Fostering Regional Development and Innovation
in New Zealand

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Introduction

The concept of regional innovation systems has in recent years gained currency among both practitioners and academics in the field of regional development. This trend is partly a reflection of the complex challenges the current era of globalisation poses for economic policy making. Any clear demarcation of local and global business activity has become increasingly artificial. Economic development is taking place in the local arena, but without knowledge of global trends and the ability to tap into international markets, is not likely to succeed. Innovation and the networks which generate innovation activity provide a bridge between economic activity at local and global levels. The significance of innovation for economic growth has come close to being a consensus proposition but the complex interplay between the global, national and regional components of the economic system still raises question of how and where public policy-making can make a difference.

At the same time, the regional dimension has featured increasingly prominently in scholarly and policy debates. Regions have emerged as key players for determining national success in the new globalised economy due to the fact that externalities and increasing returns, key drivers of growth and economic development, arise at the regional and local level. Factors unique to regions such as their culture, their social networks and the tacit knowledge generated within the latter cannot easily be replicated thus bestowing a competitive advantage on businesses operating there.

This paper offers a New Zealand perspective on how regional development policy can be used to foster innovation activity in regions and outlines the challenges a small and remote country faces in its attempts to build up regional innovation systems (RIS). It begins with a brief overview of New Zealand’s economic environment, putting particular emphasis on the country’s urban centres as the likely key nodes for innovation policy. In the second section, the paper then outlines the set of programmes used by the New Zealand government to foster regional development and innovation and puts them into context with the literature on ‘new regionalism’. Describing some of the findings of recent policy reviews, the paper then discusses the challenges and constraints encountered by regional development policies. Finally, it asks what policy remedies may be needed to overcome issues such as institutional weaknesses and the lack of alignment between regional and national policies.

Key lessons from New Zealand’s experience with regional development programmes concern the importance of the institutional set-up in different regions but they also bring to the fore the complex relationship between regional development and regional innovation policy. While regional development policy and attempts to create regional innovation systems may be complementary in the long run, from a practitioner’s point of view it is clear that their policy objectives are distinct. Regional development programmes that combine innovation objectives with broader development objectives are likely to encounter trade-offs. Development policy includes a strong component of social objectives, the significance of which will depend on the economic and social characteristics of specific regions.

In the New Zealand context, the current suite of programmes appears to offer most promise to build RIS in mid-sized regions where pockets of excellence exist in specific sectors. In contrast, several small regions may lack the size and capabilities
The concept of regional innovation systems (RIS) has been in vogue in recent years but uncertainties persist as to the boundaries of the concept and particularly its relationship to regional development policy. However, while the meaning of RIS remains open to interpretation, many assumptions underpinning the concept have increasingly become accepted in the academic and policy community. Some of the assumptions are briefly reiterated:

As a starting point, it is possible to define a regional innovation system as a geographical subset of a national innovation system, and thereby to conclude that a regional innovation system, like its national counterpart, consists of elements and relationships which interact in the production, diffusion and use of knowledge within the bounds of a region. Key elements of regional innovation systems include spatial concentrations of firms (e.g. industrial clusters), supporting knowledge organisations (e.g. universities, training institutions), regional R&D infrastructure (e.g. research institutes) as well as support organisations that bridge the gap between supply and demand (e.g. technology brokers, venture capital firms). In addition, relevant government agencies and departments and regulatory agencies also play an important role. These constituent parts of the regional innovation system interact through particular processes, taking advantage of collaborative efforts and geographical proximity, to generate and utilise knowledge and produce new and improved products and services.

Innovation is often an iterative process, and this broadens the focus of economic development from individual entrepreneurs or firms to consideration of how all the elements of society contribute to technological change derived from ideas and knowledge. Innovation in firms is influenced by a broader system that includes the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse ideas and knowledge. Good networks between firms and customers and strong linkages between firms and institutions that take advantage of collaborative efforts and geographical proximity to produce new or improved goods and services are essential for the effective exploitation of ideas and knowledge through innovation and technological change (Innovation Systems Research Network, 2002).

The quality of local institutions is particularly important, including those that deliver education, finance and bylaws. Responsiveness at a local level is essential if innovation in firms is to occur in a region. Finally, high levels of collaboration (e.g., through clustering) are also likely to be needed to drive innovation and productivity.

New Zealand’s Context
Economic development faces particular challenges in New Zealand due to the country’s location and geography. The problems for regional development and
innovation policy cannot be fully appreciated unless set in the context of the country’s relative isolation.

New Zealand is a long narrow country with a relatively small and dispersed population that is situated in the southern Pacific Ocean, 1,600 km east of Australia. It has two main islands (North and South) and a number of smaller islands, with a total land area of 268,021 sq. km, a similar size to the British Isles. Mountain ranges and hilly country dominate its landscape, 1600 km long and 450 km wide at its widest point. 4 million people inhabit New Zealand, with a low population density of 15 people per sqkm.

A small and dispersed population is not unique to New Zealand’s position. This feature is shared with countries like Finland and Norway but New Zealand’s critical mass disadvantage is compounded by remoteness from key markets and business networks. Distance has implications for attempts to build innovation systems. It accentuates the challenges inherent in initiatives to create networks that capture knowledge spillovers. While firms based in Europe’s main centres find most business and research partners within a 3 hour radius (often reachable by train), New Zealanders require a 3-hour plane journey just to reach Australia’s major hubs. Any other centres are an overnight flight away. The generation of tacit knowledge in particular is made more difficult by this remoteness.

