POLICY PAPER

TAKING THE RIGHT RISKS

WORKING TOGETHER TO REVITALISE OUR REGIONS

JULIAN WOOD

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Table of Contents

continued next page

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The paper in summary...

Our previous work laid out the evidence that **large parts of New Zealand are facing a 30 year wave of change** leading to **economic and demographic stagnation or decline**. This policy paper weighs up the international evidence for and against a wide range of regional development policies designed to assist regions to face this wave of change head on. **It draws on more than 200 studies covering more than 90 places in 24 different countries**, and delivers four key overall lessons and four policy recommendations for New Zealand's leaders in central and local government. Our goal is to assist communities, towns, cities, regions, and our nation as we grapple with the forces of globalisation, automation, ageing populations, and climate change.

The first step is to acknowledge the long-term reality that a region is facing by undertaking a growth and decline stocktake. To this end, we provide **a checklist of indicators of regional growth or decline**; and a **dashboard of economic and demographic performance**. These are designed to empower local regional planners to maximise positive outcomes for their communities.

The second step is to understand how **Smart Growth and Smart Decline** policies might turn potential pathways into real positive change in our regions. We consider the international evidence on how to: **improve local resilience and productivity**; **attract inward investment**; and **increase the supply of labour**. We also show how New Zealand is lagging behind other countries and communities the world over in using Smart Decline policy alongside growth policy to maximise wellbeing.

When considering improving local resilience and productivity we look at the use of **R&D grants** and **tax credits**, **migration's effects** on firm level innovation, **picking "industry or sector" winners**, the effects of **top down funding on innovation** and the use of **smart specialisation**. Turning toward how places attract inward investment we explore the use of non-financial incentives like **small place revitalisation**, investing in **physical assets or heavy infrastructure**, the role of **rebranding** and **flagship developments** and the attraction of creative industries. We also explore the use **of financial place-based subsidies,** finding that these often **redistribute rather than reinvigorate** economic activity. Looking at how places have tried to improve the underlying supply of labour we study the use of **youth initiatives** and the **retraining of older workers**, **spatial migration** solutions, and the use of **welcoming and settlement policy**.

Turning towards Smart Decline policy solutions, we examine the role that **rightsizing**, **densification policy**, **demolition or green space creation**, and the use of **multi-use planning** can have on people's wellbeing. We also survey the increasing role that **relocation and exit policy** will play in New Zealand's future, emphasising that relocation or exit **must be led by the local communities** themselves.

KEY LESSONS

What becomes apparent from the international literature is that **there are no ideal "drag and drop" solutions** guaranteed to work in New Zealand. Rather, regional development policy is both high risk and needs to be highly tailored to local conditions. At the same time however, **four key lessons** emerge from within the literature. Taken together, these lessons **provide a framework** to help minimise the "bloody big risk" of spatial regional development policy:

1. **Goals:** Communities and governments must be clear in what they want to do to enable evaluation of outcomes and the resulting adjustment of initiatives;
2. **Governance:** Multi-level governance is crucial to success—neither top-down nor bottom-up solutions are sufficient on their own;
3. **Funding:** Regional development funding needs to support multi-level governance and minimise the creation of dependencies; and

4. **Focus:** Regional development strategies need to be comprehensive and include both growth and decline policies at the same time if they are to be successful.

POLICY RECOMMENDATIONS

Maxim Institute suggests that the following **four policy recommendations** shape both central and local government spatial policy. We recommend that New Zealand should:

1. Develop **clear regional development goals** and rank and prioritise them to make evaluation of initiatives possible.
2. **Trial smart specialisation** as a regional development policy tool, with the aim of boosting collaboration, and co-operation across firms and regions.
3. **Use special policy zones** as a way to trial spatial policy change, including funding models.
4. Require all council long-term planning documents to **incorporate both growth and decline scenario planning**.

These policy recommendations will be **meaningful first steps** towards ensuring the regions of New Zealand are enabled to be all that they can be, in times of growth and decline. As New Zealand moves increasingly towards harnessing the great potential benefits of spatial policy tools, **we must do all we can to minimise the associated risks**. It is important to bear in mind that this type of spatial "[p]olicy experimentation implies a certain tolerance for failure. Regions can be excellent laboratories, and policy makers need to be given space to learn from mistakes." Implemented well, these policies should give our regions the chance to flourish that they deserve.

1. INTRODUCTION

"The coal mines closed, the dairy factory shutdown and then State Highway 1 cut Hikurangi loose. Once, there were so many reasons for Hikurangi being. Then, not so many... 'The government, like in other provinces, stopped seeing Hikurangi,' says Ross Campbell."[1]

Large parts of New Zealand are facing a wave of economic and demographic decline. The warning signs are here already, but we'll see the full force of the wave over the next few decades.[2] In a context where banks and post offices are closing down, jobs are scarce, and access to health care and other key services is dwindling, New Zealand's "one-size-fits-all" policy solutions are falling short for our regions. It is no wonder communities feel overlooked and left behind by the rest of the nation. They deserve better.

The Labour-New Zealand First coalition Government has brought with it a renewed focus on regional development policy. On top of the previous Government's Regional Growth Programme (RGP), this now includes a dedicated Minister of Regional Development armed with a $1 billion a year Provincial Growth Fund. We welcome this focus on regional development but reiterate that "simply spending money will not bring lasting growth."[3] Spatial policy introduces "serious risks" like "misallocating resources, creating a dependency culture and favouring rent-seekers over innovators."[4] Even the Minister of Regional Economic Development has outlined that the new Provincial Growth Fund is a "bloody big risk..."[5] It is important to bear in mind that this type of spatial "[p]olicy experimentation implies a certain tolerance for failure. Regions can be excellent laboratories, and policy makers need to be given space to learn from mistakes."[6] If we are going to spend $1 billion a year on regional development initiatives, we need to be confident that the policies we choose will make a positive difference to the lives of New Zealanders.

Maxim Institute's previous paper, *Growing Beyond Growth*, showed the goals of regional development spending need to be clear, transparent, and based on solid evidence about what works to bring long-term health to our regions. The problem is that the goals of local and central government lack clarity and are focused primarily on a "counteract" mindset; often attempting to maximise growth even when this might simply exacerbate the underlying decline. Even worse, while local and central government have aspirations for growth in the regions, there is a concerning lack of clarity on what this means, whether it is possible, and even how to get there.[7] While government regional development tools like the Business Growth Agenda and RGP show potential, we need more robust tools if we are going to make the most of regional policy spending in New Zealand.[8]

To this end, and to help New Zealand prepare for the long-term economic and demographic challenges, we recommended customised regional development pathways that include both smart growth and smart decline policy options. Instead of denying there is a problem or focussing solely on growth, we should adopt an "accept and adapt" strategy that focuses on growth where growth is possible, but also accepts that population ageing, stagnation, and even decline is a reality for many communities.

Smart decline is a way to enable "planning for less—fewer people, fewer buildings, fewer land uses"[9] but also for a better place for those that remain. It offers communities a way to plan that gives them the best chance of flourishing, or at the very least, declining well.

This policy paper picks up where the first paper left off, drilling down into this "accept and adapt" response by considering the international evidence for and against a wide range of regional development policy options. The lessons come from a broad set of academic disciplines and harness a wide array of experiences of places that have grappled with forces like globalisation, automation, ageing populations and climate change.

Drawing on a range of smart growth and smart decline policy options spanning 24 countries and covering more than 90 individual place studies, we aim to provide the reader—from regional or economic development planners to national policy-makers—with practical next steps and key overall lessons for communities, towns, cities, regions, and our nation.

To make long-term gains in the regions, the international evidence suggests that New Zealand needs to rethink its Goals, Governance, Funding, and Focus:

- **Goals**: Communities and governments must be clear in what they want to do to enable evaluation of outcomes and the resulting adjustment of initiatives;

- **Governance**: Multi-level governance is crucial to success—neither top-down nor bottom-up solutions are sufficient on their own;
- **Funding**: Regional development funding needs to support multi-level governance and minimise the creation of dependencies; and
- **Focus**: Regional development strategies need to be comprehensive and include both growth and decline policies at the same time to be successful.

Our four policy recommendations related to these key lessons are practical next steps on a 30-year journey, seeking to work towards a future where every person in New Zealand, regardless of where they live, has the opportunity to thrive. Implemented well, this long-term framework combined with our short-term next steps should give our regions the chance to flourish that they deserve. We hope this evidence-based contribution will inform and inspire those seeking to improve the long-term health and well-being of our regions.

For context, Section 2 of the paper offers a conceptual model of sustainable local economic development and the broad forces acting on this development. Section 3 provides indicators and an assessment tool for local communities to discern how they are tracking growth-wise to inform effective local scenario and risk planning. Section 4 examines the wide range of policy options available to impact on local regional development, and finally, Section 5 outlines key lessons learnt from international experience and our recommendations.

2. HOW DOES CHANGE HAPPEN? UNDERSTANDING THE LOCAL, NATIONAL, AND GLOBAL DYNAMICS OF SUSTAINABLE ECONOMIC DEVELOPMENT

Before we get to the policies, it is important we first understand the national and global context that local dynamics sit within. The model in Figure 1 below, based on work from the OECD, is a good starting point. It incorporates the local dynamics, social factors and regeneration policies that influence local sustainable development. These three areas form the heart of Figure 1 below. Here we see the interaction between:

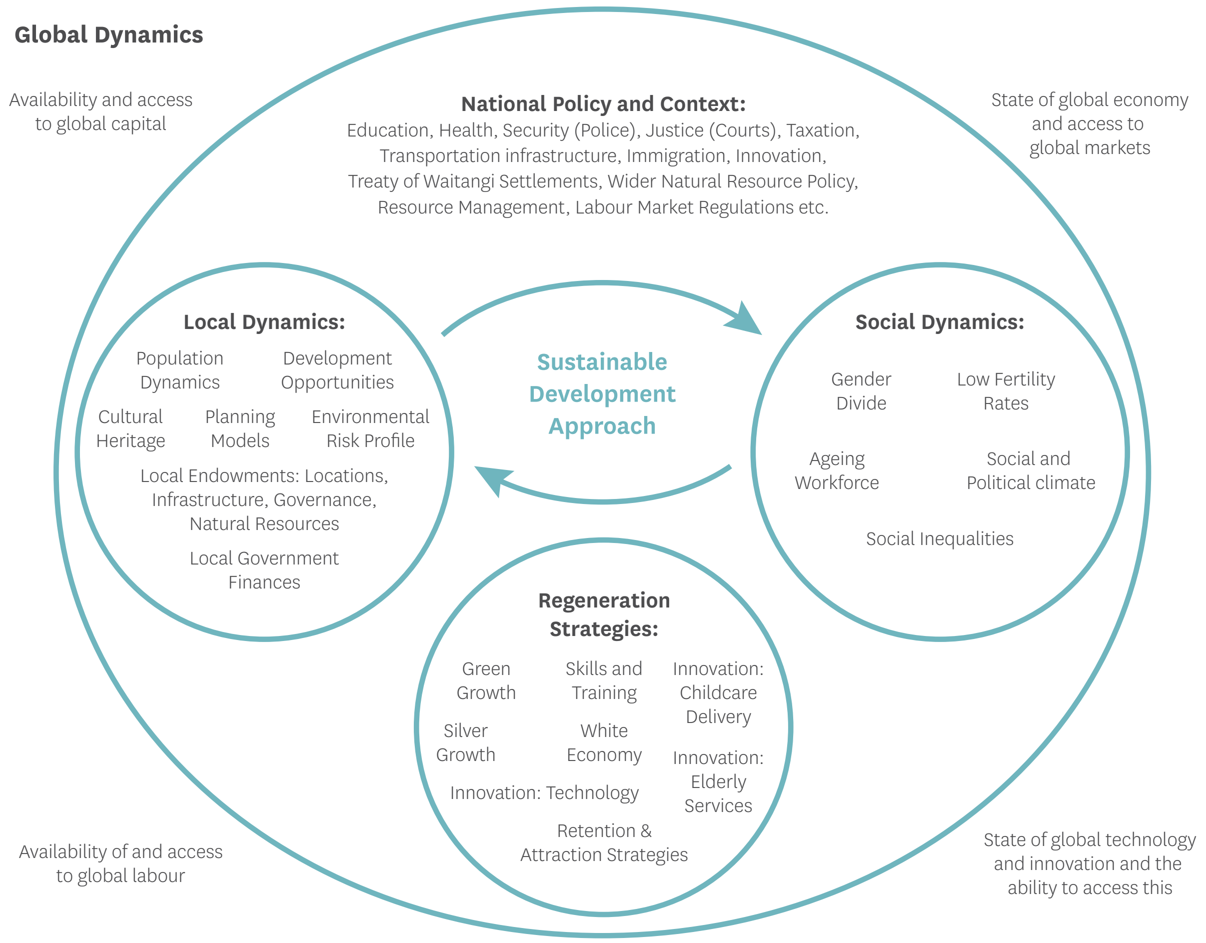
- local dynamics like a place's natural resources and cultural environment;
- social factors like fertility rates and social inequalities; and
- regeneration strategies (i.e. what can be done to encourage regeneration at the local level).

In Figure 1 we see how local sustainable development depends on the way the above elements both sit within and are shaped by the wider national policy context and global dynamics.

National Policy Context: Policies set by national government have a significant influence on the outcomes of regions. The influence of national policy on local sustainable development can be seen, for example, by:

- the way overall revenue policy sets the boundaries for local Government revenue gathering and finances;

Figure 1. Local sustainable development within a national and international context



Source: Adapted from Cristina Martinez-Fernandez et al., *Demographic Change and Local Development: Shrinkage, Regeneration and Social Dynamics* (OECD, 2012), 27, http://www.carltd.com/sites/carwebsite/files/Demographic%20Change%20and%20Local%20Development.pdf.

- how changes in the Resource Management Act can impact on planning models, a place's environmental risk profile or the ability to sustainably use local natural resources; and
- how the Treaty of Waitangi settlement process and outcomes impacts on a place's cultural heritage, development opportunities, and overall regeneration strategies.

"When I came up here 15 years ago I thought this place was on the verge of blowing up and turning into a surf town. Then came the global downturn and nothing happened. Malley: 'I've been here 15 years and Ahipara hasn't really changed at all.'"[10]

Global Dynamics: Local sustainable development happens within a range of global dynamics. The influence of global dynamics on local sustainable development is evident by, for example:

- the health of and access to global markets (can the fish caught off the East Coast or Napier be sold overseas or are administrative hurdles or trade tariffs too high and costly?);
- the availability of international finance (can local fishing firms borrow—domestically or internationally—the money they need to expand or renew their fleet?); and
- access to international labour and innovation (can these fishing firms find the right staff, have access to or make use the latest technology and fishing innovations to improve their productivity to remain competitive?).

The global, therefore, profoundly influences the local. There is no point, for example, for a local business person to invest in an export opportunity (or for a local government to fund research into it) if there are insurmountable trade barriers or if overseas tariffs are too high to sell the product overseas. Local regional development encompasses a wide range of policy fields, regulations, and governance areas, all of which need to align if opportunities for development are to be maximised.

2.1 An understanding of path dependencies is critical for change

It is also helpful to understand how path dependencies influence a place's development. Path dependence occurs when the outcome of a system or process evolves as a consequence of the history of that system or process,[11] including a place's power structures, institutions or established ways of doing things. This effectively means that past decisions cast a long and sometimes sub-optimal shadow on decisions today. A process can become imbedded and "resistant to the equilibrating and self-correcting set of market forces,"[12] meaning that the growth or decline path of a place becomes sticky and not easily amenable to change.[13] An example of this could be inferior technology becoming dominant, like an older fishing boat or style of fishing being required by law due to some legal, regulatory or local government requirement, rather than what may be optimal for a fishery. Poor decisions then, can become "locked-in."

