Productivity Issues in the Regional Economy

A Framework for Auckland's Economic Development

Prepared for the Metropolitan Auckland Project Team

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Productivity Issues in the Auckland Region

Consideration of productivity issues from the perspective of a region is a significant departure from standard regional development thinking. It raises new challenges in developing policy practices at all spatial scales.

The challenges involve taking care over how ideas about productivity developed for the national economy are translated into a regional setting, developing an understanding of productivity sensitive to regional issues, and taking seriously the economic actors (organisations and people) expected to deliver productivity gains.

These challenges mean moving from a sector-oriented regional development mind-set (that comes from taking ideas developed for the nation, around aggregate data) to one that explicitly involves economic actors and their activities at an appropriate spatial scale. This means moving beyond how Auckland might sustain its role as driver of the New Zealand economy to how it might build its role in the international domain (especially Australasia, Asia, and APEC). It means thinking about productivity in global not national terms.

The scoping processes of the Metro Project will hopefully provide conceptual understandings of productivity issues in a regional setting within a globalising economic world, and indicate how these might be translated into policies, strategies and plans.

The three work streams of the Metro Project suggest a move beyond conventional thinking on productivity in other ways, too, a shift from a capacity (or 'to the fullest possible extent from existing resources') approach, to a capability (or 'let's put in place the foundations for continually improving productivity performance') approach.

The focus on *capability* dimensions can be seen as an attempt to call forth creative long-term strategies to re-inform and re-shape thinking in private and public sector organisations

The present paper is intended to encourage discussion about the different possibilities for Auckland Region, and a possibly different Auckland Region, following a re-conceptualisation of productivity issues in these terms. It is based on thinking about the dynamics affecting and associated with regions seeking to build an international if not global role, and not simply to retain national pre-eminence.

The general argument is that *economic processes connected with Auckland can be best understood by thinking about how Auckland's activities and actors are variously positioned in the networks of global value chains and how the organisation of local economic activity impacts on that positioning for different activities and actors*.

The paper also raises the potential expansion of opportunities associated with moving from the constraints of cluster-based models of development, to thinking about the possibilities in the global economy for associated interests spanning the northern North Island.

Recognition of capability thinking means the actual mechanics of how policies can work for productivity are brought into the open. *Ultimately, policy is about influencing the investment decision processes (widely interpreted) of public and private investors in New Zealand and overseas*.

A very real question is: what investment changes will help most in putting in place the fabric for the transformation in the capabilities of Auckland's economic actors and their activities necessary to secure a long-term global presence? The key word is transformation; that is, change that is developmental.

One way to consider the nature of the challenge is to imagine having $1billion to spend over the next five years on Auckland's future. If you could make up to five investment tranches, what would they be? Why? How would you show good prospects of capability changes related to productivity that will give an edge in competitive positioning in the globalising economy?

Are there any ways that the re-conceptualisation contained in this paper might influence your preferred allocation?

These are questions that we hope to pick up through dialogue with the Metropolitan Auckland Project Team and with the visiting panel.

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1 Background

1.1 The Metropolitan Auckland Project

The Metropolitan Auckland Project builds on the vision and platform of the Auckland Regional Economic Development Strategy by preparing a set of action plans that can be implemented through the Auckland Regional Economic Development Forum.

The Strategy aims at an internationally competitive, inclusive and dynamic economy.

The Metro Project is advancing three workstreams: people and skills development, regional capability, and business capability. The emphasis is on productivity, which has emerged as a central issue from analyses by government and business. A concern for promoting productivity-based growth reflects indicators such as:

- Low innovation rates
- Low private investment in R & D
- Over-reliance on property and the property market as the focus for investment
- High interest rates
- Low engagement of some ethnic groups into education and economy.
  (Canler, C, August 2005, "Briefing Notes").

A survey of commentaries suggests some convergence of thinking on "the way forward": e.g.,

- "… Auckland must take steps to become a city of international, significance, and move from a domestic focus to a strong export one/
- Economic growth needs to be based on international export activity – both in manufacturing and services.
- Productivity gains will be based on a well-educated workforce, strong links with the rest of the world and an environment that will encourage firms to invest. From these come the knowledge, ideas and innovation we need.
- Skilled people are the key but there is currently a shortage.
- Taking a collaborative approach to economic development"
  (Jordan, C November 2005, "The Role of Auckland in the New Zealand Economy" Reference Report to MED Government and Urban Development Office for the Growth & Innovation Advisory Board26)

1.2 Purpose and Organisation of the Paper

The purpose of this paper is to show how extending the conventional economic development framework offers additional insights into productivity and how it might be advanced within a region.

The paper outlines first the constrained nature of productivity thinking associated with the current development model. Discussion is then organised around eight concerns that dominate regional economic development thinking in New Zealand: investment, employment, trade, sectors, the region, demand and supply, organisation, and intervention (Section 2).

The discussion highlights how the current model's treatment of these concerns channels productivity thinking into what might be called a 'capacity cul de sac' where the spotlight is on economic activities rather than economic actors and their actions. It leads to a focus on narrowly defined clusters rather than regions that might claim an international role in a globalising economy. By framing productivity narrowly, the conventional model constructs regional structures on which the capability dimensions of productivity are obscured by preoccupation with local capacity.

An alternative approach is developed in Section 3, of its implications discussed, especially with reference to a capability-based conception of productivity. The alternative model opens up a range of new possibilities for regional productivity, modifying policy options as a consequence.

A draft of this paper was discussed by the Metropolitan Auckland Project Team, which raised several issues that have been drawn into the current commentary. These included the association between urbanisation generally and higher productivity, the relationship between productivity gains and quality of life, the relationship between productivity and population ageing, the incremental nature of productivity gains, and the importance of a strong domestic manufacturing centre as a source in its own right and as a wider source of the skills, experience and productivity growth needed to retain an international presence.

1.3 The Current Development Model

The prognosis that informs Metro Auckland draws on a tradition of regional economic analysis focused on investment, employment, costs, competition and trade. This model is reflected in the work of Competitive Auckland, the Committee for Auckland, the Auckland Regional Development Strategy, and the Auckland Regional Economic Development Office, among others.