New Zealand’s geographical location poses particular problems for the national economy’s integration into the global economy. Traditionally, New Zealand’s small economy has been heavily dependent on international trade, with Australia, the US and Japan the largest merchandise export markets. Primary industries dominate, and exports of meat and dairy products make a large contribution to New Zealand’s economy. However, industries such as forestry, horticulture, fishing, manufacturing and tourism have become increasingly significant (Statistics New Zealand, 2001), and over the past decades, many new industries have emerged and grown strongly, including software, biotechnology, electronics, marine, education exports, media/film and wine (Office of the Prime Minister, 2002).

Problems of size and distance from major markets are mirrored at the regional level, and this has implications for economic development policy. Infrastructure provision may be particularly challenging in some areas, and a small population translates into the absence of economies of scale and scope that generally enhance firm profitability and contribute to higher prosperity. It will often be necessary for groups of firms, supported by public sector institutions, to work together to access export markets, and to identify - and build upon - regional areas of comparative advantage. Co-ordination of local and regional economic development activities is therefore essential to ensure that significant development opportunities that require the participation of multiple firms and institutions are not missed.

New Zealand Cities and the Context for Regional Innovation

From a regional development perspective, it is also significant to note that New Zealand’s population is not only small but that it is characterized by an unusual pattern of distribution. Most of the population live in New Zealand’s four main cities of Auckland, Wellington, Christchurch and Dunedin, with only 14% of the population...
living in rural areas and almost one in three people in Auckland (Statistics New Zealand, 2001). The population outside the bigger cities is highly dispersed, rendering it difficult to design policy tools that equally address the economic development concerns of those regions marked by high population concentration and those with a high degree of dispersion.

In this context, it is impossible to discuss the prospects for regional innovation systems without looking at the potential lynchpins of such systems: New Zealand’s cities. Not least due to the significance of networks for growth and innovation, urban regions have become the key nodes of economic activity. Cities are the prime centres for knowledge creation. It is here that ideas are created, shared and, most importantly, transformed into innovative practices and products that can help New Zealand to reach its economic goals\(^1\). Networks between global cities have become a key factor influencing competitiveness. Interlinkages with global value chains give firms access to global production networks, which are increasingly conduits for the transfer of knowledge, technologies, skilled labour and best practice business standards.

Once more, for New Zealand, critical size is the key problem. Auckland, the biggest city in the country, has a population of 1.2 m, which makes it a minnow in the Asia-Pacific context where the main competitors Sydney, Melbourne and Singapore all have populations in excess of 4 m. Christchurch is the second largest centre with about 350,000 people, and only three other cities (Wellington, Hamilton, Dunedin) fulfil the standard criterion of major urban centres (a population above 100,000).

Notwithstanding their size, New Zealand’s centres are comparatively well linked internationally. A recent study that analysed service industry networks among global cities ranked Auckland, Christchurch and Wellington in the same category as Vancouver, Johannesburg and Melbourne (Derudder, 2003). This may be a positive result, but city size does constitute a problem in the context of attempts to build regional innovation systems. Integration in global business service networks does not equate to being part of those global value chains where innovation activity is most pronounced. Indeed, the low level of private sector R & D spending is an indication that New Zealand runs the risk of being relegated to branch-office status unless potential synergies between business and research networks can be maximised. The low density of business and research networks in New Zealand implies even the biggest firms rely on the optimal exploitation of synergies if they are to be competitive internationally.

Despite natural disadvantages springing from geography and location, development policy in New Zealand is supported by a good platform for growth including:
- sound monetary and fiscal frameworks;
- flexible labour markets;
- few domestic barriers to competition; and
- an open economy with low barriers for trade and FDI.

In addition to a positive macroeconomic environment and an attractive regulatory framework, New Zealand can rely on the existence of a strong entrepreneurial spirit.

\(^1\) It is important to note that there is a high level of innovation in farm technology, reflecting New Zealand’s competitive position in that sector. This innovation activity is largely based in rural areas.
Results of the 41-country Global Entrepreneurship Monitor (GEM) study for 2003 showed that New Zealand’s “total entrepreneurial activity” ranked highest among developed countries for the third year running. Other indicators suggest that there is also no shortage of innovative activities, but the lack of management skills has often thwarted promising undertakings.

Positive macroeconomic conditions, promising microeconomic foundations and the nature of disadvantages (size, a dispersed population and the preponderance of small firms) imply that there is a strong case for a central government role in co-ordinating economic development activities and strengthening institutional frameworks in New Zealand’s regions where the latter support and facilitate growth and innovation activities. However, central government attempts to perform such a role were contingent on a paradigm shift in economic thinking that made permissible a new focus on the role of institutions and the interaction of the components of economic systems (firms, sectors, regions and the nation) for the latter’s functioning.

**New Zealand’s Regional Development Policy: Rationale / Objectives**

Since coming to power in November 1999, Labour-led governments have launched several key initiatives that aim at enhancing growth and innovation activity at the regional and national level. Prime Minister Helen Clark set out the Government’s approach to economic development in the February 2002 document *Growing an Innovative New Zealand*, usually referred to as the Growth and Innovation Framework (GIF).