Figure 2. Development path of a regional system

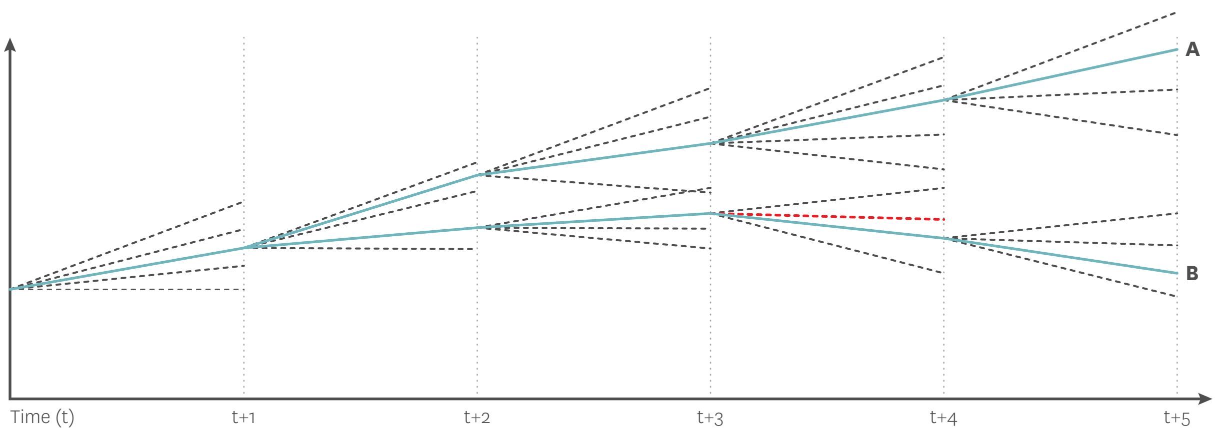


Figure 2, on page 4 illustrates this concept. Two places might start at the same place at time t and be faced with multiple possible development pathways forward to t+1 (the dashed lines). Both make similar choices and end up closely aligned at t+1. Place A then makes a series of decisions that mean it ends up at on a slightly higher development path (perhaps building a university), while B makes different choices (doubling down on its mining industry instead of starting something new, for example) and ends up on path B—a slightly lower path. But even here and in the next time period their development path possibilities still overlap (see the convergence of dashed lines). By the t+4 period we see that the path possibilities of place A and B no longer overlap and their trajectories have become path dependent—for better and worse.

What most regional development initiatives are interested in, then, is building new pathways or positively altering existing pathways. This is twofold: not only making good choices that keep the trajectory moving up (growth strategies), but also overcoming place dependencies from previous decisions (smart growth strategies). More recent literature also highlights that while new growth pathways are extremely important, it is also important (where necessary) for places to consider how to decline well (smart decline). Where could Place B be now, for example, had it decided to use smart decline strategies and ended up moving forward from the red dashed pathway as opposed to the solid blue line?

Box 1: Spatial policy is always about trade offs

Spatial policy is often known as "place based" policy because it allows policy to account for a place's social, cultural, and institutional context.[14] As such it aims to maximise the development potential of each place by taking this context into account and leveraging it where possible.[15] The alternative is to treat all places the same. This means that spatial policy is always about trade-offs. It is relatively easy to alter a place's development path if enough money can be brought to bear, but these local gains may well come at a significant cost to other places. Thus, it is important not only to uncover what works locally but to also understand how these local gains interact within the wider economy and the impact that this has on overall welfare. Spending a lot of money on improving the Auckland waterfront for the America's Cup, for example, can alter the growth path of the waterfront and associated industries, but at what cost? Should the public funding for this mean that it gets harder to access libraries in South Auckland? Hard choices need to be made in regards to not only overall welfare but the distribution of this welfare.

3. HOW ARE WE PLACED?
A LOCAL GROWTH AND DECLINE STOCKTAKE

"About ten years ago Charlie Duncan realised the Hunterville community had a problem - a lack of young people..."[16]

3.1 Long-term risk analysis is essential to overcoming political denial

Without first acknowledging the reality a region is facing, it is impossible to take positive steps towards new growth pathways. Political denial of regional long-term trends is widespread in both New Zealand and overseas, with politicians and advisors often choosing to focus on good news stories.[17] A first step in overcoming this political inertia is for local communities to undertake long-term risk analysis, or, in other words, a local growth and decline stocktake. To this end, we have pulled together two tools that will be useful:

- a checklist of indicators of regional growth or decline; and
- a dashboard of economic and demographic performance.

We have designed these tools to empower regional planners to use their local knowledge to assess their current and future situation and respond in a way that maximises positive outcomes for their communities.

3.2 Analysing growth and decline indicators

Communities seeking to make positive changes need to know their growth and decline profile. Table 1 below outlines our first tool: a range of indicators to be used to self-assess the growth and decline profile of a region.[18] The indicators are based on the "economic performance between European regions, ...outlin[ing]... attributes that correlate positively with superior performance,"[19] and recent research and data on population change within New Zealand. [20] We recommend communities work through these indicators to help paint a more detailed picture of their current situation. To help regional planners make sense of the indicators, we also offer several examples of how the checklist could be used below.

Table 1: Checklist of indicators of regional growth and decline

Indicators of Growth	Indicators of Decline
G1: A city system: the presence of at least some mid-sized cities (population: 40,000 to 150,000)	D1: No urban area population of over 100,000 and / or less than three urban areas with population over 40,000 within a 100km range of each other
G2: Human resources: supply of skilled / educated labour (share of the local workforce)	D2: Not on a major transport axis or trade route
G3: Accessibility: proximity to / distance from major markets and large urban centres	D3: Located beyond a one-hour drive from a major urban centre
G4: Advanced producer services (as a high share of local employment): consulting, finance	D4: Weberian weight-losing industries, capital intensive, with high labour productivity and high wages[21]
G5: An institutional infrastructure for supporting local development strategies	D5: A resource base whose limits of (profitable) exploitation have been reached
G6: A positive image, including a positive social climate (i.e. low labour conflict) and a local environment conducive to cooperation	D6: Climatic and geographical conditions that limit year-round tourism
G7: A good industrial mix: i.e., many small and medium-sized firms, as opposed to dominance by a few large firms	D7: An economic base founded on resource exploitation and / or the primary processing of this exploited resource

G8: Population growth: • where natural increase and net migration are both positive • where natural increase offsets net migration loss • where net migration gain offsets natural decrease when the migration is weighted in favour of females aged 15-44 years of age	D8: Population growth: • where net migration gain offsets natural decrease but net migration is largely people aged 44 years and older
	D9: Population decline: • where natural increase fails to offset net migration loss (medium risk) • where net migration gain fails to offset natural decrease (high risk) • where natural decrease and net migration loss combine (very high risk)

Source: Summation of indicators from Mario Polèse and Richard Shearmur, 'Why Some Regions Will Decline: A Canadian Case Study with Thoughts on Local Development Strategies', Papers in Regional Science 85, no. 1 (2006): 23–46 and Natalie Jackson and Lars Brabyn, 'The Mechanisms of Subnational Population Growth and Decline in New Zealand 1976-2013', Policy Quarterly, Supplementary Issue: The ebbing of the human tide. What will it mean?, 13 (June 2017): 22–36.

3.2.1 How to use the Checklist—some examples.

This tool is designed for communities themselves to work out their growth and decline profile, rather than external people or organisations making an assessment on their behalf. To help guide communities on how they could be used and to highlight the complex interactions between the indicators,[22] we offer two examples: Southland and Thames Coromandel. It is important to note these analyses are sketches, limited by the author's knowledge of the areas and are for illustrative purposes only.[23]

Example 1: Southland (illustrative purposes only)

On the positive indicator side, Southland would meet both indicators G5 and G6 insofar as it does have an institutional infrastructure for supporting local development strategies (both a Mayoral Forum and Venture Southland) and a positive image and social climate. It is notable that Southland is the first region in New Zealand with an explicit population goal. Following the 2014 Mayoral Forum the "Southland Regional Development Strategy announced an ambitious goal…to increase Southland's population by 10,000 by 2020 [now 2025]").[24]

Turning to the indicators of decline for the Southland, it is reasonable to argue that certainly parts of the region are "geographically isolated and sparsely populated" and would most likely meet indicators D1, D2, and D3 of decline. This is especially so for smaller areas like Night Caps and Ohai. This combines with Southland potentially meeting indicator D6 in regard to year-round tourism and indicator D7 insofar as it is heavily reliant on primary industries. However, it does not yet meet indicator D5 of decline, as limits of profitable exploitation of its resource base haven't yet been met. In addition to its abundant agricultural, aquaculture, and water assets, coal is still (at times) profitably extracted. Augmenting this with dynamic demographic information in indicators D8 and D9 however, informs this risk scenario further. Southland, it would seem, understands these dynamics and has been pro-active in setting a population growth target and has a whole strategy in place to achieve this goal.

Example 2: Thames Coromandel (illustrative purposes only)

Taking another region, Thames Coromandel, illustrates that a combination of growth and decline factors can cancel out one another's positive and negative effects in the short-term. Unfortunately, the example also shows that the long-term negative risk factors have the potential to escalate or combine in ways that may inhibit long term growth.

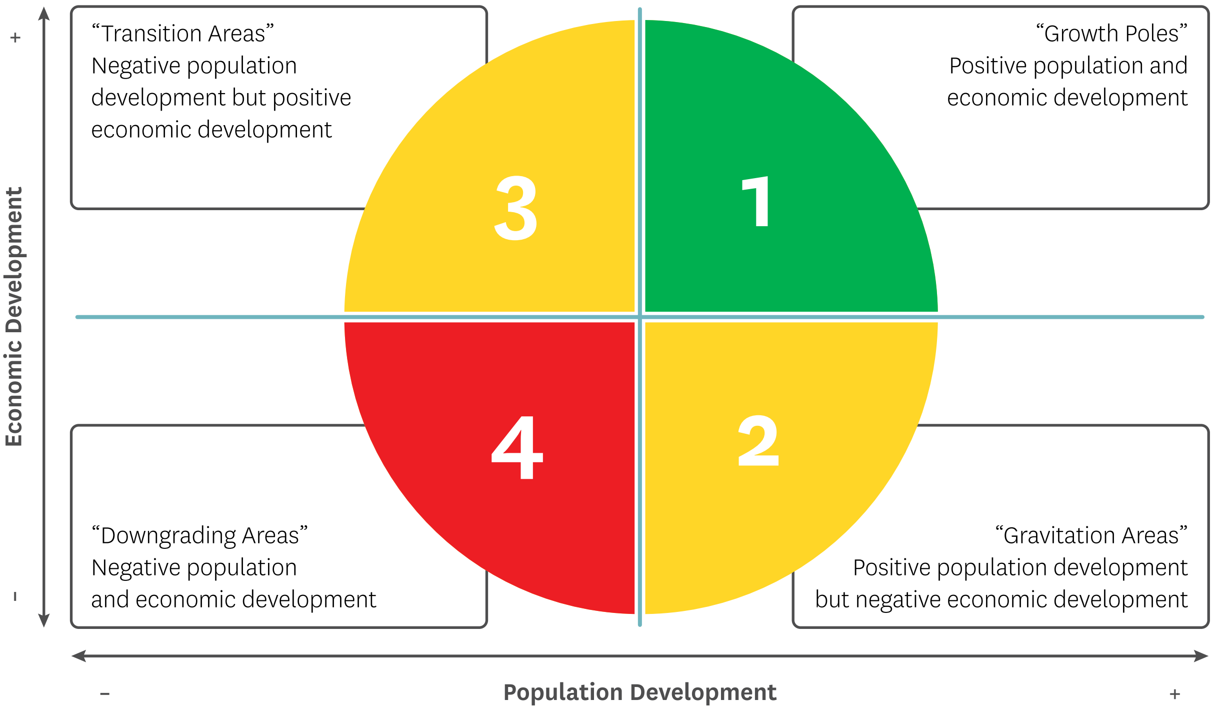
For example, the Thames Coromandel region has good proximity to Auckland and thus meets indicator G1 on the growth side. It also appears to have good population inflows and a healthy tourism sector. But when the dynamic demographic information is taken into account, it is also seen that the current population is forecast to rapidly age. Many of the population inflows are older retirees from Auckland or surrounding areas, thus meeting indicator D8 of decline. This increases the risks that the overall population will soon be in decline, thus triggering indicator D9 of decline. Given the raw number of people forecast to retire from Auckland, and the work opportunities that will arise for younger people in service provision to support these inflows, however, Thames could argue that they might well have a balance between the success and decline indicators. It is key, then, to also understand how the area fits with indicators D4, D5, D6 to assess the overall risk of decline.

In this regard, throughout its history, Thames Coromandel area has been heavily reliant on resource extraction and mining, thus potentially meeting indicator D7. Smaller firms in the mining industry tend to find it hard to compete, thus potentially meeting indicator D4. Even if indicator D5 hasn't yet been triggered (although history suggests that gold mining has a history of significant boom bust cycles) there exists an overall higher risk profile in the long term. Unfortunately, the existence of indicators D4, D5, D6, or D7 on the decline side mean it is more likely that the location will struggle to diversify as the local economic conditions are acting "as a barrier to diversification."[25] Thus while in the short term the situation is not at all dire, the outlook is not all good.

3.3 The four-quadrants dashboard of economic and demographic performance

To complement the growth and decline indicator assessment, we also recommended that communities use their local knowledge to self-assess and position themselves within a dashboard of economic and demographic performance, outlined in Figure 3 below. For regions, this can be a headliner tool to assess their overall probability of growth and decline, feeding into consideration of which regional development policy initiatives will be most appropriate.

Figure 3: Dashboard of economic and demographic performance



Source: Author adapted from the idea of Eric van Marissing and Thorsten Wiechmann, developed in a Budapest workshop on 15-16 November 2010 (WS, 2010) cited in OECD (2012), 286[26] and Thorsten Wiechmann and Karina M. Pallagst, 'Urban Shrinkage in Germany and the USA: A Comparison of Transformation Patterns and Local Strategies: Urban Shrinkage in Germany and the USA', International Journal of Urban and Regional Research 36, no. 2 (March 2012): 277, https://doi.org/10.1111/j.1468-2427.2011.01095.x.[27]

3.3.1 The quadrants explained: Growth, Gravitation, Transition, and Decline

Communities self-assessed as Quadrant 1, for example, would seem to face a relatively bright future of both economic and demographic development. These areas can be characterised as a "Growth Pole" and are most likely to be urban in nature. Communities within quadrants 2 and 3 are generally holding their own, but both face significant challenges. Those in Quadrant 2, for example, called "Gravitation Areas," are still experiencing population growth despite economic difficulties. Those in Quadrant 3, "Transition Areas," are experiencing decreasing population in spite of economic growth. Communities in Quadrant 4 are "Downgrading" or "Declining Areas," and are already or likely to soon be feeling the effects of both negative economic and population developments.

Local economic planners may also use this dashboard to classify a number of smaller places within in a wider region to provide an overall spatial analysis of the economic and demographic health of a region. For example, when looking at the Bay of Plenty, one can imagine that the city of Tauranga and Edgecumbe might well exist in different quadrants, just as the city of Gisborne on the East Coast will most likely be in a different quadrant to Ruatoria or Tolaga Bay. The overall balance of spatial growth and decline is important for regional and local government to consider when deciding on long-term initiatives and where to focus their efforts.