Key elements include the following:

- New Zealand has traditionally performed poorly relative to OECD countries, Asia and Australia.
- Recent performance ahead of some international benchmarks is unsustainable and already running into factor constraints.
- Because of its relative size, Auckland powers the New Zealand economy. It is important for national development that Auckland continues to perform at or ahead of the rest of New Zealand, and that it does this by building its presence in a regional or global business world.
- Auckland’s capacity to play this role is compromised by limited international presence (indicated by trade and trade growth) and productivity performance.
- A lack of investment is restraining productivity. Nationally, this is attributed to poor savings, and a preference for investment in property and, especially, residential rather than “productive” assets.
- Underinvestment in infrastructure (especially transport) also undermines productivity by imposing costs on business.
- Productivity roadblocks may be tackled by government action in the areas of, for example, taxation, savings and superannuation (to encourage investment), R & D funding (to encourage innovation), the costs of doing business (by reducing the “burden of government” and the costs of regulatory compliance), and infrastructure shortcomings and skill shortages.

Such a prognosis is broadly in accord with the national diagnosis contained in bank commentaries, Treasury analysis, and lobby group reports. It supports the resurrection of a regional-national policy nexus through which removing investment and factor constraints in a grounded manner – at the regional level – is expected to go a long way towards redressing imbalances in the national economy.

2 Rethinking the Development Model

The prevailing view of development is based on growth accounting. In this, capital (in the form of plant and buildings) is combined with labour to generate output in the form of goods and services. An increase in either factor of production (capital or labour) should see an increase in output. Conversely, a fall in either, will reduce output, all else being equal.

How factors of production are combined (technology) influences their efficiency, measured as labour or capital productivity, and hence total output. Hence, one response to slower labour growth, for example, is to substitute capital and thereby increase the productivity of labour. Conversely, an abundance of low cost labour reduces the level of investment required to achieve a unit of output at a given cost, substituting for capital.

Over time, competing demand (which need not be local) or factor constraints will increase the price of capital or labour in any particular locality, thereby limiting demand and output. In the case of labour shortages, this may be countered by migration in the short-term, but reducing unit costs (increasing productivity) is a longer-term prerequisite to sustaining growth. This is especially so in competitive markets.

This model underlies much thinking about regional and national development. Elements of the current model are described below, with the conventional views set against different ways of interpreting them. The discussion reveals important directions that could be included in regional policy initiatives directed at productivity.

2.1 Investment Focus

2.1.1 Emphasis on local Investment

Individual organisations (firms, government ministries or departments, quasi- and non-government entities) are the mechanisms for making investment. Sectors, however, are the basis for assessing the performance of a nation or region – distinguishing first between the private and public sector, then by product or service type (usually according to the Standard Industrial Classification). Measures of national investment are adjusted for the net movement of capital and dividends across borders.

There is a tradition of focusing policy on capital raised and invested within regions. A normative view that regions would be better off if self-sufficient in investment underlies, for example, the creation of regional development corporations and even occasionally the issuing of "local" debentures (e.g., Otago Development Corporation in the early 1980s). It is also implicit in arguments that investment in road infrastructure, for example, should correspond with the road tax take in an area, and is built into "user pays" thinking in development levies or financial contributions.

Under this geographically circumscribed view (which is also posited nationally), outward capital flows are generally seen as negative and inward as positive. The former suggest an absence of local investment opportunities, the latter a surplus.

Strong investment opportunities attract capital into a region. Good investment performance should also generate a countervailing flow of dividends. While this reflects good performance, it may be treated as negative: dividends (like investment in productivity enhancing imported plant) are treated as a debit in balance of payments calculations.

Market distortions may also shape the flow of funds, not the quality of investment. For example, using interest rates to moderate inflation can result in an inward flow of capital that is not translated into productive investment.

2.1.2 Unconstrained Investment

The twin frictions of time and place compromise growth dependent on the availability of capital. Funds often do not flow to the highest yielding investment because the mechanisms for moving them are cumbersome and "sticky". The nationalistic nature of market regulation may impede capital flows. Distance and limited knowledge constrain international investment. Past limitations to banking systems contributed to such "market imperfections".

The history of capitalism, however, has been one of increasing capital mobility and velocity. Mobility accelerated in the late 20th Century, aided by rapid advances in information and communications technology, regulatory reform (within and among states), and the growing sophistication of capital markets.

Capital markets today are characterised by a range of interconnected financial intermediaries that operate with relative ease across borders and across the public and private sectors. They have the capacity to mobilise reserves and instantaneously transfer funds among investments across the globe. A range of innovative investment instruments supports this capacity, often with only indirect connection with the production of goods and services or with productivity initiatives.

2.1.3 Promoting an attractive investment environment

The rapid evolution of capital markets means that they no longer distinguish strongly among different investments, whether in civic facilities, hard or soft infrastructure, services, primary or manufactured goods. Diminishing geographic constraints also increase the array of investment class options for individual investors and agencies.

One development challenge for Auckland is to create an environment that can attract (and hold) mobile funds and convert them into a range of tangible and productive local assets. The returns available (the quality of the investment) remain central to this challenge. The stability and security of the political and business environments, the attractiveness of the built and natural environments, the regulatory environment, risk profile, and investor familiarity all influence the attraction of investment capital.

While we now recognise that regional investment does not require funds to be generated locally, the converse also applies. Wealth accumulation does not require that local capital or equity markets are the only or even the primary source of opportunity for investors who need not, and perhaps should not, be constrained to local investments.

2.1.4 Creating an investment ethos

Under these circumstances, regional economic performance may reflect (1) the quality of local investment opportunities; and (2) the quality of investments held by local businesses and households, regardless of where they are.

A focus on the quality of residents' investments is evident in the concerns of government officials and commentators at the low rate of saving and the view that "too much" New Zealand investment is held in the local housing market.

Given sufficient wealth generated by investment, regardless of its origin, the economic fortunes of a locality will be evident in demand generated by households (consumption and lifestyle) as much in as the goods and services produced for sale by local businesses (production).

There are many localities and landscapes in developed nations configured almost entirely by consumption, with business and government activities dependent on local recycling of wealth accumulated elsewhere. The Florida and the Queensland coasts are among the more obvious and long-established examples, but rapidly growing sunbelt and peri-urban regions of New Zealand, as well as downtown café-belts in the major centres, reflect the same phenomenon.

One outstanding question that preoccupies New Zealand commentators is how far such development is funded by debt and how far by wealth (investment returns).