GIF sets out the core goal of returning New Zealand to the top half of the OECD’s GDP per capita tables, but achieving this objective is contingent upon transforming New Zealand into a more globally connected and innovative economy. GIF stresses the importance of sound foundations for national development – good fiscal management, sound monetary policy, a competitive, open economy, social cohesion, a healthy, well-educated population and a solid research and development framework. But these, alone, are not enough to deliver the standard of living, the social services and environmental protection that New Zealanders aspire to. The document goes on to focus on four areas for actions that would increase economic growth:

- enhancing the existing innovation framework;
- developing, attracting and retaining people with exceptional skills and talents;
- increasing global connectedness; and
- focusing government resources to maximise the impact of innovation across the whole economy.

GIF provides a blueprint for economic growth in New Zealand and its regions. Indeed, one of the key drivers behind the framework - a concern to overcome ‘handicaps’ of small size and long distance from markets - is even more relevant for many of regions than it is for the nation as a whole. GIF hence also provides a framework for action for the regions but regional policy was nonetheless developed independently, at least initially.
Industry and Regional Development Policy

Industry and regional development was a major plank of the incoming New Zealand Labour-Alliance Government’s policy in 1999. The new government introduced a strong policy focus on partnership between central government and regions, locally driven development, and sustainable development. While such policies had been common in most Western developed countries in the 1990s, they represented a shift from previous New Zealand central government policy. Regional development, for example, had not been an important part of policy at central government level since the 1970s.

This significant shift from previous government policy, therefore, combined with the strong direction received through formal policy from the incoming Labour-Alliance Coalition Government meant that a number of key challenges emerged early in 1999: First, a new focus on ‘whole of government’ meant that there was a need for coordination between previously separate departmental responsibilities across a number of portfolios (e.g. R&D, education, economic development, social development, etc.). Second, new institutions, policies and programmes had to be developed simultaneously, and the Ministry of Economic Development and Industry New Zealand were two such new institutions charged with industry and regional development policy development and programme delivery. Policy and programme design was based on international regional development theory and experience, exemplified in the idea of ‘new regionalism’.

New Regionalism

In common with many “third way” administrations, regional development policy in New Zealand draws on policy work variously described as an institutionalist perspective on regional development or as new regionalism (Amin, 1999; Cooke and Morgan, 1993; Danson, 2000a; 2000b; Gibbs, Jonas, Reimer and Spooner, 2001; Healey, 1999; McLeod, 2000; Morgan, 1997). This approach tends to favour bottom-up and region-specific policy actions, based on regional governance (Jessop, 1998). It also conceptualises regional development policy as a policy of innovation, rather than a purely market-driven or welfare-based approach. It differs from previous approaches to regional development based on direct investment in, and substantial tax incentives for, regionally based businesses through its focus on local strengths and advantages and the ability of the local production system to become a centre of innovation.

The impact of internationalisation has placed innovation, creativity and entrepreneurship at the core of the economic development task in the new economy, and successful regions need to have the adaptability and flexibility to respond to these demands (Thomas, 2000). Regional development as a process of transformation propels regions in particular directions, based on both exogenous and endogenous factors. New regionalism emphasises the importance of the latter, as they generate the context for regional strengths and advantages, based on territorial capital (OECD, 2001b). Such an approach treats regions as systems of innovation, with an emphasis on the path dependency and evolutionary character of innovation (Edquist, 2001).
Particularly important in this is the growing importance of institutions (e.g. firms, financial institutions, educational and research institutions, trade associations, development agencies, infrastructure, but also less tangible institutions such as rules, norms, routines, practices, often referred to as “untraded interdependencies”) in the process of regional development. While it is clear that most innovation occurs in firms, firms’ networks with other organisations and the framework of existing institutions influence innovation (Dickens, Forsgren and Malmberg, 1994; Granovetter, 1985; Raco, 1998). It is these factors that, according to the institutional/evolutionary economic perspective, regional development policy should address.

The primary concern for policy makers, therefore, should be the construction of a framework which builds economic development networks and supportive institutions and which generates clusters of innovation (Danson, 2000a, pp. 858-859). Consequently, increasing emphasis is placed on the key influences of levels of institutional support and of inter-firm collaboration, the strength of a consensus on a common purpose, and on structures that encourage innovation, skills and knowledge transfer and networking between networks.

Reflecting this, a number of success factors for local economic development have been identified in the literature. These include:

- strong local governance and leadership;
- quality local institutions, with high levels of interaction between education, research and production systems;
- active economic development practitioners and a dynamic business environment that welcomes investment;
- industry structures that are well-linked into the local economy and to matching skills sets (particularly the presence of a technology service core);
- the adaptability and flexibility to respond to changing markets;
- knowledge of, and building on, regional strengths and advantages while broadening the economic base;
- an agreed direction or strategy and regional development projects that are aligned with this;
- a local commitment to, and ownership of, development; key essential infrastructure (particularly communications);
- an entrepreneurial culture of local businesses and residents, including creating and maintaining a positive attitude to change;
- the capacity to add value to existing products and services; and

Untraded interdependencies include institutional norms and values such as trust, reciprocity and cooperation, as well as regional conventions inherent in labour markets and public institutions (Storper, 1997). These interdependencies are vital to economic and organisational learning and co-ordination. They are also based on tacit knowledge, that is, knowledge that is collective rather than individual and that cannot be removed from its human, cultural and social context. In other words, it is knowledge that “is more territorially-specific than is generally thought” (Morgan, 1997, p. 495).
The review of regional development theory highlights the need for regional development policy to not only focus on the individual elements in the economic system, but on their interrelation. Edquist (2001, p. 235) identifies two potential failures of this system:

- institutions may be inappropriate or missing; and
- interactions or links between these elements might be inappropriate or missing.