We hope that those who use this dashboard are given a sense of empowerment for change. A community with a genuine desire for change alongside sound knowledge of their growth and decline profile is in a good place, but they also need the right portfolio of policies to transform potential pathways into real positive changes. It is to this task we now turn, as we discuss the potential options and pathways for change available to communities.

Box 2: Three considerations from Ebbing the Tide*: To keep in mind when considering self-assessments of indicators of growth and decline and using the dashboard tool.*

1. Current population growth may not be an accurate indicator of the overall population health of a region. This is especially so if the observed growth is being driven by older age migration inflows. Indeed, as Professor Natalie Jackson and Lars Brabyn point out, to understand the overall health of a local population it is more important to understand the trend in the overall proportion of women aged 15-44 in a community as this is the main driver of natural population increase or decrease. This is because, while "net migration explains most of the variance in net [population] change, natural increase determines whether the [overall population] outcome is positive or negative."[28] Part of this is that "age-selective migration" accelerates "structural population ageing in most areas."[29]

2. While the majority of territorial authorities are currently experiencing natural increase (with births outweighing deaths) by 2043, approximately two thirds of all TAs will experience natural decrease. A new type of population decline is now on the horizon for many regions, one that combines natural decrease (where deaths outweigh births) and net outward migration (where outflows of people outweigh inflows). This is already evident in some rural centres and towns but by 2043, in roughly a quarter of all TAs this new form of decline will be evident.[30]

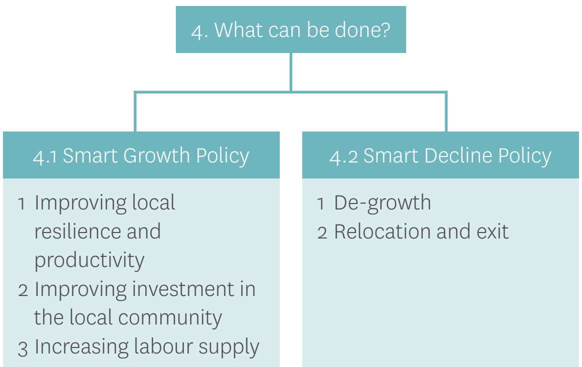
3. The dashboard tool is not a one-off test, but should be viewed as an ongoing, dynamic process. Recent work by Michael Cameron on "[t]he relative (un)certainty of subnational population decline"[31] highlights that the probability of decline changes over time—regions can and do move between quadrants. This means that a community might have a window of opportunity that it can take advantage of. Buller or Upper Hutt for example can both illustrate this window of opportunity. Across the 2023-33 timeframe both are predicted to have less than a 5% chance of population decline but both jump up to a more than 90 percent chance of decline by the 2043-53 time period. It can also mean that while some indicators may seem dire at the moment, now is not the time to push the panic button. Places like Rotorua illustrate this as they seemingly drop from a more than 90 percent chance of population decline over the 2023-33 time frame to a slightly better 5-50 percent chance of decline over the 2043-53 time period.[32]

4. WHAT CAN BE DONE?
DISCOVERING DEVELOPMENT OPTIONS BASED ON INTERNATIONAL BEST PRACTICE

"Ahipara needs a boost. It needs to grow." Then he [Malley] smiles. "But I'm glad it hasn't as well. It keeps the surf uncrowded."[33]

Fortunately, there is a rich regional development literature from both New Zealand and abroad that outlines an abundance of policy options for places to consider. In this section we will explore these options, discern how they might work together, and assess their overall likelihood of success. To help make sense of the potential pathways, we have created a framework for analysing these options, focussing on the two primary approaches: Smart Growth and Smart Decline policies (see Figure 4 below).[34]

Figure 4: What can local communities do?



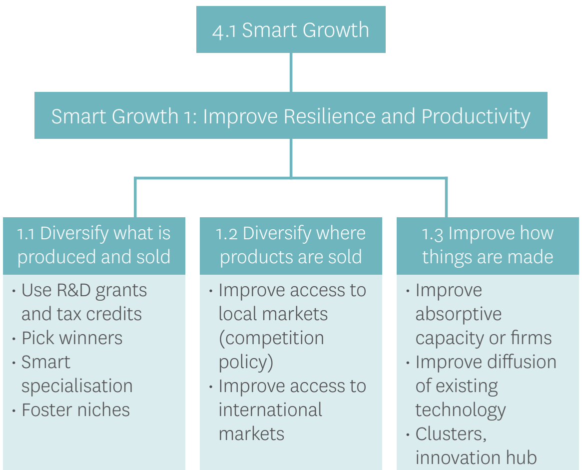
We have grouped smart growth policies into three components: local resilience and productivity; the local labour market; and the local capital market. Smart decline policy options have been broken down into two components: policy aimed at "de-growth" and policy aimed at relocation or exit. This section is structured following this five-part framework. We will begin by discussing smart growth policies and then transition to smart decline options.

Scope-wise, this paper will necessarily focus more on policies that are supported by robust empirical or case study evidence. Because of the inherent differences between the countries and case studies considered and New Zealand, there is no ideal best-practice solution that will guarantee results here—we cannot simply "drag and drop" a solution from overseas. We can, however, distil a number of key lessons from the broad reading of the material, which will be discussed in Section 5 below.

4.1 Smart Growth

Smart Growth 1: Improving local resilience and productivity

Figure 5: Smart Growth 1 - Policies aimed at improving local resilience and productivity



Three broad options are available to a local community exploring what it could do to improve resilience and productivity. It can:[35]

- diversify what it produces and sells (product or service innovation);
- diversify where or how it sells (product or service market innovation); and
- improve how it makes things (process or management innovation).

Box 3. Diversification is key to local resilience[36]

Well captured in the common saying, "don't put all your eggs in one basket" diversification is key to resilience. Diversification can protect a particular location from both an industry specific shock, like the shock that the rise of car manufacturing in Asia had on Detroit in America, and a point of sale market shock like England's entry into the EU and the loss of minimum prices in the 1970's had for agricultural producers in New Zealand. This is why it is good to have a mix of industries and firm sizes within a location, but also a wide range of markets to sell into, as can be seen in the indicators of success in Table 1. A negative shock or decline in one area can be offset by gains or boosts in other areas. Researchers Henry Mayer and Michael Greenberg warn that even for growing regions, "[d]iversifying today, in spite of the prosperity being enjoyed from strong employment and high wages, will be critical to the economic well-being of the community over the long term."[37 38]

Smart Growth 1.1: Diversify what is produced and sold

There are a number of policy options available to encourage a local area to diversify what it makes or sells. Communities can:

- use unfocussed research and development grants or subsidies;
- foster niches by protecting certain activities;
- invest in a broad industry or sector (picking a winner); or
- use a process of smart specialisation to discover and invest in something new.

Research and development grants and tax credits can have a positive impact on innovation

Innovation relies on investment. OECD research has highlighted both Research and Development (R&D) grants and tax credits encourage "the innovative activities associated with higher productivity growth."[39] There was however, only a "relatively modest average impact… over time, especially in the case of tax credits, and their effectiveness is undermined by frequent policy changes or reversals."[40] New Zealand research undertaken in 2015 by Motu confirms that R&D grants can have a significant impact on innovative outcomes.[41] Here, the relationship was stronger for the introduction of new products than for process or product innovation.

Looking overseas at areas that have transformed their economies through the use of targeted development grants can inform the story further. Anecdotal evidence from Israel's ICT revolution points toward the role that direct and targeted government assistance has had.[42] Israel introduced "conditionally repayable loans covering part of the cost for any approved industrial R&D project[s] originating from the private industry that is aimed at developing a new exportable product," where "[t]he loan is payable only if the R&D project ends with a profitable product."[43] By drastically lowering the risk of R&D by private industry in exportable technology, Israel shifted from having a very small contingent of high tech industries to it now representing "almost 50% of total industrial exports."[44]

It is an oversimplification, however, to attribute Israel's ICT revolution solely to direct targeted research grants and loans.[45] The research suggests, instead, that geopolitical events and local choices also had a significant influence. These include:

- the impact of French weapons embargos in the early 1970s;[46]
- the demise of Russia in the 1980s and the subsequent inflow of highly skilled engineers and scientists from Russia to Israel;[47]
- the impact of hyperinflation on existing Israeli firms over the 1980s; and
- the choices of the initial chief science officer responsible for developing the economy, who was already well-connected internationally and given a modest budget to invest.

The initial focus of the direct research and development funding policy was broad, namely "the maximisation of industrial R&D without targeting any specific sectors or technologies."[48] Rather than "picking high tech winners," it seems that Israel's initial policy was to "pick anything at all" so long as it was technology and export-related. This horizontal "pick all" technology approach was partly enabled by the fact that Israel started from a near-zero high tech baseline. The budgets grew quickly with the programme's success.[49]

Overall, while there is a good case for the role of direct government R&D assistance, it is not as strong or as simple as anecdote might suggest. Despite a range of negative productivity-related indicators, New Zealand "has the highest share of R&D performed by small firms across the OECD."[50] We still hold that there is a good opportunity to support small regional firms further via tax incentives or direct conditional assistance for R&D related activity. Deciding where to invest is key. As reported in *Growing Beyond Growth*, the current national level innovation and technology policy "often appears to reinforce regional inequalities as more public resources (both in absolute terms and as a proportion of regional GDP) flow to richer regions due to their greater absorptive capacity."[51] "Within New Zealand, for example," we found that, "74 percent of current business research and development support and Callaghan Innovation funding since February 2013 has been captured by firms in Auckland (40% of total number of firms receiving grants), Canterbury (15% of total), Wellington (13.5% of total), or the Bay of Plenty (5.5% of total)."[52]

Picking winners or following "recipe" type development is unlikely to work

Another theme running through the productivity and resilience literature is the call for places to diversify or invest in upcoming industries like tourism, the green economy,[53] the "white economy,"[54] and or the "silver economy."[55] This is, in other words, local places picking industry or sector winners. The results of these initiatives are often underwhelming in terms of overall impact,[56] and in the case of Japan, serve as cautionary tale of what happens when a place fails to consider local conditions. The evidence dictates that regions should focus on their local comparative advantage—what they can do better than other places—rather than anything they can do well.[57]

The fate of Japanese city Yūbari highlights that simply following a well-used "recipe" for success can lead to disastrous results. Within Japan, partly because of the top-down governance model, "almost all regions focus on internal migration, tourism and the silver and green economy."[58] This results in fierce competition for tourists, domestic migrants and firms operating in these silver and green industries. Yūbari, followed Japan's central government's plans and invested heavily in tourism and melons as it tried to transition away from mining. It subsequently faced financial collapse as tourists decided that they would prefer to visit other more interesting tourist destinations.[59] By 2016, its population had dwindled to around 9,000 from a peak of 120,000.[60]

Research into places that have invested more heavily in the silver economy (providing services like rest homes or caring facilities) in Japan suggests that this sector eventually reaches natural growth limits.[61] This is particularly evident in Osaka, as the people employed to support the silver economy and community wellbeing are also aged. Focussing on the services side of the silver economy alone, therefore, is not a long-term solution for communities.[62]

This tourism and other economic sector evidence from Japan is supported by case study evidence from the southern Italian towns of Sutera and Riace in Calabria. Here, investing in tourism infrastructure or services did not guarantee that tourists came. Instead, in Italy, tourism investment appears to work best in places nearer to population hubs.[63] Many studies also brought a timely reminder that building a tourist infrastructure is not costless. There is a critical need for additional tourism-related funding,[64] especially for smaller towns. This is a well-known issue in New Zealand in places like Franz Josef, a small town of 221 ratepayers servicing a tourist population of more than half a million people every year.[65]

On the green-economy side of things, renewables are another oft-cited investment strategy for regional development. Unfortunately, the overall evidence is very mixed on the efficacy of such initiatives. On the positive side, international research by OECD into renewable energy and rural development outlines that alongside the provision of cheaper sources of energy, "renewable energy deployment can increase and stabilise rural incomes...improving the overall innovation capacity in rural areas [and] empower[ing] local communities."[66] They also note however, that investing in a top-down and spatially-blind way "can have unexpected and undesirable consequences," [67] including the displacement of local workers, dependencies on central funding and the deepening of local absorptive capacity issues.[68] Adding to these risks, alternative energy projects in America have been found to be "susceptible to economic downturns."[69] Other green-focused initiatives like the "eco towns" in Japan have not yet been evaluated in regard to their long-term effectiveness.[70]

Overall, while there are some positives outcomes from picking industry or sector winners the important lessons here centre around the need for this investment to be more than just a so-called "recipe for success." To minimise the risks associated with picking winners, both central and local government need to work together, and the initiative must tie into some form of local comparative or competitive advantage. This concept is fleshed out the following section.

Smart specialisation may hold the key to successful spatial innovation-focused investment

A framework known as smart specialisation has potential to minimise the risks outlined in the above case studies, and spatial investment policy more broadly. Smart specialisation, "a regional policy framework for innovation driven growth,"[71] is focused on spatial or targeted interventions and built around four design principles:[72]

- **clear objectives** and intentions,[73]
- a process of **entrepreneurial discovery**,
- highly **granular interventions** (below sectoral level); and
- the need for **time-limited support**.[74]

The first principle, having **clear objectives and intentions** that are evaluable, limits the potential for political capture and creates opportunities for lessons to be learnt and carried forward into further initiatives.

The second, **entrepreneurial discovery**, minimises the risk that a central planner "picks winners" and maximises the chance that innovative ideas and processes diffuse across regions. While rarely will policy-makers admit to picking winners,

> [t]he temptation is high to buy consulting services that will write a nice report using any kind of figures and tables and thereby produce the illusion that the government has 'sufficient information and knowledge' to decide priorities in a top-down manner.[75]

Entrepreneurial discovery, on the other hand, relies on a process whereby a solution is discovered by bringing together local knowledge that is dispersed, decentralised, and sometimes hidden.[76] Cooperation across regions "with complementary capabilities and strategies"[77] is key to encourage the knowledge "capital" of one place to "spill over" into complementary activities in others, encouraging the development of new technologies and knowledge-based production chains across the economy. National and regional strategies should be aligned or "synchronised" where possible.[78] Instead of a central planner picking winners, the process of entrepreneurial discovery means that just listening to local entrepreneurs is not sufficient, the discovery process and policy must be centred around them and small and medium sized enterprises.[79]

The third principle of **highly granular and tailored interventions** also avoids the temptation to pick sectors to invest in. This approach means regional decision makers and planners wouldn't say "let's focus on the tourism sector, or the green economy or even products for export like Israel did." It requires a more granular, spatial approach; in essence a trial of something hitherto "unknown" or new. It also acknowledges that "policy resources must be prioritised on those activities, technologies or sectors where a region has the most realistic chances to develop wide-ranging and large-scale impacts which also develop and build on many different local and interregional linkages and connections."[80] In other words it helps a region to realise its comparative and not just competitive advantage.

The fourth design principle, that government **assistance is time limited**, is key to sustainable development. "The rationale to discontinue support is not about success or failure" writes Dominique Foray, "but rather that the considered activity is no longer new."[81] The importance of time-limited support is reinforced by the work of Ron Boschma and colleagues, who argue that any intervention aimed to "shield" or "nurture" a particular niche must also "empower" it by requiring it to compete unassisted after a defined period.[82] Indeed, regional development policy within Japan's mountain towns highlights that ongoing public intervention can disempower communities from discovering their own way forward, as they become increasingly dependent on public money.[83]

Overall, the evidence suggests that smart specialisation minimises the risk associated with spatial interventions and has great potential to be used to discover where and how to invest in highly-targeted regional interventions. The final form of these interventions will be time-bound and place-specific. Because of this particularity, it is unlikely that an extremely broad policy (like planting a billion trees) or a policy applied to all regions (like all regions focussing on tourism) will be uncovered. Instead the process itself should help enable some new regionally-based innovation to arise.