Implications:

- The alignment of individual sectors (public/private, SIC based) and areas with particular funding sources and forms of investment is diminishing.
- Investment finance can be sourced from anywhere.
- Capital is attracted to good returns in a favourable social and political environment.
- The economic fortunes of households and businesses alike depend on the quality of investment, rather than its location.
- Investment in the quality of life is not often mentioned: high levels of consumption should result from and reflect effective use of capital.

2.2 Employment Focus

2.2.1 Labour as a Factor of Production

In the traditional model labour is a factor of production. Growth in the labour force drives economic growth. High unemployment therefore reflects foregone output. Conversely, full employment suggests an economy producing close to capacity.

Near-full employment puts pressure on the cost of labour by increasing recruitment costs and pushing up wages. Specific skill shortages may limit production. Inflation and loss of competitiveness are likely outcomes.

Near-full employment results from expanding output, labour market that are static or shrinking, workforce ageing, a mismatch between skills and demand that limits labour market participation among some groups, or other barriers to participation. Limits on expanding labour supply include: the financial barriers faced by households with the transition from welfare to waged income; training needs; location and commuting or relocation costs; family circumstances (carer duties falling outside formal employment, or example); regulation of ages for workforce entry and exit; or lack of employment skills.

Low unemployment may invoke several policy responses. They include increasing participation rates by reducing barriers to workforce entry among particular demographic groups (e.g., carers of young children), reducing welfare support, and vocational training. .

In the past, labour market subsidies (by way of relocation and training allowances, and recruitment bounties, for example) were sometimes applied. Encouraging inward migration to take up unsatisfied demand, often in particular skill or low skill positions, or to create a labour surplus and thereby take the pressure off wages is also a long-established response.

Another is for businesses to substitute capital for labour by investing in plant and machinery. This requires fewer employees to achieve the same level of output, but often at higher skill levels. Increasing the skills and thereby the productivity of the labour force is one way to offset labour shortages, especially in the face of potential long-term shrinkage. The result should be increased productivity, allowing for higher incomes without the inflationary pressure of a wage push.

Indeed, “up-skilling” is a necessary corollary of deepening capital. Investment in more sophisticated equipment and processes calls for more advanced expertise. It may increase demand pressures in more skilled areas of the labour market and consequently see substantial income gains among, for example, manufacturing employees.

2.2.2 The Social Role of Employment

Employment is the principle means of income distribution. Full and growing employment expands household demand and contributes to a virtuous cycle of domestic economic development.

Employment also serves the social function of inclusion. Labour force participation is a socialising mechanism, underlying interactions that enhance the capacity to participate in civil society. Conversely, unemployment (or underemployment) is associated with social marginalisation.

Given these roles, employment is central to policy analysis and policy making for economic and social development. When faced with international competition, an ageing workforce, and large minority groups of underemployed people the mobilisation of labour looms large in development policy.

Even in a buoyant economy, extending employment by education for work, skills development, and trade training are important means of lifting productivity and reducing marginality.

Labour market policies may operate at several levels. Given the social connotations of employment, the most urgent may be to act on the knowledge and skills “deficits” of groups who, through limited conventional educational attainment, are more or less excluded from the formal labour market.

At another level, tertiary trades and skills programmes may be geared towards future needs, insofar as these can be anticipated. There is increasing emphasis on the capacity to change jobs, to move between sectors, or between skill sets as circumstances change.

Immigration policy is another response to labour market needs, with the capacity for local economic assimilation (English language ability, qualifications, work experience, targeted skill sets) featuring in selection processes.

2.2.3 The Question of Auckland’s Labour Productivity

A Treasury paper (Lewis and Stillman, 2005) recently argued that Auckland’s elevated incomes and income growth relative to the rest of New Zealand denote a regional economy operating at a relatively high level of productivity. The rationale is that business (and government) can afford to reward employees above the national average, in part because of the benefits of external economies of scale in large cities.

The impacts of demographic characteristics, employment and occupational structure were controlled in a multivariate analysis, which pointed to income and income growth differences in favour of Auckland and Wellington. The levels of explanation yielded by the models are weak, though (in this case “statistically significance”, is simply a reflection of the large number of observations), suggesting that little substantive weight can be given to them. This is unsurprising given that the experiment was based on controlling (or eliminating the influence of) a number of other potentially causal variables.

The paper dismissed the notion that structural factors lie behind this difference. The only other study that examined the issue (NZIER) operated at too high a level of generalisation to be accorded any weight by the authors, as it assumed national constant production functions within sectors in an attempt to isolate regional structural effects.

While data on regional variations in productivity within sectors is difficult to assemble, the fact remains that Auckland has a large share of the nation’s employment in high-income service sectors. For example, Auckland accounted for 44% of New Zealand’s total employees in the finance sector in 2004, 38% in services to property and business, and 37% in communications. Auckland accounted for 92% of national growth in the finance sector between 2000 and 2004.

In any case, the control that can be exercised by SIC categories in a large regression model is unlikely to capture the pattern of higher order employment. This occurs within sectors and occupations as well as between them, and Auckland’s concentration of head office, technical, management, and developmental roles will heavily influence this.

The fact that there is some evidence for agglomeration economies in Auckland relative to the rest of New Zealand is hardly surprising. Considerable international evidence points to the tendency towards higher productivity in more urbanised areas. A combination of structural factors, the quality and accumulation of “human capital” as a result of migration, training, employment diversity, and the availability of external economies of scale are all associated with cities’ traditional dominance of developed economies.

The analysis of a purported productivity differential leaves questions unanswered.

- It does not address wage inflation, which in an economy working close to capacity may be pushing Auckland incomes ahead of the national average without productivity benefits. This is particularly so for high order employment, where skills attract a premium. Structural differentials may be compounded by labour market shortages in key sectors.