Policy can be used to improve the functioning of the region as a system of innovation, through addressing institutions’ ability to support economic development and through strengthening linkages in the economic system. Central government can add value to these processes as catalyst and facilitator as well as partner for the economic development process. The difficulty lies in deciding where central government has a comparative advantage vis-à-vis local government and/or the private sector.

In the New Zealand context, the original policy rationale for a central government role in regional development [CAB (00) M17/1 D refers] had three main elements:

- central government activities impacting on regional development were poorly co-ordinated with one another and with local government activities that also impacted on regional development, with resultant duplication, overlaps and inefficiencies;
- New Zealand’s small size, geography and dispersed population, and the relatively high number of local government entities means, that, in some circumstances, central government needed to take a leadership role in co-ordination of activity and strategy formulation to attempt to overcome insular development thinking and projects, and direct competition between local communities; and
- existing resources in regions were under-utilised and there was a lack of strategic focus on sustainable economic development.

Central government was therefore identified as having a role in facilitating and promoting sustainable regional development to help regions respond to local opportunities; facilitating learning and co-operation among regional groups; and improving their understanding of the value of locally driven development.

**New Zealand’s Regional Policy: Programmes and Implementation**

Using the conceptual basis for regional development policy outlined above, a suite of policy instruments addresses various aspects of the key factors identified in the literature. The Cluster Development Programme (CDP), for example, aims to incentivise networking and collaboration between firms, and the Regional Polytechnic Development Fund (RPDF) addresses the necessary linkages between educational institutions and regional industries and labour markets. The Regional Partnerships Programme (RPP) is the main programme in this suite, and is modelled on the OECD LEED (Local Economic and Employment Development) programme.
Regional Partnerships Programme

The RPP is a three stage programme which part-funds regional economic partnerships for regional economic development strategies ($100,000 per 3 year cycle), capability building ($100,000 in any one year) and for a major regional initiative (MRI) (up to $2 million per 3 year cycle). The RPP has now been in operation for nearly 4 years. Twenty-six regional partnerships have been established, and implementation of the RPP is at various stages in New Zealand’s regions.

The RPP intends to bring about co-operation among regional stakeholders, facilitate improved governance and foster leadership capability nested within regions.

The original policy objectives of the RPP (DEV (00) 38, 26 June 2000) were:

- to facilitate and promote sustainable regional development to help regions respond to local opportunities;
- to facilitate learning and co-operation among regional groups; and
- to improve [regional groups’] understanding of the value of locally driven strategic development processes.

A further key objective was to provide Maori and Pacific peoples with opportunities to control their own development and to achieve their own objectives. There was also a desire to ensure that a regional perspective is incorporated in national policy development where such policy differentially affects regions. Since then, further work on the policy rationale has been undertaken. This has been informed by related policy development, particularly around growth and innovation (the GIF), sustainable development (the Sustainable Development Programme of Action) and local government (the new Local Government Act).

At the core of the RPP is a partnership approach that creates the widest possible buy-in into regional strategies and their implementation empowering regions to identify and exploit opportunities. A more strategic regional focus on economic development opportunities is encouraged, capability to deliver on such opportunities is built, and there is an expectation that more regional development projects will be aligned with strategies developed in regions and that cross-regional buy-in to and (financial and other) support for such initiatives is fostered. The underlying assumption is that the RPP partnership approach will help create an institutional environment more conducive to co-operation, which will in turn foster more innovation activity, particularly in those areas where regions have a comparative advantage.

Cluster Development Programme (CDP)

Evidence suggests that clusters, through their collaborative activity, contribute to economic development by improving business performance, as well as regional competitiveness by enabling regional specialisation and by building capacity/capabilities for innovation. A well-functioning cluster enables members to utilise networks to achieve objectives that they would not be able to achieve as effectively if acting in isolation. Through identifying and facilitating cluster

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3 Maori groups are New Zealand’s indigenous people, comprising 14.7% of the population. Pacific people account for 6.5%.
development, regions and groups of business can co-ordinate their strengths rather than spreading their effort too widely to achieve benefits of scale, scope and innovation.

The CDP was designed with the objective to encourage, enable and assist cluster-based initiatives through the provision of information, advice, facilitation and limited funding. More specifically, the CDP:

- builds the skills, knowledge and expertise of cluster facilitators in best-practice cluster processes;
- addresses barriers to collaboration within clusters;
- builds capacity and capability for collaboration and improved cluster development; and
- assists stakeholders to identify and exploit opportunities for growth, and improve the growth rate and sustainability of clusters. This leads to improved firm and regional performance.

**Regional Polytechnic Development Fund (RPDF)**

The RPDF has a more limited focus. It aims to encourage polytechs to collaborate with regional industry with a view to make the tertiary institutions more responsive to industry skills needs. By doing so, the RPDF will help build regional capability. A higher degree of responsiveness to regional training needs aligned with regional comparative advantages will help make a significant contribution to regional growth and innovation activity.

