must acknowledge the reality of the situation and lead the way for decline to be managed at a municipal/local level.
• Policy responses may be fragmented and can involve many different actors, including all levels of government (national, state, local), private actors and citizens.
• Citizen-led approaches can be used as alternative/ less conventional policy responses
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