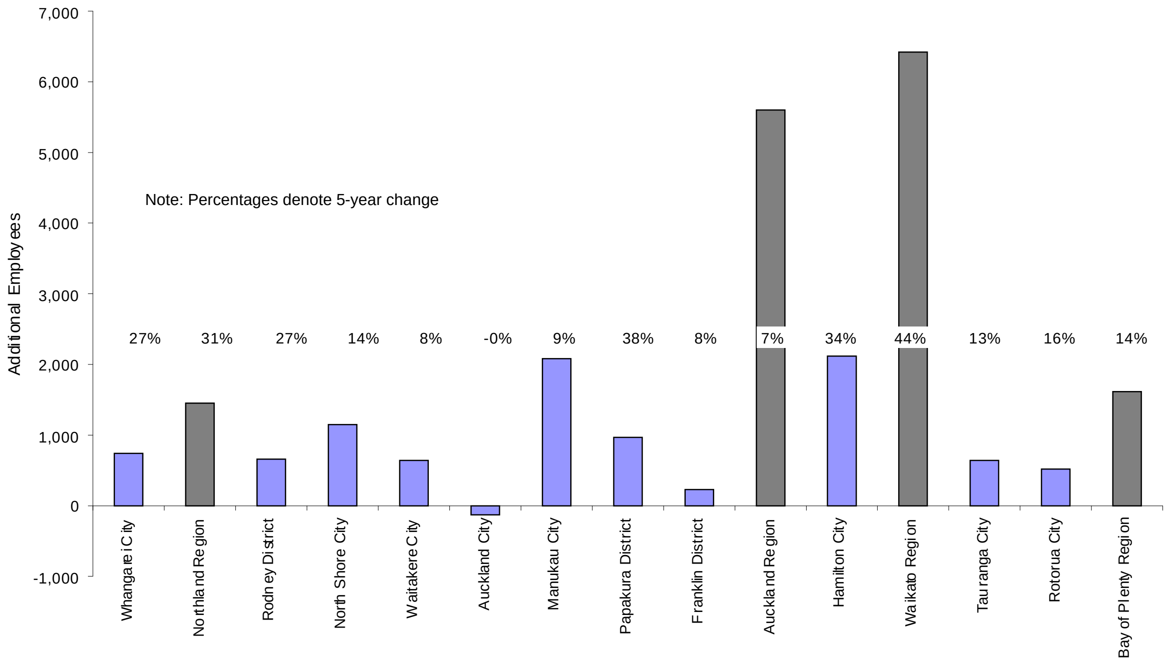
- The potential for flow-through effects on incomes from a skills-based wage push might also explain some of the differences identified in the paper, particularly through the likely relationship with extraordinary house price growth in Auckland.

  Value added is a more useful indicator of productivity performance, within which the share attracted to labour is a secondary (although significant) issue.

- The paper does not consider the diseconomies that may also be associated with large urban centres. These are reflected in high housing and living costs, which, compound wage inflation. They are reflected in the high cost of doing business, including often-cited congestion and infrastructure failings. These force sectors with less capacity to bid for expensive premises or labour, or sustain high congestion and service charges, to relocate to less costly localities, possibly moving operations, especially low wage components, offshore. This may be done through outsourcing formerly internal processes as much as through relocation.

The relative reduction in Auckland's share of New Zealand manufacturing (Figure 1) suggests that this process is underway. The impact is likely to be greatest on lower value added activity. This reduces opportunities for less skilled labour, although it does lead to a "statistical" or structural increase in productivity by leading to a relative reduction in the share of lower wage activities in the Region.

Figure 1: Decentralisation of Manufacturing, Northern North Island, 2000-2004



Source: Business Demographics, Statistics New Zealand

In any case, the Lewis and Stillman paper does not deal with the crux of the current economic development model, which focuses on competition and international trade. The productivity question needs to be pitched at Auckland's position vis-à-vis international centres of production. In large measure, gains in productivity should reflect increasing specialisation and engagement on the global stage, rather than tracking at or ahead of rates of income growth in other parts of New Zealand.

While the evidence is still slim, the expectation is that Auckland can become increasingly specialised (See Box, Figure 2) and increasingly engaged at a global level as a result.

A Note on Specialisation:

Figure 2 (below) is indicative only, as it operates at a broad level of sector aggregation and is based simply on employee numbers.

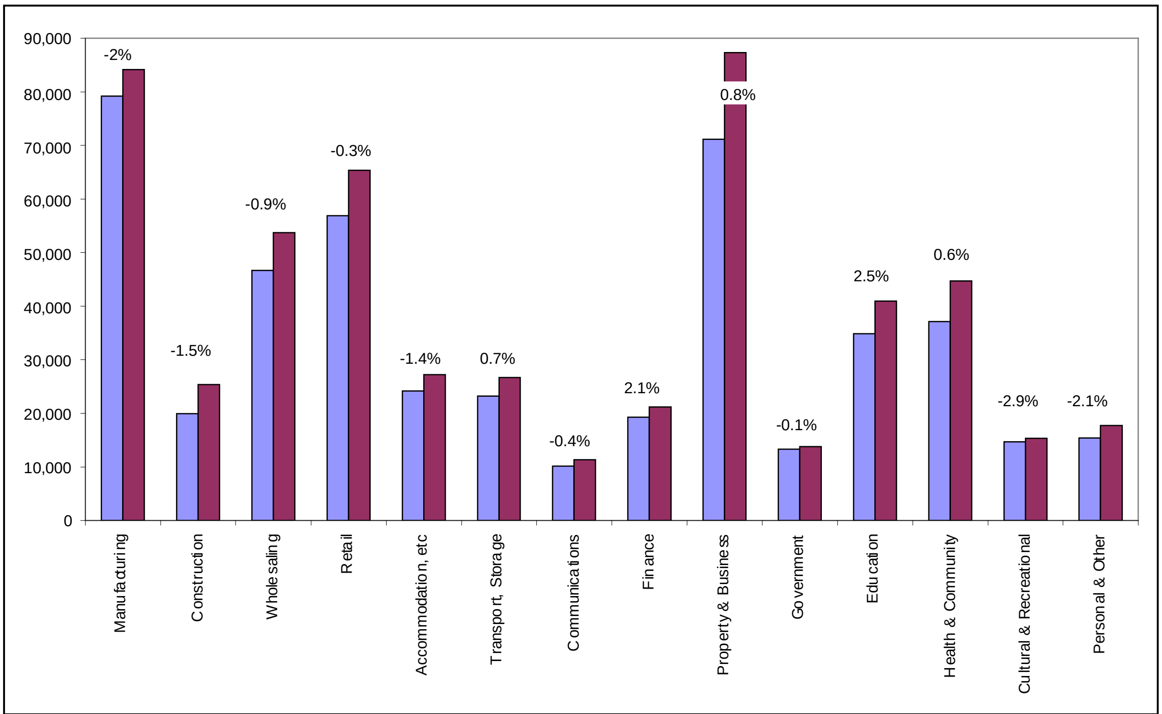
All sectors grew between 2000 and 2004. Property and business services, followed by retail trade were the strongest performers. However, most Auckland sectors lost share to other parts of New Zealand. The percentage figures denote the shift in the national share of employment for each sector. For example, manufacturing shifted from 31.2% of New Zealand's employment to 29.2% over the four years. On the other hand, property and business services increased share from 37.5% to 38.3%.