Smart Growth 1.2: Diversify where products are sold

A second way to improve local resilience is for local firms to have access to a wide range of product markets. Central government should continue to focus on maintaining access to international markets via international trade agreements. The ability for regions to influence these trade agreements is limited, however. Also, as highlighted in our previous paper "as the economic centre of gravity moves toward Asia, a part of the globe we are situated in we will need to secure ourselves as part of this global region."[84] One way for local communities to encourage these linkages is through the use of skilled and unskilled migration policy. Recent New Zealand evidence supports this, finding that New Zealand firms that hire recent migrants are more likely to enter new export markets.[85]

Surviving in these markets over the long term is critical. As the Productivity Commission outlined, in order to survive, local firms must be efficient, dynamic, and able to respond quickly to market signals, highlighting the role that improvements in domestic competition policy can have in enabling local firms to compete locally and internationally.[86] This is especially important for the services sector as it transitions from volume-based, commodity growth to knowledge intensive and high-value-add growth.[87]

The evidence points towards the importance of not only ensuring access to diverse markets, but also making sure that any interventions taken do not endanger this access or stifle the local market by unreasonably protecting local firms from competition. Similarly, one can argue that access to unfair competition (if local firms are having to compete with heavily protected firms overseas) is also unwise for the local economy. Overall, regions have relatively limited potential to influence where products are sold, but they can be more agile and efficient. We will now turn toward improving how things are made.

Smart Growth 1.3: Improve how things are made

Some form of innovation, be it process or management-related, is key to improving how things are made. As already examined above, OECD research has highlighted both Research and Development (R&D) grants and tax credits encourage "the innovative activities associated with higher productivity growth."[88] However, another way forward is for firms to learn from prior research from outside sources. This ability to learn from others is known in the literature as a firm's absorptive capacity; the higher it is, the more likely that firms will adapt to global best practice. This absorptive capacity combines with patent and copyright laws and regulations to set the way that information and innovation diffuses across firms and regions.

In New Zealand, research suggests that our bigger firms make good use of innovation frontier information, but this doesn't appear to trickle down to smaller firms, highlighting a problem with the diffusion of information across New Zealand firms.[89] Similarly, a recent examination of the absorptive capacity of firms reinforces these findings by showing that small, locally-owned firms with no professionals operating in the primary sector tend to have lower levels of absorptive capacity than their respective counterparts.[90]

Migration policy that enables regional firms to attract and employ highly skilled migrants and New Zealand returnees does seem to be an important component of firm-level innovation, diffusion and absorptive capacity for New Zealand. Research that looked at the links between new arrivals and firm-level innovation found that "firms that hire more recent migrants and firms that hire more recent returnee New Zealanders tend to innovate more than other firms."[91][92] In terms of diffusion, both new migrants and returnee New Zealanders have a positive role to play, most likely through their positive influence on the skills composition of the workforce.[93]

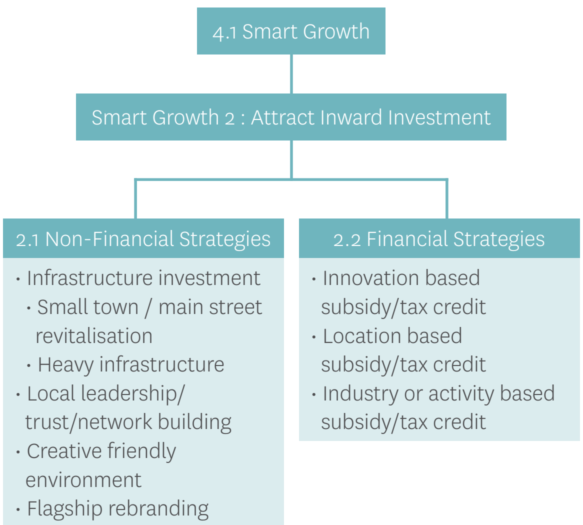
Recent research by Paul Conway from the Productivity Commission argues that New Zealand needs an "[a]ll-of-firm innovation mind-set to lift the capability of firms to absorb new technology, and maximise its benefits... [helping firms see that] working on the business is just as important as developing new and improved products."[94] Industry and sector organisations are also likely to play a lead role as information providers.[95]

Smart Growth 1 - Conclusion

In summary, policies should aim to improve resilience and productivity. Diversification has the potential to help improve the resilience of a local community in the long term. R&D grants and tax credits can positively influence the innovative activity of firms and are a potential way forward, but are costly and prone to policy reversal. Solutions based on being open to migration—especially skilled migration—appear key to improving innovation, diffusion, and the absorptive capacity of local firms. Picking "industry or sector" winners, is particularly high-risk for local communities, especially if these interventions are driven from the top down or funded centrally. Creating dependencies and crowding out local innovation are the key risks here. Similarly, centralised funding can create unhealthy silos of interventions, whereby locations hoard information and innovation, thus slowing down the diffusion of information spill-overs. It is therefore important to minimise, where possible, obvious risks around picking winners or creating dependencies. Using the spatial smart specialisation model shows promise in this regard, as it not only minimises these risks but aims to enable regional knowledge spill-overs, by encouraging co-operation across regions.

Smart Growth 2: Improving investment in the local community

Figure 6: Policies aimed at inward investment



The second component of smart growth policies is a cluster of policy incentives aimed at attracting new capital or investment to a place. We have divided these into non-financial and financial incentives (See Figure 8):

- Non-financial strategies aim to make the location a more desirable place to undertake work or invest through social, environmental, infrastructure, flagship investments, or rebranding improvements. While not transferring money to firms, some forms of non-financial incentives like fast-tracking approval of permits through local government do aim to lower the cost of undertaking business in a particular location.
- Financial incentives provide some form of monetary incentive for firms or individuals to invest locally. They can be innovation, industry, or location-based.

In practice, financial and non-financial strategies are used side-by-side and are hard to delineate. Monetary incentives, for example, may be provided to revitalise social housing stock or the local shopping environment through "main street" beautification. Similarly, a flagship building like an opera house, theatre, or gallery may be partially or wholly funded through public funds to attract creatives.

Smart Growth 2.1: Non-financial strategies

Non-financial strategies usually aim to revitalise a place by making it a specific location more attractive to live or work in—be it "hard" infrastructure investments like building new bridges or roads, or more "soft" or social infrastructure like improving ethnic or social diversity. There are wide range of case studies from around the world that examine small place revitalisation.[96] Because each place studied has a different set of challenges, local conditions, and slightly different solutions, care must be taken when analysing the policies. Overall the results tended to be mixed, with many initiatives ushering in a short-term positive boost to employment or population that was reversed soon after. Very few initiatives successfully enabled a community to overcome a negative trajectory.

Building things (physical infrastructure investment) to attract investment is the costliest form of intervention and tends not to arrest population decline

Studies from Switzerland and Germany highlighted that efforts to revitalise housing and school infrastructure were very high cost compared to most other forms of social intervention, and when tried in isolation often failed to have successful long-term impacts.[97]

In Japan's mountains, the focus of assistance has often been to build heavy regional infrastructure like roads, bridges, and highways, within a centralised "build it and capital/people will come" approach. As Thomas Feldhoff outlines, however, "economic growth has failed to materialize" and these efforts seemingly caused a second problem as access to these public works has "aggravated regional economies' dependency on central government-controlled construction works."[98] Overall, in Japan, as these infrastructure subsidies have been scaled back, small towns have quickly transitioned to marginal settlements and then shortly afterwards a process of regional abandonment and collapse.

Success stories often hinge on local leadership

The central role of local leadership and vision for small towns to realise their potential was evident in nearly all the regional success stories. Leadership took the form of a key person or champion for the community. Local communities were also, more often than not, funders of their own revitalisation (see Box 4 below). Many decided to co-operatively purchase or fund an important local asset, such as the local pub in the case of the Old Crown in Cumbria UK or a local service station in New Zealand.[99] Another example was private benefactors previously employed at the local timber mill in Kawerau invested in a business and community hub initiative which has proven to be an ongoing local success story.[100]

Box 4: Tapanui comes together to solve its health needs

The local hospital in Tapanui closed in 1994, and "[l]ike many isolated rural communities, dwindling population and increasing cost, combined with reduced funding, contributed to the closure."[101] The non-profit West Otago Heath Trust was established in 2002 to investigate what could be done to improve health care provision and aged care in Tapanui and the surrounding area. The Trust investigated options between 2002 and 2015, and the community, who raised $3.6 million and volunteered 26,000 hours time, has enacted the plan over the last eight years. $1 million of the total came from a special rates levy provided by the District council, while the old hospital site was gifted by the Government. The overall result of the community's efforts was a 14-bed rest home and a 24-hour access West Otago Health Centre (which also provides training for rural doctors and nurses).[102] In 2015, the Trust and the broader community's response, won the Trustpower National Community Award and has become a source of pride for the wider community.[103] According to Marianne Parks, the West Otago Health Ltd Director, "it's a project that galvanised our community, and is a living example of the magic that can happen when a group of committed individuals come together with a shared resolve, to make things happen."[104]

Harnessing external expertise to overcome local gaps in knowledge is important

Aligning well with the earlier discussion on the levels of absorptive capacity in local communities, studies from Australia,[105] United States,[106] and Germany[107] also suggest that places benefit when they seek outside expertise to help them navigate wider networks to find allies, information, or potential funding sources. This was particularly pertinent when there were multiple and complex layers of local, regional, and federal government and university funding sources available. The localised knowledge available to fill out all the forms or tick all the boxes needed to make a change simply wasn't available.

Partnering with outside expertise and higher levels of government can also provide a level of accountability that helps maintain the goals of the intervention over time, in turn overcoming the long-term capture of public spending by early participants. This type of capture was evident in London's Coin Street development, where over a 25-year period early public investments resulted in gentrification of the area, enabling neighbourhood associations to benefit, rather than maintaining the "social equity and redistributional priorities" that formed the basis of the interventions in the first place.[108]

Focusing on creatives and creative industries only works if all other considerations are equal

A number of small towns have sought to make themselves more attractive to creatives and creative industries as a way to attract inward investment. Initiatives like Wellington's focus on becoming "Wellywood," Nelson as the birthplace of the New Zealand World of Wearable Arts awards, or Dublin becoming a hub for media and computer game design are examples of this. Unfortunately, the results from Ireland are not encouraging.[109] So-called "hard" factors like the availability of skilled labour, good transportation, decent communications infrastructure, and market accessibility usually won over "soft" factors like "levels of ethnic or social diversity, cultural and social facilities,"[110] or levels of tolerance and openness. A place can certainly improve its soft factors, but if it is in competition with a similar location that has better hard factors, the evidence suggests firms will put emphasis on the latter. All else being equal, however, soft factors will help a location be more attractive to creatives.

Flagship developments and rebranding should not be seen as isolated or one-off solutions

Rebranding a location alongside some form of flagship development like building an opera house or technology park is another non-financial method used to attract inward investment. The rebranding of post-industrial Manchester is often heralded as proof of this concept as both population and economic growth followed its ongoing implementation. However, as Assistant Professor in Architecture and Built Environment Fernando Ortiz-Moya point outs, contextual factors like Manchester's location at the heart of a globally-connected growing region played a huge role.[111] "New" Manchester transformed its image not just through multiple initiatives and flagship projects but also through more localised neighbourhood renewal projects, not all of which were successful. The neighbourhood renewal projects were often required to counteract to the sustained, and in some cases deepened, inequality and social exclusion created by the flagship projects.[112]

Overall, while this model had success in Manchester, it isn't easily replicable. Simply building a stadium or a pool will not be a guaranteed success, particularly without local neighbourhood renewal projects. Indeed as Ortiz-Moya summarises:

> Cities trying to replicate the 'Manchester Effect' should find their own brand based on their own local heritage. Rather than following generic strategies to become a 'creative city', a 'techno city' or a 'cultural city', policymakers should find their city's inherent assets and develop their strategies around them.[113]

Smart Growth 2.2: Financial strategies

Financial strategies incentivise firms to locate in a particular place by offering money or tax credits based on their locational choice (these locations are then often known as special economic zones). These incentives can also encourage particular types of industries, say heavy manufacturing or high technology firms, to cluster within the zone. The evidence suggests these types of incentives, at least in the short term, tend to work as firms seek to take advantage of the financial windfalls.[114]

While firms appear to do well, the overall benefit for the host location is however, far less compelling, and often highly dependent on the domestic firms (usually outside the zone) being able to quickly learn from the international frontier firms that locate in the zone. They can do this in different ways: first by becoming part of the global value chain and hence becoming part of the knowledge chain; or by employing staff previously employed in the "in zone" firms. Unfortunately, this is far easier said than done.[115] It is also well documented that as subsidies or financial incentives dry up, firms can and will choose to relocate to another place as demonstrated by the Polish mining city Wałbrzych's attempt to attract new non-mining industries into a special economic zone. Firms that initially chose to locate inside the special economic zone announced they would be relocating to new zones as the Wałbrzych one ended.[116]

There is also good evidence of the costs to overall economic efficiency of special economic zones, especially if the firm was likely to be based in or near the area anyway, or if market signals are blunted. The experience of France in No-Pas-de-Calais[117] offers an example of the former, as their special economic zones were found to have caused the relocation of firms from areas close to but outside the zone rather than any form of overall regeneration of regional growth. Subsidies given to revitalise rural housing and business premises under the rural renewal scheme in Ireland is an example of the latter. The subsidies initially stemmed population decline, but in the longer term created an oversupply of housing, and decline returned.[118] More generally, the OECD has argued that the combination of these two costs mean that the use of spatial financial incentives like special economic zones is "wasteful from a social welfare point of view."[119]

Smart Growth 2 - Conclusion

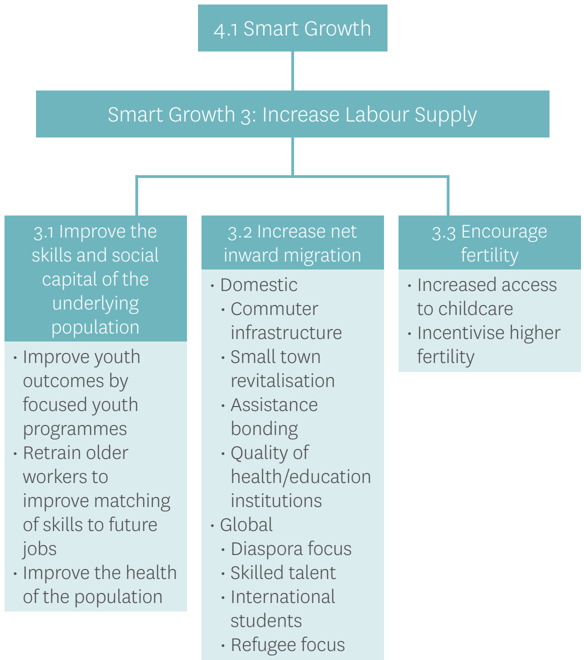
Overall, the literature highlights that if non-financial initiatives are to attract investment, they should be seen be complements to other development policy options. Small place revitalisation efforts resulted in a short-term boost to employment or population. Where places were successful, their success often hinged on exceptional local leadership and the ability to harness external expertise to overcome local knowledge and funding gaps. Policy that focused on building local physical assets like school buildings was costly and unable to arrest decline. The use of heavy infrastructure investment in Japan crowded out local solutions. Rebranding and flagship developments required a good consideration of local conditions and that the initiatives fit with underlying comparative advantage. Along these lines, aiming to improve local cultural and social facilities and levels of tolerance and openness was not, in isolation from a consideration of hard factors, seen as a viable way to attract creatives and thus creative industries.