**First Indicative Results of Regional Development Programmes (RDPs)**

**Programme Success**

After 3 years of operation, and within the context of needing an understanding of whether or not these new programmes were appropriate to the New Zealand economic development context, central government undertook reviews of programme performance to date. These reviews, centred on the RPP, need to be seen in the context of several factors.

First, it needs to be noted that regions were at vastly divergent starting points as far as processes (e.g., good stakeholder relations), capability (e.g., a good understanding of regional assets and challenges) and economic potential (existence of particular comparative advantages) are concerned. It is also important to remember that direct attribution of programme performance to regional GDP growth or regional employment growth is not measurable for a number of reasons. For example, multiple factors influence regional GDP and employment, time lags exist, and the programme investment is modest in terms of regional and national economic

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4 The RPP has been in operation for three years. The CDP started in 2002 following a pilot programme and the RPDF commenced in April 2002.
aggregates. Measures of success for programmes, therefore, are focused on intermediate indicators, which have been developed as part of pilot evaluations\textsuperscript{5}, drawing on international experience with similar regional development programmes (see for example, OECD 1999, OECD 2001a, OECD 2001c).

This international literature indicates, for example, that better linkages between economic development institutions and firms and improved trust can lead to more jointly funded development projects and better understanding of - and synergies from - previously disjointed economic development initiatives and processes. This can ultimately lead to a more regional outlook, better economies of scale and less duplication of resources.

The RPP evaluation showed that the programme performs against key indicators of success. These are mainly focused on changed economic development partnership behaviours, including:

- a more strategic regional focus and an agreed economic development direction (including key stakeholder buy-in);
- improved knowledge of a region’s strengths and advantages and more projects aligned with this;
- strengthened and extended economic development networks and more collaborative approaches to projects;
- improved co-operation and trust between groups and better understanding of other stakeholders’ goals and processes; and
- better co-ordination and alignment between central and local government resources.

Analysis has shown that capability building grants have supported key aspects of partnership development, as well as the building of institutional capability and research into key sectors in support of a MRI. The review has also shown that, in regional perceptions, capability building grants are important for achieving early results on a few selected projects that no individual partner may have achieved alone. International research and other aspects of the RPP review show that this is a key contributing factor to the success of long term partnership development. Also, early results on practical, region-wide projects are extremely helpful in building credibility for the regional economic development process and in learning how to work together across traditional boundaries. In addition, the evaluation indicates that the capability building component is instrumental in delivering on broader strategy outcomes.

The RPP review has also shown that a key risk factor for regional partnerships and governance is the different timelines and resources that stakeholders face in partnerships. For example, business needs for early results do not always sit well with structural and process requirements of local government and iwi (Maori groups).

\textsuperscript{5} Only the RPP has been formally evaluated to date, both the RDPF and CDP have undergone internal assessments relating to programme alignment.
Broad participation in RDPs across different regions is vital for the success of overall regional development policy, particularly if one objective is the enhancement of innovation activity across the nation. However, research into alignment among RDPs has indicated a pattern of uneven programme participation, raising some concerns about the effectiveness of the current toolset of regional development programmes.

These findings show that there is some evidence of overall complementarity across programmes but regional activity and programme participation has varied greatly, most notably the use of clusters and the emergence of MRI initiatives. One observation is most striking: In regions that have received RPP MRI funding, there has been little activity in firm-focused programmes. This applies largely to small-to-mid-sized regions with well-resourced EDAs. Vice versa, regions where businesses have received considerable funding under the commercial programmes have not yet managed to obtain MRI funding, or have experienced significant delays. This applies to the most populous regions (Auckland, Canterbury) and one large region with one of the key centres (Otago). A third category of very small regions have not succeeded in either category.

While there are exceptions to this pattern, the general validity of this observation has repercussions for regional development policy and, specifically, attempts to build regional innovation systems. The patterns of participation in firm-focused and partnership-centred initiatives imply that challenges for innovation initiatives vary according to the nature of regions:

- **Successful mid-sized regions**: Why have they concentrated on MRIs at the expense of smaller commercial projects? Because of political gains (driven on by EDAs dominated by local government), because they have few potential commercial projects (drawing everybody together) or because they have – in a more positive light – been able to focus minds and facilitate consultations particularly well?

- **Big regions**: Are incentive structures or are consultation requirements / difficult governance conditions to blame? Are incentive structures right? To determine the latter, a business view would be needed.

- **Small regions**: Are the institutional capabilities of small regions deficient or is there a genuine lack of economic opportunities that can be exploited regardless of incentive structure?

An assessment of programme participation must be cognizant of the fact that interventions that rely on partnership-building will take a longer time to be successful than initiatives relying on buy-in to more narrow commercial objectives. Slow participation may hence be a function of programme complexity, not of programme failure. Nonetheless, there are indications that the current set of programmes is most

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6 Northland, Waikato and Wellington have had considerable success in both categories (funding for commercial and RPP-based initiatives).

7 Examples include Hawke’s Bay, Taranaki, Manawatu, Nelson/Tasman.
beneficial for mid-sized regions that already have got in place good governance, high systems capacity and strong capabilities.