Education services climbed from 23.5% to 25.9% share and health and community services from, 21.9% to 22.4% of the national total.

There was a slight shift away from production and from services to final demand (accommodation, retailing, cultural, recreation and personal services) to more specialist business services and perhaps higher order education and health services.

The time horizon is limited, the data approximate, and the sectors too aggregated, but the possibility of a significant shift in the structure of Auckland's economy needs to be taken into account before prescribing future employment requirements on the basis of past – or even current – demand.

Figure 2: Trends towards Specialisation, 2000-2004



2.2.4 Labour: an Alternative View

A number of questions emerge from our understanding of the role of labour and how intervention might enhance it:

- What to train people for?
- How relevant is retirement at age 60 or 65?
- What are the qualitative differences of an ageing workforce? At what point do health and other interests diminish the "worth" of one labour unit compared with another?
- How do we encourage people to participate in a global labour market, directly or indirectly?
- What does the increasing mobility of the most skilled, specialised, and in-demand occupations mean for Auckland, as our best and brightest move up through the global labour markets (which tend to operate through large cities)?
- How to mobilise people currently excluded into the labour market in anything other than a transient and marginal manner?

Mobility may be the key to the future of the labour force. This includes movement between forms of employment – public and private, wage and salary, self-employment and waged-employment, part-time and full-time work – and between organisations, occupations and localities.

The expectations and likely experience of young, educated workforce entrants today are different from those of their predecessors. An earlier generation of employees (and employers) faced linear career progression, with progress determined by capability, training, and length of service. In the future, training and capability may simply be the necessary preconditions to the lateral movements through which people advance their positions. Occupational trajectories will not be as predictable or comfortable, nor bound by sector affiliation, but, as a result of increasing international engagement, they may be more productive and rewarding.

There will continue to be a limit to the numbers of people who can participate in a global economy, though, and the challenge of engaging all members of the community in formal employment remains. This may focus on basic skills development for those groups for which the existing education system falls short.

Lifting the capacity for the Region's skilled and educated to participate in a global economy may not by itself enhance the prospects for large numbers of people stuck with low order, low-paid, repetitive work or even no work at all, nor any prospects. The aim of increasing flexibility and mobility may need to be driven through all levels of educational attainment and workforce skills, to lift productivity at all levels of employment. The policy focus might be on increasing the mobility of the disadvantaged, exposing otherwise marginalised groups to alternative roles, models, places, cultures and possibilities.

2.3 Trade Focus

Exporting as a driver of growth has two theoretical foundations, income generation and specialisation. These are explored below.

2.3.1 Exporting to Generate Income

A given region (or business, or nation) can expand beyond the constraints of local demand by tapping into markets available elsewhere. Income growth is assured for a region that has more exporting than importing industries. Economic development in this zero-sum game is about increasing export sales at the cost of producers elsewhere.

This model often lies behind the explanation of regional economic differences. However, sustained international growth and the capacity of individual economies to expand beyond apparent resource constraints means that this neo-Malthusian view of trade and development today carries diminishing weight.

It still underlies our competitive model of trade, though. Through this, different places rather than different organisations are seen to be in competition. Place-based promotion reflects this concept, as do export incentives, together with the view that reducing local input costs (especially, for example, labour, land and utilities), will almost alone deliver the competitive edge needed to increase exports and reduce imports. This is still a capacity view of productivity.

2.3.2 Exporting and Specialisation

The second theoretical foundation for trade is the classical principle of specialisation. In an open economy, trade will enable a location to shift capital, labour and other resources to those sectors in which it has a competitive advantage, and to exit those in which it does not. The net result is an increase in productivity across trading partners and localities in a win-win game.

In this model, exposure to international markets drives innovation as firms seek to increase productivity and sustain their comparative advantage by reducing production costs and by product enhancement and refinement. In this way, comparative advantage may be extended and reinforced.

Arguments about the importance of specialisation and innovation underlie the drive for deregulating world markets. They also build on the expectation that success in competitive markets will support local growth. However, the increasing complexity of international investment, changing rules of ownership and governance, and business alliances are changing the way firms participate in the international arena, from a purely competitive stance to a mix of competition and cooperation.

This also has implications for how places participate in a global world.

2.3.3 Broadening the Basis for International Engagement

An alternative way of looking at international trade is to consider participation in international value chains. This focuses on value realised rather than simply goods or services produced or traded. Participation in value chains may be through supplying goods (resources, components, equipment), services (design, training, administration, information, communications, finance, governance, etc), or capital (by way of equity, debt or other financial instruments). Value may be extracted from design or distribution, as much as from production. This point of entry into thinking is a capability view of productivity.

This view does not diminish the importance of earning overseas income to sustain local consumption. However, it recognises the wider range of channels through which that income may be earned.

Implications:

- Understanding value chains is essential to understand performance and prospects in a globalising economy;
- Recognising the dynamics and challenges of participating in different value chains and at different steps within them is crucial to understanding a place's economic potential;
- There is need to focus on the related 'assets' that underpin participation in international value chains.