Financial strategies to attract inward investment through the use of special economic zones, while often initially successful, were also associated with overall efficiency losses to society in the long-term. The ability of the local community around the special zone to learn from firms within the zone or become part of the global value chains associated with them was critical for success. Often, however, these zones tended to redistribute rather than reinvigorate economic activity. Place-based subsidies run the risk of blunting market signals and creating secondary negative effects.

Smart Growth 3: Increasing labour supply

Just as a location can aim to incentivise the inflow of investment to improve its growth prospects, it can also aim to improve its local labour supply in quantity and or its underlying skills and social capital.

Figure 7: Policies aimed at increasing local labour supply



We have arranged these labour supply policies into three broad categories, those that seek to:

- improve the skills and social capital of the underlying population;
- increase net inward migration;[120] or
- increase the fertility of the underlying population.

These policy tools interact in a multitude of ways: some mutually-reinforcing; others working at cross purposes.[121] As we have seen in earlier sections, policies need to be considered with the bigger picture in mind. Due to the depth and breadth of literature on migration solutions, we will focus on common themes that arise rather than a complete overview of migration policy. We will also look at two studies related to local skills and education training in response to regional or localised decline alongside fertility policy options.[122]

Smart Growth 3.1 Improve the skills and social capital of the underlying population

Retraining older workers has shown some success

One way of improving the local labour market is to upskill local people. With the global trend toward an ageing workforce and increasing automation, a number of places have seen success by focusing on retraining older, recently unemployed people. Two case studies, one from Germany and another from Canada, outline some of the lessons learnt for supporting older unemployed workers in shrinking towns.

The Germany study examined the national-level "Perspective 50 plus" programme, an active labour market policy investing in the silver workforce, particularly women and female migrants.[123] "Between 2005 and 2011," the report outlines that "more than 580,000 older long term unemployed across Germany were [included in the programme] and more than 160,000 of these found a job in the regular labour market."[124] This is a positive outcome. Key elements of the programme included: gender mainstreaming;[125] focusing on small and medium-sized employers; including health care strategies alongside employment strategies (health issues were a barrier for many older unemployed people); and vastly reducing the number of cases per staff worker to enable more focused assistance.

The Canadian study looked at a much smaller-scale initiative, that focused on improving outcomes of older people that had become unemployed due to the closure or downsizing of a firm in a place with a high reliance on a single employer or industry.[126] Over an average duration of three months, the initiative offered a range of targeted assistance ranging from CV preparation to upskilling, often in group settings. They almost always involved "a job-shadowing or work experience component with a local employer or community organisation."[127] The strengths of this programme appear to be its "joined-up approach," whereby training initiatives were embedded in wider regional development strategies and across various levels of government, training providers, and employers. While small in scale, its highly-targeted approach appears to have had good outcomes for participants, especially older women—75% of participants "found employment during or after their participation" in the programme; 44% of those were still employed 8 months later.[128]

Youth initiatives show some promise

Youth initiatives aim to improve the retention of young people within a particular location by linking local youth to local jobs. Studies into small town renewal in Australia point toward the success of youth programs that focus on improving "employment diversity, education options, transport, accommodation, lifestyle, image, and participation."[129] On the participation front, an initiative in Sweden has encouraged youth participation in local councils and in school decision making.[130] There are also examples in the Netherlands of initiatives that join employers with education providers to highlight the possibilities for local employment for local youth.[131] The overall outcomes of these newer programs have not yet been evaluated.

In our own backyard Rachel McMillan reported on the success of youth interventions in Otorohanga, New Zealand, following the opening of a trade training centre aimed at transitioning local young people into local jobs. These initiatives included "pastoral care of apprentices… scholarships and guaranteed job paths."[132] A Ministry of Social Development review of the initiatives found that "since the initiatives began in 2005, youth crime has plummeted and there is zero registered unemployment for people under age 25 since November 2006."[133]

More recently, a youth transition programme piloted by Aoraki Development in Timaru (in partnership with the Ministry of Social Development and the Ministry of Education and within the wider Canterbury Regional Economic Development Strategy) has seen some initial success and is likely to be expanded.[134] This programme aims to connect young people in schools to businesses and helps employers to become "youth friendly." There is an evaluation of this pilot being planned.

Maintaining health and education services in rural areas impacts positively on wellbeing

A number of places have attempted to diminish the impact of demographic change by investing in regional health or education services to help people stay in remote areas. As already discussed above, Japan has made a significant investment into the widespread use of ICT solutions for aged care. Another example is Distance Health Care in Sydjylland, Denmark, a telemedicine project where "patients can be diagnosed, monitored, and treated in their own homes."[135] After evaluation, this programme was extended to become an important part of service provision in the region.[136] There is no overall evaluation of these initiatives regarding their demographic success, but as mentioned earlier, these initiatives have been shown to improve health and reduce social isolation outcomes.[137]

Smart Growth 3.2: Increase net inward migration

Migration is unlikely to work everywhere

> *"So, we have jobs, and affordable housing, but we need skilled workers and we would like to see more incentives in getting people to settle into our region..."[138]*

Migration solutions are, perhaps, the most commonly cited solution to small town demographic decline. As outlined in our previous paper, however, the big picture of their effectiveness is not encouraging: "Immigration is also unlikely to solve regional demographic trends, as migrants typically self-select where to settle...[t]o date, migrants have been most likely to settle in New Zealand's major urban areas rather than rural ones.[139] Skilled immigration is unlikely to balance out the long-term structural ageing problem in the New Zealand economy. As Natalie Jackson confirms, "[e]ven a trebling of the current immigration rates would have little effect on the structural ageing of the population."[140]

Migration can make a big difference to a local area with the right set of policies and support

While not necessarily effective at an overall or national level, local communities should not ignore the potential of migration solutions. These could include a focus on domestic migration by improving commuting or ICT linkages with larger cities, or offering tertiary study scholarships for local school leavers with the aim of having these students later return and work in the community, to name a few possibilities.[141]

The international literature highlights that international migration for a particular location can be highly influential in revitalising a local town or city. This can be through a location focusing on getting their own diaspora to return, or through the use of skilled—or even unskilled—migration solutions.[142] Many New Zealand towns are already proactive in this regard, with promising results. As Kurt Bayer reported of Ashburton:

> ...while sheep [farming] has been transplanted by dairy, it still is an agricultural powerhouse. It's just that it's gone beyond the local population to help keep it running. Migrant workers have flooded to the area over the last decade. The Ashburton district - total population of around 32,000 - now has a 3000- strong Filipino community, another 1000 or more Pasifika people...consensus seems to be that the place is all the richer for the increased diversity and multiculturalism.[143]

Success requires settlement and welcoming policy

The most common theme throughout the international literature on the ability of local communities to use migration successfully is not just their ability to attract the "right" or "highly skilled" people or to "incentivise" or "bond" people to settle in smaller communities, it is their ability to welcome and settle well.

A positive example of good welcoming and settlement policy comes from the southern Italian towns of Sutera and Riace. Researcher Deborah Needleman's points out that for these small communities, "refugee migration if welcomed and settled well can breathe new life into shrinking places," and goes on to say that accepting refugees as "an act of humanity...has become an act of self-preservation."[144] The Närpes region of Finland established "Welcome Offices" to provide information to immigrants and help co-ordinate the integration work in the region[145] with varying degrees of success. Economist Philippe Legrain supports this positive view of refugee migration from an economic perspective, predicting that "investing one Euro in welcoming refugees can yield nearly two Euros in economic benefits within five years."[146]

Domestically, Immigration New Zealand has recently commenced a "Welcoming Communities" pilot programme in five locations across New Zealand.[147] This pilot encourages local government, tangata whenua, and community leaders to develop a wide range of welcoming initiatives that aim for the following results:[148]

- there is an increase in community capability to welcome newcomers;
- newcomers feel included;
- those who are eligible choose to stay and make the community their home;
- communities recognise the benefits of diversity;
- negative perceptions towards newcomers are reduced; and
- community growth is planned for and carefully managed.[149]

This pilot programme will be evaluated in 2018.

Another recent example of welcoming policy in New Zealand is the "Community Connectors" based in Cheviot and Culverden/Amuri,[150] that work to engage newcomers to the district and connect isolated people in with community activities. The need for these part-time, Ministry of Social Development-funded positions came to light following the findings of a local business survey. Interestingly, a similar position in Amberly, introduced following the success of the Cheviot and Culverden trials was seen to be less successful in Amberley due to the fact it wasn't based on local need.[151] This is an important lesson for these kind of initiatives.

Successful migration in rural locations requires a different set of migration policy tools compared to larger cities

A recent study of rural area migration solutions in Nordic Countries (Iceland, Norway, Sweden, Finland, Denmark, and Greenland) concluded that while "integration outcomes are not always that good,"[152] success appears to hinge on policies that aim to overcome particular problems with rural locations like:

- family-wide immigration solutions (not just interventions focused on employment that attract highly-skilled individuals or in schools that attract international students);
- local education providers having access to and providing e-learning services (to overcome local second-language learning capacity constraints);
- workers being able to source housing close to jobs (as rural areas are not well-served by public transport);
- local settlement co-ordinators; and
- welcoming communities.[153]

A key lesson on migration solutions is that they are often contingent on community agreement and backing, or else welcoming policy will fail.[154] Indeed, even with broad-based support for migration solutions from within community, the politically motivated anti-migration knife attack of the Mayor of the small German town of Altena serves as a warning that migration as a policy tool can stir emotions of those with a strong adversity to change.[155]

Local communities can successfully take a leadership role in migration solutions if given the chance

The capacity of local communities shouldn't be underestimated. Case study research from Morden, a 9,000-strong population town in Canada's Manitoba province, highlights the leading role that small communities can play in migration solutions if they are given permission to act by broader local community and national-level immigration policy.[156] Whereas other smaller areas hope to attract migrants after they have arrived in Canada, Morden actively seeks out potential newcomers before they have even applied to live in Canada. The town focuses on skilled migrants who have no existing family linkages to other parts of Canada and requires them to visit the town for two weeks before assisting them to apply for relevant visas. Following this visit, successful applicants are then streamlined through the broader provincial migration programme by local Morden officials. While Morden has been effective in recruiting highly skilled migrants and initial retention rates seem high, there is not yet any long-term evidence that this will be sustainable.

Another option is to focus on people who already have a connection to a community

Other places have focused their migration efforts on getting people that have migrated elsewhere to return; people with an existing connection to a community. Israel and China, for example, have concentrated on harnessing their wider diaspora with return-focused migration strategies. Research suggests that knowledge-based returnees contribute substantially to the strength of domestic research and innovation systems.[157] As the authors articulated, "returnees directly link their country of origin to the outside world...[and] boost domestic productivity and international competitiveness through the direct transfer of knowledge and the indirect benefits brought by overseas professional and trade networks."[158]

Unfortunately, the experience of both countries highlights one of the major challenges faced by returnees: "somewhat restricted" labour market opportunities, "with one returnee describing it as 'professional suicide.'"[159] This does not mean that small places should discount the idea of return-focused migration, just that once again, it is not a simple solution with guaranteed results. The role of welcoming policy is also apposite here, as we see people experience social and cultural dislocation even in a place they have a connection with.[160]

Smart Growth 3.3: Encourage fertility

Governments have used a wide range of measures that have been used by to increase fertility, including: "baby bonuses, family allowances, maternal, paternal and parental leave, subsidized childcare, tax incentives, subsidized housing, flexible work schedules, and campaigns to promote the sharing of parenting and household work between spouses."[161] Few have been successful. "The United Nations noted in its 2013 World Fertility report that "the success of policies to influence fertility in low fertility countries has not been impressive,"[162] and continued to conclude that "the evidence for the effect of financial incentives on increasing fertility is mixed and often temporary and transient." [163]

This is a grim assessment. In the same report the United Nations outlined that there is some evidence to support the use of family-friendly policies like increasing the availability of childcare, for the use of flexible parental leave and efforts at addressing work-life balance issues, as these initiatives can influence fertility insofar as they promote the ability to combine work and parenthood. On balance, however, the evidence suggests that there is limited ability for either central government or local communities to influence local fertility rates, let alone capture these gains.

Smart Growth 3 - Conclusion

Improving the underlying supply of labour is not easy, but there are a number of options available for communities. Youth initiatives and the retraining of older workers both showed promise and should be investigated further. At a local level there was good evidence to support migration solutions, but these are not a one-size-fits-all solution. Migration solutions also appear to rely on a community being open to change and able to welcome newcomers or returnees well. Unfortunately, there doesn't appear to be any effective policy levers to increase fertility rates in a robust way.

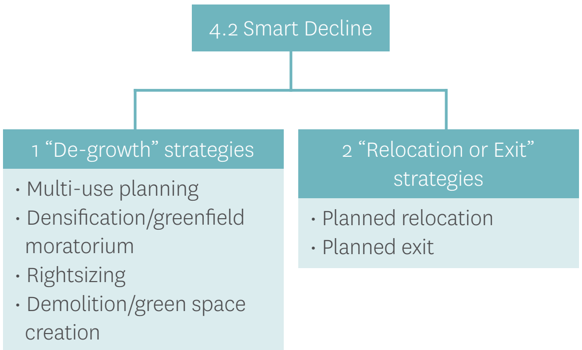
4.2 Smart Decline

"I've spent my whole life watching the economy go down and down and down. Our biggest export was our kids. People couldn't get jobs."[164]

Smart decline has been well-defined as "planning for less—fewer people, fewer buildings, fewer land uses."[165] The city of Youngstown, Ohio is the archetypal example in the literature. It has used the smart decline approach to plan for a "better, smaller Youngstown, focusing on improving the quality of life for existing residents rather than attempting to grow the city."[166] This acknowledges the dynamic nature of markets and wellbeing, that not everywhere can grow at the same time. While smart decline does present mobility solutions like relocation and exit options, it is more squarely focused on the fact that for most communities decline doesn't mean they will disappear. It therefore ensures that local policy is aligned to reality and responds in such a way that maximises people's wellbeing and opportunities where overall decline is evident and unavoidable.

Unsurprisingly, the approach is a difficult sell politically, despite the use of decline strategies in places around the world for over 80 years.[167] In their work looking at development strategies, Professor Dieter Rink and others point out that strategies that include decline "rarely explicitly mention shrinkage in their public rhetoric."[168] Shrinkage policies are often viewed with a sense of fear and suspicion, especially by politicians. This is a shame as the literature highlights that the effects of decline are not experienced equally, it is often the poorest who are already struggling to meet their basic needs who are the most affected by the continued use of optimistic yet ill-suited growth-focused planning tools in the face of decline.[169]

Figure 8: Policies aimed at declining well.



For the purposes of this paper smart decline policy has been split into two major streams: the relocation or exit stream and the "de-growth" stream. We will turn to de-growth first.

Smart Decline 1: "De-growth" strategies

There is a growing number of studies and countries looking at various forms of smart decline. "De-growth" policy options include "rightsizing" or "smart shrinking", densification, demolition or green space creation, and multi-use planning.[170] These policies are often used in concert and are heavily interrelated. The most well-known and documented examples of the use of de-growth policies exist in Germany and the United States,[171] [172] but there are also robust studies from the UK,[173] Scotland,[174] Portugal,[175] and the Netherlands.[176] All things considered, smart decline can have significant positive wellbeing implications and help places avoid common issues associated with the loss of density or decline (outlined in more detail below).