From an innovation systems perspective, it is of particular concern that those regions that contain New Zealand’s key cities have made very slow progress towards partnership-building. The failure has been even more striking because Canterbury, Auckland and Otago between them host five of New Zealand’s eight universities, and all three are well serviced by New Zealand’s prime public research institutions, the Crown Research Institutes (CRI). Specialised businesses are concentrated in these areas. All up, conditions are most conducive to the establishment of regional innovation systems, and these are arguably the only regions (in addition to Wellington) where NZ can achieve anything resembling economies of scale and scope.

The significance of these regions makes it urgent to examine the causes of lack of success so far. It is not entirely clear at this stage whether the root cause of difficulties is an incentive or a co-ordination problem: The slow RPP take-up in the Auckland and Canterbury regions raise questions over whether programme design is sufficiently attractive to all stakeholders (larger businesses). Alternatively, this could be a co-ordination problem, reflecting the larger number of stakeholders in urban areas. This also serves as a warning that bigger size of regions (which addresses the critical mass problem) could come at significant cost in terms of co-ordination (governance issues).

Another challenge concerns the participation of New Zealand’s Maori population. Involvement of iwi has been less than hoped for despite some notable exceptions. Given the emphasis on partnership-building, this is a key shortcoming of the RPP. The reasons have not yet been fully explored but there are indications that regional boundaries chosen for the RPP do not respond to patterns of co-operation among Maori groups (although capability and resourcing issues also play a role).

**What have we learnt about the challenges inherent in building Regional Innovation Systems?**

Overall, attempts to create broader regional partnerships and to lay the foundations for regional innovation systems in New Zealand’s regions have been encouraging. However, a first stocktake has also brought into sharper focus some of the difficulties associated with attempts to recast institutional foundations for regional development in New Zealand. Problems have been detected in three broad areas:

- institutional weaknesses in regions;
- co-ordination between regional and national strategies;
- lack of clarity over policy goals (redistribution and promotion of growth).

**Institutional Issues**

Deficient institutional foundations have proven an obstacle for two different types of regions, both large and small\(^8\). As to the latter, it is not surprising that low capabilities

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\(^8\) It is important to note that some of the institutional problems mentioned are linked to New Zealand’s political set-up. The existence of 74 Territorial Local Authorities (TLA) does not facilitate smooth institutional co-operation.
have impeded regional development given the small population of some of the RPP regions. Even the fact that central government has provided a lot of guidance to regions, combining top-down and bottom-up elements in the RPP process, has not been sufficient to allow all regions to participate meaningfully in the programmes on offer. Several (although not all) small regions have struggled to come up with promising MRI initiatives and have also failed to obtain funding for firm-focused programmes.

This outcome poses difficulties for programme design, because it cannot be determined whether low participation has only been a function of low capabilities that prevent regions from responding to economic opportunities or whether it reflects the absence of such opportunities in the first place. Central government can address institutional weaknesses, for example by ensuring regional EDAs are well resourced and funded. However, it can do little to create economic opportunities where no comparative advantage exists - at least short of a full-fledged *state dirigisme* that would run counter to the premise of regional development as a business-driven process.

In some of New Zealand’s larger regions, a different kind of institutional weakness has stymied regional development. Paradoxically, some of the regions characterised by the country’s most pronounced concentration of businesses and research institutions have also failed to take advantage of core regional development programmes. Difficulties there cannot be attributed to institutional weaknesses in a narrow sense, as sufficient capabilities evidently exist. However, some key regions have been plagued by governance problems, manifest in the inability to find consensus. The very competition among local authorities that the RPP is aimed at eradicating in the long run is holding up progress. Some of the problems encountered are explicable in the context of incompatible economic interests, which are linked to disparate economic strengths of local areas. Yet, the fact that this has rendered elusive consensus on projects of mutual benefit is noteworthy given the RPP’s intention to encourage region-wide co-operation.

Bigger regions present an even more serious policy challenge than small regions due to political pressures to produce tangible results. Failure to show evidence of success in Auckland, where almost one-third of New Zealand’s population and 36% of businesses reside, would be unacceptable in the long run, and there is a risk that political pressures will result in the dilution of programme criteria (e.g., by allowing local authorities to obtain funding for separate projects that would benefit them individually rather than the region).

It also raises issues over the incentive structures of the current programme toolset. Businesses are likely to find the partnership approach cumbersome at the best of times, but compliance costs will prove a serious barrier if the ultimate outcome does not promise benefits from broader regional co-operation. It may not be accidental that businesses in those large regions have participated in the comparatively poorly funded CDP but have shown little interest in the RPP. Initiatives that might be most acceptable to local authorities and can serve as a lynchpin for consensus may not be kind of activities that can attract particularly those larger businesses whose presence would maximise the economic impact of partnerships.
Overall, failure points to the initial absence of diffuse reciprocity\(^9\) in key regions of New Zealand. Regional partners are unwilling to forego immediate benefits for the sake of the greater regional good and are not lured by an implicit promise that it may be their turn to benefit next time around. The fact that small and mid-sized regions have not experienced a comparable absence of fundamental trust could be seen as evidence that this is not a reflection of an individualistic national culture. A historic lack of co-operation, poor governance arrangements and misaligned incentive structures are likely causes. What should be noted is a failure to date to redefine the rules for engagement from a situation of ‘specific reciprocity’ - which prevails in competitive bargaining – to one of ‘diffuse reciprocity’. For the purpose of building regional innovation systems this may not prove a fatal flaw but, given the need to optimise synergies in New Zealand, it will render more difficult attempts to create an environment conducive to knowledge sharing.