2.4 Sector-Based Analysis

2.4.1 The Current Analysis

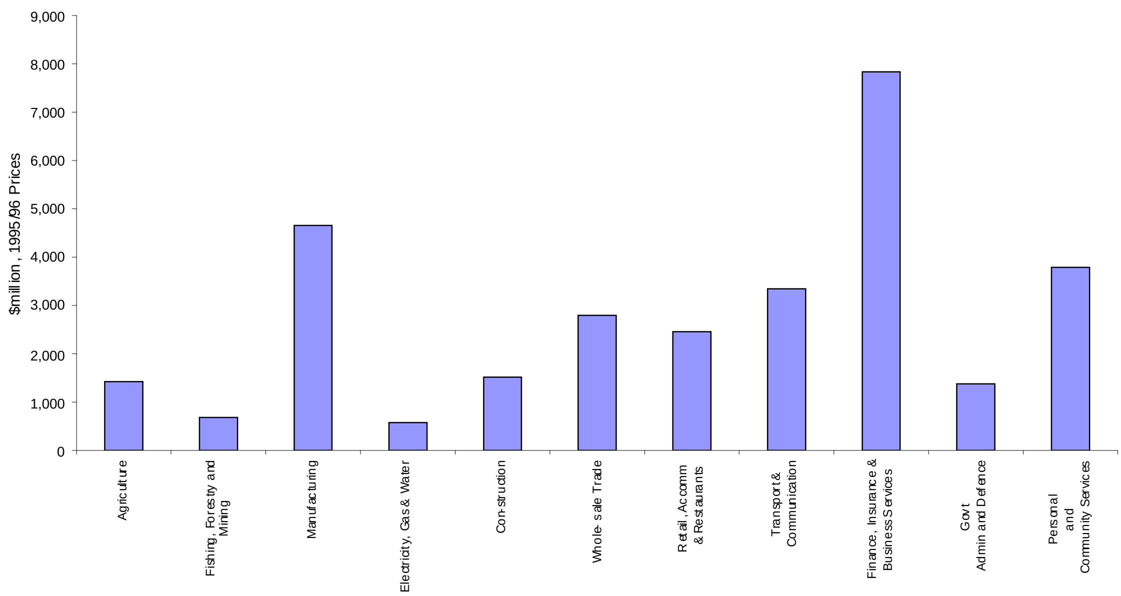
For national accounting purposes, output data is gathered and analysed according to broad sector categories – primary industries, manufacturing industries, and service industries. These are further subdivided according to international Standard Industrial Classification definitions.

Sector-based categories are in large part historical. The distribution of output across them is uneven (Figure 3), the attributes of activities within any one category may be widely divergent, and the divisions bear little relationship to trade flows, the organisation of public and private investment, or the structure and divisions of the value chain. They no longer bear a close relationship to vocational paths, training needs or professional associations, as production, distribution and consumption are organised through organisations and associations that stretch across boundaries.

Despite diminishing relevance, sector-based classification still underlies much regional analysis, if only because of information gathering conventions. Data assigned to SIC categories may be useful in a historical sense, though, for tracing the shift over time from primary through secondary production based-economies through to service-based economies.

Much of the refinement of the SIC has been pitched at manufacturing, and much regional and sector analysis focuses on manufacturing. This reflects the distinction between “basic” and “non-basic” sectors, those that tend to earn income for a region (meeting external demand) and those that tend to recycle it (Section 2.3.1, above). When some 70% of the economy lies in service activities, however, and that share is increasing, as in Auckland, there is a rationale for focusing productivity improvement on services as much as production and, more generally, on the chains of activity that *combine services and production*, often in new ways.

Figure 3: Distribution of National Output by SIC September 2005



2.4.2 Capturing the Dynamics of Expanding Industries

Businesses cross over sectors. While fortunes may be influenced by whether or not a core activity is located in an expanding sector, the grounds for development are unlikely to rest just on the production or service delivered. An organisation will also reflect the resources, technology and relationships (suppliers, markets, advisors, agencies, etc) assembled to justify its existence, and the capacity to manage these to meet changing circumstances.

For example, a firm may be known for biotechnology, its survival and growth owing as much to agriculture, the education and research sectors, and financial services, as to manufacturing a particular product. It may grow as an offshoot of a business in a totally different sector to take advantage of opportunities derived from the character of the market, a particular technology, or supply gap.

We might organise information on dimensions similar to but different from and potentially more relevant than traditional sectors, for example:

- Environment
- Music
- Community
- Culture
- Creativity
- Governance
- Communications
- Information
- Automobility
- Urban development
- Visitor
- Leisure
- Finance
- Infrastructure
- Construction
- Health
- Personal Care
- Marine
- Sport
- Biosecurity
- Security, etc

Some of these categories are defined by output, others by a distinctive profile of consumption, and yet others by particular sets of skill or technologies. They are by no means definitive, but intended to reflect how resources are organised in today's urban economy. Each grouping has a definite shape. Each reflects particular expectations and relations among particular groups of people and organisations. At the same time, they carry with them different connotations of growth and decline.

Boundaries between sectors are fuzzy and permeable. Organisations and people can belong to more than one category, and move among them over time. Their relevance is likely to vary over time and between places.

While the Standard Industrial Classification remains useful for benchmarking purposes, the tendency to frame analysis and policy prescription in terms of traditional sectors constrains thinking, actions and outcomes.

Searching out and understanding what drives new groupings of resources, skills and technologies may be a more constructive way of thinking about strategic opportunities for Auckland. Understanding how businesses evolve, both in terms of ongoing incremental gains driven by continuous improvement and through occasional quantum shifts driven by innovation also calls for a greater emphasis on organisations than on sectors.

This view of productivity is best advanced when the contributions that might come from different ways of understanding existing activities are integrated into the contributions that derive from thinking of the way productivity efforts are: (1) affected by the positioning of Auckland's activities and actors in the networks of global value chains and (2) impacted by the ways in which the organisation of local activities might constrain the positioning of activities and actors.

This shift can give a new frame of reference for dealing with small firms as a category of organisation and output that crosses sectors (within which they tend to be treated as dependent on larger organisations, or as secondary to firms dominating output). It may lead to a greater emphasis on firm culture and capacity and rather less on geographic clusters, although the two may overlap.

Implications:

- Production and services might best be conceptualised and analysed with reference to value chains, which may have limited connection to individual places;
- Sectors and industries have strong ties to value chains;
- Defining business in terms of contemporary, international value chains may require a new formulation of economic aggregates;
- Re-classification of activities in this way may release fresh understandings and new growth potential locally;
- Industry cultures are likely to differ among these new categories;
- The small and medium size firm may through its culture and responsiveness hold a key to productivity growth across sectors and clusters.

2.5 The Nature of the Region

2.5.1 Defining a Boundary

The nature of cities and their regions is not straightforward. The challenge with a significant urbanised area is to set meaningful boundaries, given that edges are inevitably imprecise and dynamic. Clearly, a tightly drawn boundary will see more cross-border transactions than a loosely drawn one.