There are some good ground rules for smart decline policy. As Justin Hollander and Jeremy Németh sketch in their research into the bounds of smart decline, for smart decline policies to have a better chance of success, they must:

- include and explicitly recognise multiple voices at both the planning and implementation phase;
- be political and deliberative in nature;
- use a wide range of communication techniques to provide information that enables citizens to engage in the process; and
- be regional in scope, but local in control and implementation.[177]

These above elements are key because, as already mentioned, the effects of decline are not experienced equally, and those with less bear the brunt of change. When greenfield development sites are opened up in declining places, for example, older parts of a town can become hollowed out and increasingly seen as poorer and less desirable neighbourhoods.[178] This can further devalue house prices in these left-behind areas, beginning a downward spiral with the potential to cause social and racial divisions to grow.[179] It is particularly important then, to enable poorer people to have a voice in planning processes.[180]

The inclusive approach is also particularly important when attempting to overcome the reluctance of a community to transition from a growth narrative to a decline narrative. Rightsizing, for example is often associated—rightly or wrongly—with perceptions of a city or place becoming worse off.[181] A study of mining towns in rural Pennsylvania showed that it often took a generation for locals to acknowledge that their industries were not coming back if no decline intervention had taken place.[182] This is a significant setback for a community—without transitioning to a decline narrative they will not plan effectively for the future.

Indeed, both vision and local stakeholder input are key for communities to accept smart decline.[183] As seen in Japan, smart shrinkage or de-growth policy has been viewed as an opportunity or catalyst for the local community to discuss and work towards an agreement on what it means to live well. De-growth "can provide opportunities for spatial reconfiguration of the built environment,"[184] enabling communities to think through how best to improve their overall wellbeing and objectives, as they "develop new and alternative sets of objectives towards ways of living that prioritise socio-environmental stability and, even, sustainability."[185]

The use of multi-use planning and densification are also ways to minimise societal divisions within a declining community. Multi-use planning can enable local school buildings, for example, to be used as community centres, to bring together a range of community and economic activity around an existing social hub. This has been used successfully in schools based in North East Scotland.[186] Densification policy, on the other hand, aims to stop the geographical dispersion of economic activity. In theory, this shields certain communities from being overwhelmed by disused buildings as new ones are built on greenfield sites. A housing and commercial moratorium is an example of a densification tool that has resulted in positive experiences for many.[187] Instead of creating new suburbs, new ventures and houses can be built on already available or disused sites. Local authorities may be required to meet the cost of the demolition and preparation of older disused buildings, a task that evidence from the UK suggests is best carried out by specialised agencies.[188] Densification may also mean relaxing the planning rules around the separation of work areas and living spaces. These policies are a departure from a usual growth-planning methodology that sees these separations as both normal and desirable.

There is also evidence from overseas that decline strategies take time to do well, and if carried out hastily are likely to lead to negative outcomes. As Rink argues, therefore, it is important to leave space for a "wait and see" approach toward vacant lots, brownfields, and similar areas so as to avoid unintended consequences.[189] While "an easy win" for town planners and one that also minimises health and safety issues associated with decrepit buildings, evidence from the use of demolition in the Netherlands to create green spaces by pulling down buildings found that "without additional efforts to improve the quality of these spaces it can hardly be called an improvement."[190]

In summary, New Zealand has a lot to learn from the case studies above as we grapple with small town decline. It is a mature response for a community to discuss what it means to be in decline, ways of rightsizing, and maintaining wellbeing so that remaining growth can be maximised and the negative effects on those most affected can be minimised. Overcoming the simple growth narrative inertia will be key for New Zealand.

Smart Decline 1.1: Central government needs to assist in overcoming growth narrative inertia

Central governments have a crucial role in overcoming the stigma of planning for de-growth. As Sílvia Sousa and Paulo Pinho outline in their study of Oporto, Spain, central government can "enable [local] planners to overcome growth narrative inertia"[191] by simply requiring risk and scenario planning that includes both growth and decline scenarios in any local long-term planning documents. By including both growth and decline scenarios, local communities will be fully informed. The OECD support this view, arguing (in the German context) that local government and central government planners should be make it a pre-condition of national funding to use integrated de-growing policy targets (like showing what it might be like to plan for fewer people and less economic activity), and scenario planning (giving a range of estimates dependant on different assumptions about the extent of this decline).[192] Similarly, when focusing on the Brandenburg region in Germany, Roos Galjaard and colleagues argued that there is now a need for a demographic check on all long-term local investments by governments to ensure the financial viability of the investment.[193] Along these fiscal lines, others have pointed out that it may necessary for the central Government to set aside emergency funds or "rescue umbrellas," while also considering how to share federal corporate or income tax with local governments beset by decline.[194]

Smart Decline 1 - Conclusion

In conclusion, decline strategies are just that—decline strategies. If used in isolation they can only slow, not arrest, inevitable decline. They can, however, have significant wellbeing implications. Even in Youngstown, Ohio, often seen as the "gold standard" of planning for decline, there is evidence that shrinkage can outpace even the best plans, have scale issues, and the social and economic processes that result from and contribute to population loss can be out of a place's control.[195] Having said this, the use of de-growth strategies, like rightsizing or "smart shrinking", densification, demolition or green space creation, and multi-use planning may well bring breathing space to a community under pressure so that they can consider their future and respond in a way that maximises their health and wellbeing. The central government must play a role to encourage local governments to overcome a simple growth-only narrative, best achieved by promoting the use of both growth and decline scenario and spatial planning.

Smart Decline 2: "Relocation or Exit" strategies

The second, relatively unexplored stream of "smart decline" policy focuses on relocation and exit policy. This is where a local population decides that in the face of overwhelming population and economic pressures (or potentially climate change or natural disaster risks) the best thing to do is to explore ways to relocate the remaining population to another more robust location, winding down the community.

Smart Decline 2.1: Exit is already happening

Small place closure and exit is not just a future thought experiment, places around the world are closing. Japan for example, has seen communities collapse due to population ageing, natural population decline and natural disasters.[196] As researcher Rachel McMillan reported, Russia is also feeling the effects of demographic pressures, with over 8,500 Russian villages disappearing due to population decline over the 2002-2010 period.[197] McMillan also points out that regions such as North Dakota in America are dotted with crumbling towns.[198] New Zealand too, has not been immune. The last known town closure was the small town of Kelso (in Western Otago) in the early 1980's. Kelso's exit was precipitated in 1980 by its second "hundred-year flood" in two consecutive years.

Box 5: Kelso – A New Zealand town is closed

In 1978, Kelso was small rural town with 16 houses, a town hall, a school, a motor garage, a "Wrightson NMA," a general store and a railway head when the first "hundred-year" flood hit the town. Following the flood, most of the town was largely repaired using insurance and the proceeds of a relief fund. [199] The decision to repair the railway line was deferred however, and a new build ban was put in place by Tuapeka County. This ban rallied residents to make "Wednesday 7th February [1978] the day that Kelso showed its teeth and was ready and willing to fight for its life."[200]

Unfortunately, in 1980, a second "hundred-year" flood inundated the town. As a result, the town became uninsurable.[201] Following a postal vote, the local school, which had been unable to secure a full-time principal for the last two years was closed, and the children transported to schools outside Kelso.[202]

> It now seemed that those who maintained that nothing could be done for Kelso were correct… unpopular and unacceptable as this had always been, it [exit] now had to be considered. Financially many were trapped and felt that it was impossible to leave.[203]

Later in the year the remaining residents decided to abandon the town sought assistance from the already-established 1978 relief fund. The remaining disaster relief funds were repurposed via the Otago Southland Flood Relief Committed Empowering Bill (13 November 1980), allowing their use for relocation of the remaining residents. By January 1981, the relocation of the remaining 17 families to nearby Tapanui was underway, the main challenge being lining up haulage companies that could shift houses.

More recently in New Zealand, a report prepared in 2017 for the West Coast Regional Council analysed three options available to Franz Josef township in relation to the risks associated with flooding from the Waiho River and the town's situation on the Alpine Fault and range-front.[204] Alongside options to let the river widen naturally or to continue to actively protect the town by continuing to build stopbanks and remove gravel from the river (in both cases relocating township assets off the fault line), the third option was to "physically avoid the natural hazards challenges… by moving the township to Lake Mapourika."[205] Similar to demographic risks we've discussed above, the natural flooding risk would inevitably increase, leaving the town uninhabitable unless alternative actions were taken.

Smart Decline 2.2: Forced relocation and exit can have disastrous results

Examples or evaluations of planned exits are extremely rare. There were only four examples found: the 1930s exit of the Scottish Island of St Kilda; the 1953 exit of the Irish Blasket Islands; the aforementioned abandonment and relocation of Kelso in New Zealand; and the 2011 closure of the Western Australian Aboriginal town of Oombulgurri.[206]

Of the four examples, only the exit of the Irish Blasket Islands (and, to some extent, Kelso) resulted in relatively positive outcomes. Researchers attribute this success to the community being relocated into a more suitable location that enabled them to remain a community and continue a lifestyle similar to the one they originally had.[207] Before the planned exit, the situation was becoming increasingly desperate on the Island, as Doctor Micheal O'Cearna wrote: "in the last few years life had become very difficult. The youth had left the island and the older people were left to fend for themselves."[208]

The forced closure of the isolated Aboriginal town of Oombulgurri in Western Australia following it being declared unviable is also instructive because of the negative impact the top down process had on people's wellbeing. As outlined by Amnesty International's Indigenous Peoples' Rights Manager, Tammy Solonec, there was no plan to help people evicted from Oombulgurri integrate into Wyndham or other towns, leaving them "highly traumatised...one of the men who stayed to the end was ultimately evicted, and he took his own life soon after.[209] The process effectively made some people homeless, while for the last to leave, they also lost most of their possessions due to forced relocation with two days' notice.[210]

McMillan argues, that planned exits "need to be careful about protecting social connectedness, providing appropriate employment and adequate housing for transferred residents."[211] Without this assistance, communities like Oombulgurri will be cut adrift with the associated negative social outcomes.

In New Zealand, the costs associated with any relocation will not be cheap. Taking the case of Franz Josef outlined above, Tonkin and Taylor have estimated the direct costs at about one million dollars per resident.[212] The hidden costs on people's mental health following forced relocation and exit are also high and need to be considered, as found in evidence from a study of communities in the Tōhoku region after the Great East Japan Earthquake and tsunami,[213] and supported by New Zealand research from Janet Spittlehouse following the Christchurch earthquakes.[214] It is, therefore, far better to relocate before disaster strikes.

Smart Decline 2 - Conclusion

Discussions about relocation and exit will become increasingly important as New Zealand not only faces its demographic future, but also the likelihood of communities needing to address rising sea level flooding risks or face the effects of earthquakes and other natural disasters.[215] Lessons learnt from here and overseas highlight that any discussion in regard to relocation or exit must be led by the local communities themselves, but also fit within a wider strategic view of what might become possible with wider social and economic assistance. Certainly, if the lessons from Kelso are anything to go by, there will be people and communities, who without viable alternatives and wider social and economic assistance, will bear significant financial loss as their town becomes an increasingly risky place to live.

5. OVERALL KEY LESSONS AND OUR POLICY RECOMMENDATIONS

Drawing together the themes and lessons from the international literature on smart growth and decline policy, we have discerned four key lessons that together, build a framework to minimise the "bloody big risk" of spatial regional development policy:[216]

1. **Goals:** Communities and governments must be clear in what they want to do to enable evaluation of outcomes and the resulting adjustment of initiatives;
2. **Governance:** Multi-level governance is crucial to success—neither top-down nor bottom-up solutions are sufficient on their own;
3. **Funding:** Regional development funding needs to support multi-level governance and minimise the creation of dependencies; and
4. **Focus:** Regional development strategies need to be comprehensive and include both growth and decline policies at the same time to be successful.

We will discuss each in turn, embedding our associated "next step" policy recommendations throughout.

5.1 Goals – Clear goals minimise the risks associated with spatial policy

As outlined in our last paper and illustrated in the above case studies, the success of any spatial or place-paced policy hinges firmly on the clarity, verifiability, and transparency of what planners and communities are trying to achieve—or, the goals.[217] Without this crucial step it is impossible to evaluate whether any initiative achieved its desired outcomes. Effective evaluation requires not only the central government, but regions and places too, to clearly articulate what their regional development goals are and to rank and prioritise these goals. Because these goals will sometimes be in contradiction or tension, agreement at the relevant levels needs to achieved in order to navigate these tensions. A national goal to double agricultural exports might be in tension with a goal to reduce greenhouse gas emissions, for example, while a regional goal to improve employment outcomes for young Māori women on the East Coast might be in conflict with a national-level minimum wage rise that aims to make living in expensive cities more affordable. If, for example, New Zealand decides that the goal to reduce greenhouse gas emissions should take priority, then initiatives that focus on reducing emissions from agriculture might take precedence over initiatives that simply expand agricultural production.

Policy Recommendation 1: New Zealand needs to develop clear goals and rank and prioritise them to make evaluation of initiatives possible

Clear and prioritised goals are a key starting point for any spatial policy framework as its enables the evaluation of initiatives, minimising waste on initiatives that are not working and focusing attention on ones that do. It also constrains political interference and the capture of regional development spending on initiatives as a means to influence the voting behaviour of constituents within marginal seats.

5.2 Governance - Multi-level governance is critical for improved outcomes

Throughout the literature, it is clear that heavily centralised governance is likely to lead to poorer regional development decision-making. Japan's experience highlights the great potential for dependency, waste, fierce competition, and poor outcomes that can be associated with an over-reliance on top-down or centralised cultural, political, and economic institutions deciding the way forward for the regions. Similarly, when it comes to smart decline and especially relocation and exit, evidence from Australia gives a stark warning as to the poor results of top-down decision making.

But this doesn't mean that bottom-up processes are ideal either. Case studies from the UK, France, Germany, and the USA all highlight the problems associated with simple bottom-up governance, including a lack of access to: broader information; allies; funding; and; wider strategic regional development thinking. Bottom-up processes can be just as isolated or siloed as central government processes, both suffering from potential tunnel vision and path dependence.

These are the very problems that "multi-level governance" within smart specialisation aims to address. Multi-level governance for example can help local communities to overcome local knowledge gaps by:

- encouraging the regions to co-operate and learn from and with each other; and
- by allowing central government policy to synchronise with regional priorities rather than simply aligning regional initiatives to central government goals.

Co-operation and collaboration across the regions allows knowledge spill-overs to occur across regions for example. The potential gains that can be made from this aspect alone shouldn't be understated. As already outlined, enabling the knowledge "capital" of one place to "spill over" into complementary or closely related activities in other places can encourage the development of new general purpose technologies and knowledge based production chains across the economy. Cooperation also has the healthy side effect of synchronising regional strategies as regions learn from, adapt to, and take advantage of each other's strengths. This, in effect, starts to break down regional silos of information and innovation rather than simply developing regional action plans.

Multi-level governance also enables the central government to synchronise its national strategies with regional strategies and priorities rather than the other way round. This means that regions are not bound to seek funding solely for initiatives that align with the central government's national strategy (thus meeting central funding criteria) but that regional priorities can boil up to become regional strategies which in turn can become national strategies. Thus, multi-level governance will require central government to change how it develops and decides on a whole raft of policies that impact on regions. One clear example of this can be illustrated by the previous Government's "Roads of National Significance" model. It was seen that many roads of "local significance" didn't meet the "threshold" for central government funding. Under multi-level governance, a spatial lens might mean that different road funding criteria are developed to synchronise with regional (and not simply central government) priorities.