**Insufficient Co-ordination of Regional and National Strategies**

While the emphasis of this paper is on the regional dimension of growth and innovation, the focus on knowledge-sharing should serve as a reminder that regional development cannot be separated from national policy. RDPs may succeed in strengthening capacity and capabilities in New Zealand’s regions that allow the latter to identify and exploit regional comparative advantages, and this process may lift the innovation and growth performance of specific regions. However, it is important to recognise that New Zealand’s national performance will only improve if regional comparative advantages can be translated into leverage in the international arena, e.g., through improved export performance. This is unlikely to happen unless sectors that are strong in particular regions can pool all resources available at the national level. While the identification of comparative regional advantages constitutes the first key step, businesses in many sectors will have to source inputs from across the nation (e.g., specialised research skills). It is hence crucial that regional strategies are co-ordinated with national sector strategies if industries operate in different parts of the country. At present, regional initiatives are insufficiently co-ordinated with one another, increasing the risk that critical mass may thwart innovative activities due to the fragmentation of small-scale initiatives in the same sector across the country. To illustrate this, the development of the biotech sector, which is very capital-intensive and relies on highly specialised research skills, is unlikely to progress unless businesses in regions that have a comparative advantage in the area can work out a division of labour within the sector.

Co-ordination inevitably leads to tension over process issues. Partnership research shows that tensions between ‘top-down’ and ‘bottom-up’ objectives and processes are a difficult aspect of public-private partnerships for economic development. This problem is accentuated if attempts are made to align regional projects and national industry strategies. National initiatives imply the existence of a top-down process whereas regional projects are intended to be defined in a bottom-up process by regional partners.

\(^9\) Two types of reciprocity have been identified (Coleman, 1990; Putnam, 1993). Diffuse reciprocity refers to a continuing relationship marked by exchanges that at any given time may be unrequited, but over time will be repaid and balanced. In contrast, specific reciprocity refers to simultaneous exchanges of items of roughly equal value. The latter concept indicates a lack of trust and points to a relationship not conducive to long-term co-operation.
The issue of regional-national level co-ordination also brings to the fore the tension between regional and national innovation systems. There is no conclusive answer yet to the question whether regional innovation systems are viable for a country of New Zealand’s size or whether the country should instead focus on building a single national innovation system. What is certain is that there is a strong need to co-ordinate regional and national level policy.

In the short term, policy makers are likely left with the task of juggling divergent demands from national industry and regional strategies. Only the creation of genuine regional innovation capability is likely to provide a long-term solution. Regional and national innovation systems need to complement and mutually reinforce one another, but the precise division of labour will be case-specific.

Conflicting Goals for Regional Development

The above dilemma points to a more profound problem with regional development policy. It brings to the fore the tension between discrepant policy goals in the area of regional development, more specifically the overlaps and contradictions between regional development and regional innovation policy.

Conceptually, the establishment of regional innovation systems could be regarded as a subgoal of the broader regional development effort in New Zealand. The process in New Zealand is designed as one that is driven by business needs. Redistributive goals are not explicit to policy and are relegated to second-tier objectives but they nonetheless loom large in the background. The small size of some of New Zealand’s regions and the absence therein of research institutions and competitive specialised industries may render futile any attempt to establish regional innovation systems. One study of the New Zealand context concluded that RIS may be a viable concept for New Zealand but only for the large urban centres (O’Meara, 2003). However, examples of mid-sized regions like Nelson, Taranaki and Hawke’s Bay provide reason for optimism. Drawing on comparative advantages and long-standing specialisations, these regions have managed to create small pockets of excellence that are likely to offer foundations for narrowly focused but successful regional innovation systems.

However, most small regions may not offer the same promise, raising questions over future policy approaches. Political leaders will find it impossible to defend policies that will clearly leave some regions further behind unless these policies are tempered by initiatives that guarantee a modicum of employment and growth in all areas. This is where innovation and growth-focused policies will be tempered by redistributive goals.

However, New Zealand’s overall policy emphasis on growth and innovation rather than approximate living standards across regions is not necessarily shared by other countries. While there is broad agreement that regional development should promote sustainable growth, different strategies are being pursued in terms of what the emphasis should be between redistributive and growth goals. In the European Union and particularly Scandinavian countries such as Norway and Denmark, regional development policy has traditionally been used to promote redistributive goals or at
the very least ensure that a similar standard of living prevails across regions. It would be wrong to state that these objectives are entirely absent in New Zealand. However, the overall focus lies on growth.

These elaborations show that regional development policy and regional innovation policy are clearly not synonymous. However, they are likely to be policy areas with complementary goals. Neither may be sustainable in the absence of the other. In the absence of attempts to build regional capabilities that foster sustainable growth and innovation activity, regional development policy will become a redistributive policy tool that entails one-way transfers from rich to poor regions. However, regional innovation policy that focuses on the core elements of the innovation process – individual firms and research institutions – without targeting the institutional environment and enhancing interaction among system components is at best likely to end up with isolated pockets of success without interlinkages with other actors in the localities. Efforts by practitioners to advance regional development and innovation policies will have to contend with those tensions, but the right balance between the two sets of policy instruments will depend on specific economic background conditions, political goals and the cultural environment in which policies will operate.