One convention is to define city-regions in terms of labour catchments. However, high speed, long-distance and even overnight commuting mean that this is arbitrary. The alignment of labour market boundaries with a collection of more or less autonomous firms is no longer appropriate, either, as increasingly diverse ways of organising production and services across boundaries, diffusion of ownership, and mobility of capital reduce the internal coherence of any business agglomeration.

In broadly functional terms, regional boundaries today may be more widely drawn than in the past. They may reflect, for example, port and airport catchments, linkages with business and financial services, and a growing cross-boundary flow of goods and people.

Recent settlement patterns reinforce the sense of "multi-city regions". For example, the accelerating population growth of hinterland or second order cities (as taking place around Auckland), the revival of small towns based on lifestyles, lifestyle industries, and consumption, the uptake of rural spaces by "urban" households, and decentralising employment suggest that large city urbanisation is pushing outwards. This is achieved by an extension and intensification of hinterland, by incorporating places within the hinterland, by strengthening connections with hinterland cities, and not just by continuous edge expansion ("urban sprawl").

Under these circumstances, existing administrative boundaries may define economic entities poorly. This is especially the case when boundaries were set on the basis of physical criteria (catchments), political expediency, and compromise (as in Auckland), and more especially when they reflect a set of economic and political circumstances that have since changed.

2.5.2 Images of the Region

Despite blurring boundaries, the push for local identity and international recognition may lead to the identification of far more limited areas with a region or city. Sydney for example, is recognised globally through reference to the iconic Opera House and Harbour Bridge, London to Westminster, and New York to the Statue of Liberty.

Auckland may be promoted as the CBD and harbour side, supplemented by images of non-built spaces, such as the Waitakere Ranges and Rangitoto Island. It may appropriate distant spaces to reinforce its international face as an outdoor, lifestyle city, trading on scenes of the Coromandel Peninsula, Rotorua or the Bay of Islands. Or, it may focus on nodes such as Mangere International Airport or the Port of Auckland to highlight modernity, trade and internationalism.

The spaces that define Auckland can be manipulated in other ways. Telescoped images of queues of cars and pylons, or of motorway flyovers may promote particular (political) agendas internally, or promote lifestyles elsewhere in New Zealand.

Focusing on the CBD within the city-region is not privileging Auckland City or its downtown over other territorialities. Rather, it is a device to secure recognition, conveying key values associated with living and working in Auckland.

Nevertheless, it is important to recognise different spatial associations with the term "Auckland" and even "Auckland region", and to qualify analyses and policies accordingly. In doing this, we need to address which "Auckland" policies might impact on, and which "Auckland" will reap their benefits.

2.5.3 The seamless region

In an international context, the most appropriate view may be one of an economic region of places connected through collective relationships with local and especially global value chains. These will include the education, advisory and scientific services they might offer, development and production services, logistics, transport and distribution, financial and business support services.

From this perspective, Auckland is the core of an urbanised region that encompasses Tauranga, Hamilton and Whangarei, and various localities in between. This wider region has well-developed internal transport links, strong and complementary port and airport services, and brings together the components of (for example):

- A world class food producing complex centred on but not limited to the Waikato;
- Centres of creativity and culture in Auckland and Rotorua;
- Centres of lifestyle living in the Bay of Plenty, and, the Bay of Islands and Taupo,
- Multiple nodes of production and distribution;
- An international business centre;
- A network of professional and amateur sports codes, organisations, competitors, venues and facilities;
- A network of complementary tertiary education facilities (Auckland City, North Shore City, Hamilton);
- Rich routes of visitor activity and consumption, focused on tourist nodes like Rotorua, the Bay of Islands, maritime Auckland, Waitomo and Taupo.

This is a region across which flows of investment and people, goods and services are facilitated by strong transport links. Throughout the wider urbanised region and its rural interstices, people share levels of service and patterns of consumption that in the past might only have been associated with large cities. Indeed, the northern North Island is widely urbanised in the sense of the common interests of its businesses and its residents. Propinquity and sharing the built environment are only part of this broader view of an urbanised and economically coherent Northern North Island Region.

Implications

- Spatial alignment of investment across value chains is obscured by restrictive definitions of economic regions,
- Constraints are imposed on conceptualisation of issues and opportunities by particular geographic metaphors,
- A preoccupation with contiguity overlooks the functional interdependence of non-contiguous places within a wider region and other 'distant" places;
- Quality of life and growth issues are entangled in the conceptualisation of regions for promotion and planning purposes;
- The urbanised region may be a much more powerful organising framework for planning and development in a globalising economy than the city region.

2.6 Demand and supply

A combination of the output focus associated with SIC sectors, a commodity focus associated with trade flows, and long-standing emphasis on producing goods as a driver of regional and national wealth are associated with assumptions about demand. These assumptions also need revisiting. For example, trade has progressively moved up the value chain. While materials and commodities still dominate physical flows, trade in higher value added goods is exploding – with such items moving swiftly via a range of intermediary and delivery options along dense and complex routes – all through diverse organisations.

Complexity and flexibility are managed by logistics arrangements that today span consolidation, assembly and packaging, storage and handling. They draw on sophisticated information technology and communications infrastructure, as well as on advanced electronic, mechanical and transport technologies. Integrated organisations provide one-stop global coverage across complex networks.

The distinction between production and distribution is diminishing. Inventories may sit almost anywhere in the world. Single and customised item despatch can be undertaken with mass handling efficiency.

Final demand is increasingly important in trade flows, so that shippers can embody more value added in their sales. Production is becoming concentrated globally, with China and India complementing and overtaking Japan and Korea as Asian and, increasingly, global manufacturing hearths. At the same time, burgeoning travel and visitor sectors mean that "foreign" consumption may take place on home soil.

In any case, consumption has gone beyond goods to services of all sorts. Of particular interest in Auckland, is the sale of training and education through a variety of channels – seminars and conferences; specialist advisory services; formal educational institutions; and virtual delivery.

2.6.1 Economies with Less manufacturing

The implication of the global shifts taking place in the “chained” nature of production and distribution raises a question over whether manufacturing can continue to form the long-term core of investment and employment in regions like Auckland.

Manufacturing has lost much of its dominant role. Business services have become the leading sector and, alongside a range of social and personal services, comprise the numerical core of the regional economy as currently defined.