Evidence from Australia and the United States underscores how important multi-level governance is for rural communities. "Collaborative governance builds political capital that enables co-operation on solutions. i.e. "partnerships generate networks through micro-processes that enhance collective efficacy and build political capital amongst key policy actors".[218] In the US, participants in one case study expressed that the "process of building capacity and creating partnerships is as important as the outcome."[219] As Michael Storper, Professor of Economic Geography from London School of Economics points out, "[a]chieving desired outcomes requires much more than any single 'magic wand' mechanism (the market, the state, centralisation, decentralisation, etc.); instead it requires a complex, messy process of social choice."[220] The careful use of multi-level governance holds the key to bringing coherence to the complexity.

Policy Recommendation 2: Trial smart specialisation as a regional development policy tool, with the aim of boosting collaboration and co-operation across firms and regions.

We recommend trialling smart-specialisation as a regional development policy tool, which relies on the use of multi-level governance and entrepreneurial discovery to uncover a number of highly-targeted regional initiatives. These initiatives should be highly location-specific in nature, but also arise out of the collaborative process across regions. Any spending should be time-limited both to limit the risk of dependency and to acknowledge that any regional development funding should be tied to an initiative being something "new" rather than it being successful or unsuccessful.[221]

5.3 Funding – Regional development funding needs to support multi-level governance and minimise the creation of dependencies

> *"Duncan though is '...seriously frustrated with how rural communities were treated by central government. All they want to do is pull money out. We have one of the biggest non-sealed roading networks of any council at Rangitikei. And all they want to do is pull back the percentage that they want to contribute. I've got a trucking company as well and we pay $250,000 just in road user tax. If they just applied that to our roads.'"*[222]

Funding decisions are key not only to governance arrangements, but also the long-term outcomes of regional development initiatives. It is no use having good governance arrangements if these are undermined by funding arrangements are still controlled centrally, for example.

Evidence from Spain and Portugal highlights that funding expectations are formed early on in the regional development process.[223] Studies in Japan and from the EU illustrated how these expectations—when combined with heavily-centralised funding—are likely to lead to dependency on central funding, and even stifle or crowd-out the ability of local actors to find local solutions.[224]

On the flip side, many cases highlighted the positive impact that co-operatively purchasing important local assets can bring to a local community.[225] Practically, however, in almost all the case studies, places with a small population emphasised the need for outside or increased funding to overcome infrastructure issues or meet peak tourism demand. This demonstrates the need for a multi-level governance structure that is empowered to make these funding decisions as a way to overcome central government political inertia and imbue multi-level governance arrangements with fiscal authority. One could argue, for example, that even within New Zealand the way that regions are still required to access central funding via Wellington processes undermines the bottom up process of the Regional Growth Programme and the goals of the Provincial Growth Fund.

Another angle on funding local change is to use special policy zones to promote spatial policy that benefits communities in the long run.[226] Smart specialisation and multi-level governance could be trialled within these zones, for example, allowing national-level funding criteria and decisions to be synchronised to local or regional priorities. Immigration options like enabling communities and towns to attract specific migrants and expedite their applications through the immigration pipeline—as used successfully in Canada—are also possible.[227] This is not an argument for traditional special economic zones that use taxes or subsidies to incentivise firms. The evidence points towards these types of zones redistributing economic activity rather than creating a net gain of economic activity, meaning firms, more often than not, come out on top.[228] Zones also need to be tied to efforts to improve a location's absorptive capacity, like retraining of older workers or youth focused training initiatives, as well as innovation and research initiatives in small and medium sized enterprises. Early funding for these initiatives could be raised by returning the GST portion of council rates to local authorities, to be used on local regional development initiatives.

Policy Recommendation 3: That New Zealand make use of special policy zones as a way to trial spatial policy change including funding models.

We recommend establishing special policy zones that allow trials of spatial policy and funding changes. Smart specialisation and multi-level governance, for example, could be trialled within these zones, allowing national-level funding criteria and decisions to be synchronised to local or regional priorities. This is not only a way to overcome central government political inertia but will give fiscal authority to multi-level governance arrangements.

5.4 Focus – Policy should be comprehensive and focus on both growth and decline to maximise the overall chance of success

The fourth, key lesson from the international literature is that the focus of policy matters. It needs to be comprehensive—focusing on both growth and decline to maximise the overall chance of success. In this regard, it is increasingly clear that New Zealand's focus on growth alone is increasingly "out of sync" with international regional development responses to population ageing, decline, and climate change. A key theme running throughout the research is that it is important to harness a wide range of growth and decline initiatives alongside one another in a way that is tailored to meet local need.

Most of the literature stressed that simply focusing on growth means that areas under gradual decline go unnoticed, and are therefore placed at serious risk of many negative social and economic consequences. This is especially true for regions that are predominantly growing but also have localised pockets of decline. Bay of Plenty is an example of this in New Zealand: one of the top growth regions in the country but still with struggling areas, typically more pronounced the further eastward within the region. To help move local government beyond this "growth only" policy inertia, central government should require scenario planning and demographic checks on any local growth focused initiatives. This is especially important as the effects of decline are not felt evenly throughout a community and pockets of localised decline can deepen if growth-only focussed policies are used.

Both growth and decline interventions were typically unsuccessful when used in isolation from each other. Relatively successful planning initiatives like rebranding or flagship developments, when evaluated more broadly, were only successful within a much wider ambit of renewal initiatives.[229] Similarly, investing in physical infrastructure alone was likely to be expensive and limited in its outcomes unless tied to improvements in local people's skills. Furthermore, decline initiatives, if used in isolation, are just that: they manage decline only. They can have good wellbeing implications in terms of minimising social isolation and maintaining access to services, but aside from relocation they are not pathways out of demographic or economic decline for a community. Relocation itself seems to rely on two elements, that it be lead from the bottom up, and that wider society be willing to contribute toward the associated costs to ensure overall wellbeing. Evidence from Australia and Japan shows the likely long and costly impact on those involved when forced relocation and exit is undertaken from the top down.

Policy Recommendation 4: Require all council long-term planning documents to incorporate both growth and decline scenario planning

Central government should require all regional council long-term planning documents to include scenario planning with both growth and decline scenarios. This would be a useful and quick-to-implement first step toward overcoming political inertia and changing the policy discussion toward decline. As these would consider social and economic considerations, they would also dovetail with current plans to respond to climate change and sea level rise.

5.5 Conclusion

We welcome the Government's renewed focus on regional development and spatial policy, but also agree with the Minister of Regional Economic Development that the path ahead is a "bloody big risk." To increase the odds of success, the accumulated lessons from a range of smart growth and smart decline policies spanning 24 countries and more than 90 individual place studies, point towards the importance of having a solid regional development policy framework in place.

To make long-term gains in the regions, the international evidence suggests that New Zealand needs to rethink its regional development Goals, Governance, Funding, and Focus:

- **Goals**: Communities and governments must be clear in what they want to do to enable evaluation of outcomes and the resulting adjustment of initiatives;

- **Governance**: Multi-level governance is crucial to success—neither top-down nor bottom-up solutions are sufficient on their own;
- **Funding**: Regional development funding needs to support multi-level governance and minimise the creation of dependencies; and
- **Focus**: Regional development strategies need to be comprehensive and include both growth and decline policies at the same time to be successful.

As first steps along this journey we make the following four policy recommendations.

1. Develop **clear regional development goals** and rank and prioritise them to make evaluation of initiatives possible.
2. **Trial smart specialisation** as a regional development policy tool, with the aim of boosting collaboration, and co-operation across firms and regions.
3. **Use special policy zones** as a way to trial spatial policy change, including funding models.
4. Require all council long-term planning documents to **incorporate both growth and decline scenario planning**.

These policy recommendations will be meaningful first steps towards ensuring the regions of New Zealand are enabled to be all that they can be, in both times of growth and decline. As New Zealand moves increasingly towards harnessing the great potential benefits of spatial policy tools, we must do all we can to minimise the associated risks. It is important to bear in mind that this type of spatial "[p]olicy experimentation implies a certain tolerance for failure. Regions can be excellent laboratories, and policy makers need to be given space to learn from mistakes."[230] Implemented well, these policies should give our regions the chance to flourish that they deserve.

ENDNOTES

1 David Fisher, 'Heartbeat: Hikurangi Rising like a New Dawn', New Zealand Herald, 28 August 2017, http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11900279. In the lead-up to the 2017 election, the New Zealand Herald's Heartbeat series travelled to small towns around New Zealand interviewing people on their hopes, fears and dreams for the future of the "heartland" of the country. These snapshots provided a human pulse on the problems and opportunities facing regional New Zealand raised in our previous paper, and will be interspersed throughout so their voices are heard.

2 Paul Spoonley, ed., *Rebooting the Regions: Why Low or Zero Growth Needn't Mean the End of Prosperity* (Auckland, New Zealand: Massey University Press, 2016); Natalie Jackson and Jonathan Boston, eds., 'The Ebbing of the Human Tide: What Will It Mean?', Policy Quarterly 13 (June 2017): 1–72; Rachael Christina McMillan, 'Anticipating Subnational Depopulation: Policy Responses and Strategic Interventions to Regional Decline' (University of Waikato, 2015), http://researchcommons.waikato.ac.nz/bitstream/handle/10289/9873/thesis.pdf?sequence=3&isAllowed=y; Julian Wood, 'Growing beyond Growth: Rethinking the Goals of Regional Development in New Zealand' (Maxim Institute, February 2017), https://www.maxim.org.nz/growing-beyond-growth/.

3 Maxim Institute, '$1B Regional Development Fund Needs Coherent Vision', accessed 4 January 2017, https://www.maxim.org.nz/1b-regional-development-fund-needs-coherent-vision/.

4 Fabrizio Barca, *Agenda for a Reformed Cohesion Policy* (European Communities, 2009), 11.

5 Henry Cooke and Marty Sharpe, 'Shane Jones Doles out Millions of Dollars to Northland, Hawke's Bay, and Rail Regeneration', *Stuff News*, 23 February 2018, sec. Politics, https://www.stuff.co.nz/national/politics/101706620/Shane-Jones-doles-out-millions-of-dollars-to-Northland-Hawkes-Bay-and-rail-regeneration.

6 OECD, *Innovation and Modernising the Rural Economy*, OECD Rural Policy Reviews (OECD Publishing, 2014), 63, https://doi.org/10.1787/9789264205390-en.

7 In the recent survey undertaken by Local Government New Zealand over 60 percent of regional and rural councils replied that that they did not have a documented and well-known definition of economic development. See 'Better Economic Development in Local Government', Discussion Paper (LGNZ, July 2017), 7, http://www.lgnz.co.nz/assets/Uploads/44475-LGNZ-Economic-Development-6-FINAL.pdf.

8 The 2017 evaluation of the RGP highlighted that the Programme showed potential, but could be significantly improved. The report commended how the RGP: integrated local perspectives; helped key regional stakeholders work together; and enabled a more joined-up governance between Ministers, senior officials, and regional stakeholders. The authors recommended, however, that the Programme needs restate and update its strategic purpose, better align and support Māori economic development plans, and be clear and consistent when it comes to systems and processes. See Judy Oakden et al., 'Evaluation of the Regional Growth Programme Implementation and Ways of Working' (Pragmatica Limited, December 2017), http://www.mbie.govt.nz/info-services/sectors-industries/regions-cities/regional-economic-development/pdf-image-library/evaluation-rgp.pdf.

9 Deborah E. Popper and Frank J. Popper, 'Small Can Be Beautiful', *Planning* 68, no. 7 (July 2002): 23.

10 David Fisher, 'Heartbeat: Ahipara, Where Not Much Has Changed since the GFC Stopped the Boom-Town Talk', *New Zealand Herald*, 23 August 2017, http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11900276.

11 Ron Martin and Peter Sunley, 'Path Dependence and Regional Economic Development', *Journal of Economic Geography* 6, no. 4 (2006): 399.

12 Harvey A. Goldstein, 'Theory and Practice of Technology-Based Economic Development', in *Theories of Local Economic Development: Linking Theory to Practice*, ed. James E. Rowe (England: Ashgate Publishing, 2009), 243.

13 This is partly why having enabling macroeconomic settings is so key. If a places macro settings inhibit dynamic change, it may lock in poor performance.

14 Fabrizio Barca, Philip McCann, and Andrés Rodríguez-Pose, 'The Case for Regional Development Intervention: Place-Based versus Place-Neutral Approaches', *Journal of Regional Science* 52, no. 1 (February 2012): 139, https://doi.org/10.1111/j.1467-9787.2011.00756.x.

15 Barca, McCann, and Rodríguez-Pose, 145.

16 Jamie Morton, 'Heartland: Cheese Capital Eltham Needs a Boost', *New Zealand Herald*, 22 August 2017, http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11894759.

17 Adriana Weber, 'Regions Must Face Challenge of Population Decline - Report', *Radio New Zealand*, 28 February 2017, sec. New Zealand, https://www.radionz.co.nz/news/national/325489/regions-must-face-challenge-of-population-decline-report.

18 Mario Polèse and Richard Shearmur, 'Why Some Regions Will Decline: A Canadian Case Study with Thoughts on Local Development Strategies', *Papers in Regional Science* 85, no. 1 (2006): 23–46. Polèse and Shearmur, 30.Natalie Jackson and Lars Brabyn, 'The Mechanisms of Subnational Population Growth and Decline in New Zealand 1976-2013', *Policy Quarterly*, Supplementary Issue: The ebbing of the human tide. What will it mean?, 13 (June 2017): 22–36. It would be informative for future research to examine the extent to which these European based measures of growth and decline can be improved to fit within a New Zealand context.

19 Polèse and Shearmur, 'Why Some Regions Will Decline'. Here Polèse and Shearmur state that "Decline means that the region will undergo relative, and eventually absolute, population and employment decline." Their framework for regional decline is located within a "geographically large nation, with inhabited spaces (The Periphery) located beyond a one-hour drive from a major urban centre (threshold defined according to context); and a nation in the last stages of the demographic transition: natural increase is either close to zero or negative. [As they state] Most industrialised nations today meet this condition.

20 Natalie Jackson and Lars Brabyn, 'The Mechanisms of Subnational Population Growth and Decline in New Zealand 1976-2013'.

21 This is an industry that by its presence "crowds out" new entrants or opportunities for local diversification. New entrants cannot compete with this dominant local industry for finance or human resources. They are either out lobbied, out marketed or out priced on wages. All these factors combine to meant that the region or area is less likely to diversify.

22 Polèse and Shearmur, 'Why Some Regions Will Decline'.

23 As such we will not be attempting to place the examples within the dash board tool as this is best undertaken by people within a region who understand local dynamics best.

24 Amber-Leigh Woolf, 'International Skills Could Boost Southland Population by 2020', *Stuff News*, 7 July 2016, http://www.stuff.co.nz/business/81872599/international-skills-could-boost-southland-population-by-2020.

25 Polèse and Shearmur, 'Why Some Regions Will Decline', 42–43.

26 Cristina Martinez-Fernandez et al., *Demographic Change and Local Development: Shrinkage, Regeneration and Social Dynamics* (OECD, 2012), 286, http://www.carltd.com/sites/carwebsite/files/Demographic%20Change%20and%20Local%20Development.pdf.