Potential Policy Remedies

The challenges that have emerged are complex, and it is improbable that any panacea will be available that proves effective across regions. In the long run, more autonomy at the regional level may be appropriate (e.g. innovation seems to be a key feature of ‘bottom-up’ processes), but this has to be carefully balanced with existing capability and scale. The scale envisaged by regional policy in New Zealand is much smaller than that generally referred to in the international literature. Lessons from the international literature in regard to regional autonomy and devolution of authority may therefore have to be tempered. Further research on the levels of critical mass required may be needed in the New Zealand context. However, several avenues appear promising for future regional development policy.

Amalgamate Small Regions

There is evidence that the RPP partnerships in some of New Zealand’s regions are too small to be viable and that some partnerships would benefit from amalgamation with adjacent regions. While this is an important issue going forward, no fundamental change should be imposed from central government, given the partnership development process and the importance of trust and stability. Instead, it is likely that New Zealand Trade and Enterprise (NZTE) – the agency responsible for the operational implementation of RDPs - will need to take an active brokering role in convincing partnerships of the merits of working across boundaries to achieve critical mass and a broad regional outlook. The key challenge for policy making is to determine how best to ‘incentivise’ larger regions.

Big Regions: Improving Governance Structures

Those regions centred on large cities are New Zealand’s prime hope for establishing high-impact regional innovation systems. However, there is a view that some of the RPP regions are too large and complex. Such concerns have already been addressed in
Auckland through more flexible funding allocations (e.g. the capability building and MRI caps for Auckland were raised to reflect the size of the region, its complexity, and the level of the local contribution). A similar situation may be evident in Canterbury, where an urban / rural division renders unlikely consensus on a single MRI that will suit all regional partners. However, by international standards, these are still small regions in terms of population and number of businesses, suggesting that the focus should rest on improving governance structures, not reshaping of partnerships or regional boundaries. In addition to improvements to governance, there may be the need to look at the RPP’s incentive structures. At present, they do not seem ideally suited to large and complex regions. Programme design may need to address the role of the MRI as ‘carrot’ to incentivise behaviour by some RPP partners, particularly larger businesses.

**Strengthen EDAs**

Given the local knowledge vested in regional parties and given the headstart of local leaders in terms of networking capability, it seems appropriate to increasingly rely on regional institutions. Economic Development Associations (EDAs) can serve as the fulcrum for co-ordinated economic development planning, and the strategy development stage of the RPP has been testimony to the general capability of regional institutions.

There is a clear consensus that well resourced EDAs are a key to successful regional partnerships. The regional knowledge and particularly the intimate understanding of local businesses and their concerns vested in EDAs means they are indispensable if the provision of programmes is to be tailored to local needs. Good models of EDAs are distinguished by a strong commercial focus as well as their ability to maintain links to local government; they are not just dependent on delivering government programmes but are flexible and able to respond to opportunities (e.g., attract inward investment). It is appreciated that a good performance of EDAs will be contingent upon a) certainty of funding; b) in-house capability; c) existence of commercial objectives and relationships with business (which build credibility).

**Align Co-ordination of Regional and National Strategies with Source of Key Inputs**

Decision-making power as to the co-ordination of regional and national strategies should take place where the key inputs are provided. This would delegate decision-making (and funding authority) to an entity at the level where knowledge of involved businesses is greatest. The cluster programme could be a prime example to illustrate this. For clusters that will predominantly have a regional impact and rely largely on regional inputs (skilled labour, business expertise, funding), power should rest largely with regional partners, although central government should retain some funding and co-ordination power to ensure national best practice standards are maintained. This would allow close tailoring of funding and skills initiatives (for example, polytechnic programmes) to regional business needs. At the same time, those clusters that are competitive internationally but need to rely on national-level inputs would be co-ordinated at the national level (increasing synergies) and provided with specialist inputs that are only available at the national level in a country of NZ’s size (e.g., highly specialised research skills).
However, attention needs to be paid to the appropriate governance conditions. EDA control over clusters can de facto amount to the predominance of local government in decision-making. Any marginalisation of business would have serious repercussions for the commercial viability of initiatives and would risk tilting towards redistributive goals.

Conclusion

The case of New Zealand’s regional development policies has revealed the difficulties policy makers face when they want to establish regional innovation systems. While issues of critical size, which are particularly pronounced but not unique to New Zealand, pose challenges, key barriers to the creation of regional innovation systems are to be found in the institutional sphere. The co-ordination of regional with national strategies and the design of policy tools that incentivise regional innovation are key problems that need to be resolved.

The creation of the right institutional set-up is key to successful regions, as the former creates conditions conducive to innovation activity. However, it needs to be emphasised that the reality of economic foundations needs to be borne in mind by practitioners of regional development. In the absence of economic opportunities – arguably the case in some small regions – a good institutional set-up on its own is unlikely to be a catalyst. The low uptake of firm-focused programmes in regions where partnerships have been successful (manifest in MRIs) is likely to point to the existence of highly specialised but also limited comparative advantages. New Zealand’s best hope to create RIS lies in regions around its big centres. This does not mean that smaller regions should be neglected but a clearer distinction between regional development and innovation policies may be useful. While they are complementary, their immediate goals are different and the respective toolsets will only prove effective in specific contexts.

REFERENCES