27 Thorsten Wiechmann and Karina M. Pallagst, 'Urban Shrinkage in Germany and the USA: A Comparison of Transformation Patterns and Local Strategies: Urban Shrinkage in Germany and the USA', *International Journal of Urban and Regional Research* 36, no. 2 (March 2012): 277, https://doi.org/10.1111/j.1468-2427.2011.01095.x.

28 Natalie Jackson and Lars Brabyn, 'The Mechanisms of Subnational Population Growth and Decline in New Zealand 1976-2013', 29.

29 Natalie Jackson and Lars Brabyn, 29.

30 This new form of decline is a very high-risk demographic situation for a community, and one that Japan can attest to as population decline transitions into what has become known as "population collapse." See P. Matanle and Y. Sato, 'Coming Soon to a City Near You! Learning to Live "Beyond Growth" in Japan's Shrinking Regions', *Social Science Japan Journal* 13, no. 2 (1 December 2010): 187–210, https://doi.org/10.1093/ssjj/jyq013.

31 Michael P. Cameron, 'The Relative (Un)Certainty of Subnational Population Decline', *Policy Quarterly*, Supplementary Issue: The ebbing of the human tide. What will it mean?, 13 (June 2017): 55–60.

32 While focusing on uncertainty, by 2043-2053, Cameron's work reinforces the demographic narrative highlighting that 26 TA's face almost certain population decline (defined in Cameron's work as a greater than a 90 percent chance of decline). A further 7 TA's have a greater than 50 but less than 90 percent chance of decline (with Wellington being the first major centre to enter the list). Overall, the declining TA's are "mostly (but not exclusively) rural and peripheral areas."

33 David Fisher, 'Heartbeat: Ahipara, Where Not Much Has Changed since the GFC Stopped the Boom-Town Talk', *New Zealand Herald*, 23 August 2017, http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11900276.

34 In practice, many of the policy options discussed below are not as neat as this framework may suggest. It is inherently difficult to delineate and separate one from another, as they are often inter-related. The groupings, then, are the author's best attempt at ordering a vast and complicated literature.

35 Resilience in this context can be defined as a particular locations ability to contain a negative economic shock, see OECD (2017) "Economic shock and changes in global production structures: methods for measuring economic resilience".

36 As outlined by: R. Martin, 'Regional Economic Resilience, Hysteresis and Recessionary Shocks', *Journal of Economic Geography* 12, no. 1 (1 January 2012): 11, https://doi.org/10.1093/jeg/lbr019 Different interpretations of resilience suggest that at least four interrelated dimensions are needed to begin to give full meaning to the notion as a description of how regional economies respond to recessionary or other such shocks. The first is that of resistance, that is the vulnerability or sensitivity of a regional economy to disturbances and disruptions, such as recessions. The second is that of the speed and extent of recovery from such a disruption. The third aspect concerns the extent to which the regional economy undergoes structural re-orientation and what implications such re-orientation has for the region's output, jobs and incomes. The fourth dimension concerns the degree of renewal or resumption of the growth path that characterized the regional economy prior to the shock." .

37 Henry J. Mayer and Michael R. Greenberg, 'Coming Back from Economic Despair: Case Studies of Small- and Medium-Size American Cities', *Economic Development Quarterly* 15, no. 3 (August 2001): 215, https://doi.org/10.1177/089124240101500301.

38 For a study into de-industrialization and de-innovation in Australia, see also, Cristina Martinez-Fernandez, 'De-Industrialization and De-Innovation in Shrinking Cities', in *Shrinking Cities South/North =: '"Achicamiento"' Urbano Sur/Norte*, 1st edition, Migration and Urban-Regional Development Series = Serie Migración y Desarrollo Urbano-Regional 2 ([Tallahassee] : Zapopan, Jalisco, México : [Los Angeles] : Pacific Palisades, Calif. : México, D.F: Florida State University ; University of Guadalajara ; UCLA Program on Mexico ; PROFMEX/World ; Juan Pablos Editor, 2010), 51–67.

39 Ben Westmore, 'Policy Incentives for Private Innovation and Maxinisibg the Returns', *OECD Journal: Economic Studies* 2013/1 (2014): 121–63.

40 Alain de Serres, Naomitsu Yashiro, and Hervé Boulhol, 'An International Perspective on the New Zealand Productivity Paradox', *New Zealand Productivity Commission*, no. Working Paper 2014/01 (April 2014), https://www.productivity.govt.nz/sites/default/files/international-perspective-working-paper.pdf.

41 Adam Jaffe and Trinh Le, 'The Impact of R&D Subsidy on Innovation: A Study of New Zealand Firms', Working Paper (Motu, 29 June 2015), https://www.productivity.govt.nz/working-paper/the-impact-of-rd-subsidy-on-innovation-a-study-of-new-zealand-firms. This potentially raises a question mark over firms' absorptive capacity within New Zealand (see more on this in section 4.3 below).

42 The use of information and data in regard to Israel as an example of regional development within this paper is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law. It is also important to caution against the thinking that investing in a particular area and that this investment is successful will be a panacea for poverty. Kurzer (2007) when looking at innovation in Israel points out that even being a world leader in the ICT sector can mean that gaps widen as wages for those in the successful sector grow while wages for those who cannot make the transition into the growth sector stagnate. "Poverty rates [In Israel] are twice the average of other developed countries and the gap between the wealthy and the rest of society has widened." Paulette Kurzer, 'Book Review: Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and IrelandBreznitzD. (2007). Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and Ireland. New Haven, CT: Yale University Press.', *Comparative Political Studies* 45, no. 8 (August 2012): 1063–67, https://doi.org/10.1177/0010414012445947.

43 Dan Breznitz and Darius Ornston, 'The Revolutionary Power of Peripheral Agencies: Explaining Radical Policy Innovation in Finland and Israel', *Comparative Political Studies* 46, no. 10 (2013): 1232.

44 Ilan Moss, 'Start-up Nation: An Innovation Story', *OECD Observer*, Second Quarter 2011.

45 Moss.

46 Breznitz and Ornston, 'The Revolutionary Power of Peripheral Agencies'.

47 Anthony Welch and Jie Hao, 'Global Argonauts: Returnees and Diaspora as Sources of Innovation in China and Israel', *Globalisation, Societies and Education* 14, no. 2 (2 April 2016): 272–97, https://doi.org/10.1080/14767724.2015.1026249.

48 Breznitz and Ornston, 'The Revolutionary Power of Peripheral Agencies', 1232.

49 It is also worthy of note that as the assistance has become targeted on social outcomes, like the 2011 "program dedicated to the support of technological innovation that would aid disabled individuals to achieve functionality in their daily activities" that industry applications for funding have been increasingly limited. See Amos Zehavi and Dan Breznitz, 'Distribution Sensitive Innovation Policies: Conceptualization and Empirical Examples', *Research Policy* 46, no. 1 (February 2017): 332, https://doi.org/10.1016/j.respol.2016.11.007. 3.4. DSIP for the disabled for more detail.

50 Alain de Serres, Naomitsu Yashiro, and Hervé Boulhol, 'An International Perspective on the New Zealand Productivity Paradox'.

51 Ministry of Business, Innovation and Employment, 'Briefing on Investigating Regional Science Institutes', 2015, 3 paragraph 13.

52 Ministry of Business, Innovation and Employment, 3 paragraph 14.

53 "UN Environment has developed a working definition of a green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities." See: http://web.unep.org/greeneconomy/what-inclusive-green-economy

54 In this research "the "White economy" refers to those products, services, and activities related to health care and care including dependent, disabled and the elderly." See OECD, 'Fostering Resilient Economies: Demographic Transition in Local Labour Markets' (OECD, 2014), 166, http://www.oecd.org/cfe/leed/Fostering-Resilient-Economies_final_opt.pdf.

55 "In this research, silver industry (or silver economy) is defined as the industry/sector focusing on producing/providing the aged population oriented products/services." See OECD, 166.

56 Cristina Martinez-Fernandez et al., 'Shrinking Cities in Australia, Japan, Europe and the USA: From a Global Process to Local Policy Responses', *Progress in Planning* 105 (April 2016): 1–48, https://doi.org/10.1016/j.progress.2014.10.001.

57 Thomas Feldhoff, 'Shrinking Communities in Japan: Community Ownership of Assets as a Development Potential for Rural Japan?', *Urban Design International* 18, no. 1 (2013): 99–109.

58 Martinez-Fernandez et al., 'Shrinking Cities in Australia, Japan, Europe and the USA'.

59 P. Seaton, 'Depopulation and Financial Collapse in Yubari: Market Forces, Administrative Folly, or a Warning to Others?', *Social Science Japan Journal* 13, no. 2 (1 December 2010): 227–40, https://doi.org/10.1093/ssjj/jyp045.

60 http://www.oecd-ilibrary.org/economics/oecd-economic-surveys-japan-2017/the-decline-in-yubari-s-population-is-projected-to-continue_eco_surveys-jpn-2017-graph80-en

61 Martinez-Fernandez et al., 'Shrinking Cities in Australia, Japan, Europe and the USA'.

62 It is noted that the use of ICT solutions to improve wellbeing for ageing populations) can alleviate some issues in relation to social isolation even if this is not a solution for demographic decline, see Sophie Buhnik's 2011 study of Osaka, cited in Martinez-Fernandez et al. Research by the OECD found that Japan's use of ICT to deliver health services to elderly in remote or declining areas was effective, but the implementation of the solutions required high familiarisation and institutional support for people over 65 to use the service, see OECD, 'Summary Note of OECD Workshop", OECD Workshop on "Policies and Strategies for Demographic Change: Skills, Employment and Sustainable Development' (Paris: OECD, 20 June 2011)

63 Deborah Needleman, 'Who Will Save These Dying Italian Towns? Near-Empty Villages Try to Hold on to an Endangered Way of Life — and Some of the Country's Most Important Artisanal Traditions.', *New York Times*, 7 September 2017, https://www.nytimes.com/2017/09/07/t-magazine/abandoned-italian-towns.html.

64 Caru Bowns, 'Shrinkage Happens ... in Small Towns Too!: Responding to de-Population and Loss of Place in Susquehanna River Towns', *Urban Design International; Basingstoke* 18, no. 1 (Spring 2013): 61–77, http://dx.doi.org.ezproxy.auckland.ac.nz/10.1057/udi.2012.27; University of North Carolina, 'Small Towns, Big Ideas: Branson, Missouri', accessed 10 October 2017, http://www.iog.unc.edu/programs/cednc/stbi/cases/branson.php.

65 Sam Strong, 'Future of Earthquake, Flood-Prone Town of Franz Josef up in Air', *Stuff News*, 28 September 2017, https://www.stuff.co.nz/the-press/news/west-coast/97304541/future-of-earthquake-floodprone-town-of-franz-josef-up-in-air.

66 OECD, ed., *Linking Renewable Energy to Rural Development*, OECD Green Growth Studies (Paris: OECD publications, 2012), 52.

67 OECD, *Innovation and Modernising the Rural Economy*, OECD Rural Policy Reviews (OECD Publishing, 2014), 58, https://doi.org/10.1787/9789264205390-en.

68 OECD, 58.

69 Mazurkewich, 2010 cited in Rachael Christina McMillan, 'Anticipating Subnational Depopulation: Policy Responses and Strategic Interventions to Regional Decline' (University of Waikato, 2015), http://researchcommons.waikato.ac.nz/bitstream/handle/10289/9873/thesis.pdf?sequence=3&isAllowed=y.\\uc0\\u8216{} Anticipating Subnational Depopulation: Policy Responses and Strategic Interventions to Regional Decline\\uc0\\u8217{} (University of Waikato, 2015

70 Global Environmental Centre, 2005 cited in Rachael Christina McMillan.

71 OECD, 'Innovation-Driven Growth in Regions: The Role of Smart Specialisation' (OECD, 2013), https://www.oecd.org/innovation/inno/smart-specialisation.pdf.

72 As Foray,1429, outlines "Horizontal policies are good policies! First, they are likely to improve important components of the regional system of innovation. Second, they minimize risks inherent in any policy which selects projects according to preferred fields (Trajtenberg, 2012). And, indeed, this sort of policy has the potential to stimulate structural changes through various mechanisms such as diversification in firms, spin-offs and start-ups, mobility of people and networking (Boschma & Frenken, 2011)."

73 Philip McCann and Raquel Ortega-Argilés, 'Smart Specialisation, Entrepreneurship and SMEs: Issues and Challenges for a Results-Oriented EU Regional Policy', *Small Business Economics* 46, no. 4 (April 2016): 537–52, https://doi.org/10.1007/s11187-016-9707-z.

74 Dominique Foray, 'On the Policy Space of Smart Specialization Strategies', *European Planning Studies* 24, no. 8 (2 August 2016): 1428–37, https://doi.org/10.1080/09654313.2016.1176126.

75 Foray, 1434.

76 OECD, 'Innovation-Driven Growth in Regions: The Role of Smart Specialisation'.

77 OECD, 16.

78 OECD, 13.

79 McCann and Ortega-Argilés, 'Smart Specialisation, Entrepreneurship and SMEs', 549.

80 Foray (2012) cited in McCann and Ortega-Argilés, 538.

81 Foray, 'On the Policy Space of Smart Specialization Strategies', 1434.

82 Ron Boschma et al., 'Towards a Theory of Regional Diversification: Combining Insights from Evolutionary Economic Geography and Transition Studies', *Regional Studies* 51, no. 1 (2 January 2017): 37, https://doi.org/10.1080/00343404.2016.1258460.

83 Feldhoff, 'Shrinking Communities in Japan'.

84 Julian Wood, 'Growing beyond Growth: Rethinking the Goals of Regional Development in New Zealand' (Maxim Institute, February 2017), 7, https://www.maxim.org.nz/growing-beyond-growth/.

85 Keith McLeod, Richard Fabling, and David C. Maré, 'Hiring New Ideas: International Migration and Firm Innovation in New Zealand', 2014, 29. Migration policy options will be covered in more detail in section 4.1.3 smart growth 3: labour supply related policy.

86 Productivity Commission, 'Productivity Commission Briefing to the Incoming Minister 2017', 2017, http://uat-productivity.samdog.co.nz/sites/default/files/BIM%20 2017.pdf.

87 Productivity Commission.

88 Ben Westmore, 'Policy Incentives for Private Innovation and Maxinisibg the Returns'.

89 Paul Conway, 'Achieving New Zealand's Productivity Potential', Research paper (New Zealand Productivity Commission, January 2016).

90 Richard Harris, 'Absorptive Capacity in New Zealand Firms: Measurement and (Policy) Importance' (Presentation on Absorptive Capacity in New Zeland Firms, New Zealand Productivity Commission, 14 November 2017). Presentation at New Zealand Productivity Commission. Harris here defines absorptive capacity by saying it is "Similar to the ability of an individual to learn, absorptive capacity is about the ability of firms to use knowledge from the external environment to improve their productivity. If firms are not able to learn, then new strategies or technology designed to help firms become more productive are likely to have only limited impact."

91 McLeod, Fabling, and Maré, 'Hiring New Ideas'.

92 McLeod, Fabling, and Maré, 29.

93 McLeod, Fabling, and Maré, 29. In terms of diffusion, firms with a higher share of returning New Zealanders in addition to introducing new goods and services and new marketing methods were more likely to report "introducing new organisational and managerial practices." Firms that hired more recent migrants in addition to introducing "new goods and services, new marketing methods and being more likely to enter new product markets "are more likely to introduce new processes."

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95 Richard Harris, 'Absorptive Capacity in New Zealand Firms: Measurement and (Policy) Importance'. Presentation at the New Zealand Productivity Commission.

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