Even within traditional manufacturing organisations, production conditions have shifted substantially, through a combination of outsourcing some processes and components, especially to low cost centres of production, greater integration of functions through the shift to electronic controls, and process improvements which transform the “factory floor”.

Consequently, successful manufacturers in a global market need to look beyond traditional production models, towards horizontally integrated operations quite often over linked over long distances, and away from vertically integrated models. Where vertical integration exists, it may be through clusters of connected organisations in different locations rather than happening “under one roof”. Hence, creative and higher order service sectors, encompassing various design skills and technologies, financial and business analysis, marketing and distribution, are as much a part of the manufacturing landscape today as fabrication, engineering and assembly.

Part of the development challenge will be to harness the resources and energy in these new or expanding sectors to emerging international demands outside or involving manufacturing, to diverse tradeable services in creative, engineering, administrative and educational roles. A number of channels provide the opportunity – broadband, enhanced air networks, and an infrastructure of educational and instructional organisations. They may be delivered from the point of origin or at the point of consumption. They may require the relocation of individuals or entire organisations.

At the same time, the growth of local demand will continue to support the growth of services to local households and organisations. Again, many of these services are likely to be novel and innovative, responding in part to a growing emphasis on lifestyle as the basis for consumption, and the variety and creativity it encourages.

Implications

- Traditional categories of demand and supply tend to hide the knowledge content of goods and services, especially the growing importance of global systems and processes in the organisation of economic activity.
- The skills required for a changing profile of knowledge-centred activities are underestimated, both in terms of learning skills and putting skills to work.

2.7 Organisation Focus

2.7.1 Beyond the theory of the firm

The traditional economic model treats the firm as a largely undifferentiated, profit maximising entity, usually associated with a small set of production sites. It functions to combine capital and labour efficiently in a rational and predictable response to market signals and competitive pressure.

Economic development models and policies still operate largely within this paradigm (although this may not be acknowledged). The assumption that organisations respond rationally to business opportunities and on the basis of a good knowledge of relevant conditions underpins expectations for responses to policy measures. The reality is likely to be different on two grounds.

First is the well-rehearsed critique of the theory of the firm, which acknowledges the reality of suboptimal decision-making by resource and information-strapped entrepreneurs and managers, operating with mixed motives, under short-term pressure and through a variety of shifting allegiances.

Second, is the fact that organisational arrangements and structures vary, power relations among organisations are uneven, and governance arrangements are diverse. These factors limit managers' capacity to act freely.

Of current significance, is the mixing up of public and private sector organisations across value chains, often with different charters and mandates, capacity and capability, and motives. The challenge for owners and managers, and those who would seek to modify their behaviour, is to achieve consistency of decisions and predictability of outcomes in a diverse and dynamic institutional environment.

2.7.2 Dealing with coalitions of interests

The reality is that through business relationships and mutual interests at different points of the value chain, a range of different organisations may have both common and divergent interests locally and over regional, national and international borders.

Achieving a reorientation from domestic to international markets is not straightforward. It requires a reconfiguration of operations to lift productivity, a change in capital investment policy, or a commitment to greater creativity through investing in the appropriate skills and resources, and impinges on a range of critical, pre-existing relationships. For many organisations, this may require local managers to negotiate a shift with principals and partners operating elsewhere or subject to different governance conditions.

The implication is that policy initiatives require an understanding and appreciation of both the position occupied by target organisations within a particular value chain, and the conditions other than local resources that might shape their response.

Implications

- Abandoning the assumed independence of the firm and firm level decision-making allows consideration of the many hybrid-type arrangements that characterise the contemporary economy – franchises, joint ventures, public-private partnerships, community partnerships, co-operatives, alliances and so on. The productivity implications of different arrangements are largely unknown.
- Recognising the relationships of firms with other organisations and often complicated internal arrangements enables thinking to be widened to include the interactions that define these relationships and how they impact upon productivity.

2.8 Intervention

2.8.1 Rationale and responses

The classical model supports public intervention in response to market failure. Intervention might be by way of developing infrastructure that would not be supplied by the private sector, to facilitate production and competition. Examples include the traditional provision of transport infrastructure and more recently, information infrastructure. Or, it may be to encourage the supply of quasi-public goods (e.g., education and trade training).

Intervention might also be justified when decisions do not reflect their full costs (e.g., environmental externalities) or benefits (e.g., the social contribution of job creation).

Business is regulated, also, to prevent “anti-competitive” behaviour. Collaboration between two (or more) producers can attract penalties if judged to limit competition within national (or regional) boundaries.

2.8.2 Promoting partnerships

Despite the reforms since 1984 favouring regulation by competitive markets and commercialisation of previously public services, there is today a current of renewed support for government intervention. This is seen in spending on transport infrastructure, the restoration of localised services in the interests of consumers (e.g., banking), the design and support of tertiary education programmes, and the allocation of resources to research and development.

In terms of economic development, the promotion of spatial clusters was one way government agencies sought to influence economic outcomes. During the 1990s this evolved into promoting the importance of R & D and innovation to sustain productivity gains. The proliferation of economic development agencies reflects a new spirit of public and private cooperation in local economic development

The updated economic model outlined in this paper supports further development of the public-private sector relationship to recognise a common interest in a stronger presence in global value chains. There is a question over whether this can be achieved through strategic partnerships or whether it will need to be subordinated to procedures associated with transparency and accountability.

Entrepreneurialism might be encouraged within the public sector. New agencies or spin-off organisations can bring value to chains traditionally the domain of the private sector, perhaps in association with existing businesses. Any move towards strategic partnerships will require further evolution of crown enterprises and their capacity to operate both collaboratively with private sector interests, and competitively in an international setting.

Relationships between public and private interests can also be built in areas traditionally associated with local government, in the quality and character of physical, civic and social infrastructure, for example. Such cooperation might focus on opportunities for driving productivity gains in public services, and lifting efficiencies in the delivery and management of infrastructure.

Under the Local Government Act 2002 councils are concerned with economic, environmental, social and cultural well-beings. A balanced approach, recognising and acting where necessary on trade-offs among these areas, should lead councils to develop and sustain a quality of life in keeping with residents' expectations and of a standard that will retain Auckland's position as a desirable place to live.

It is important that business plays an active role in the planning needed to underpin this, if only to ensure that weight is given to enhanced economic and lifestyle conditions.

Finally, participation within global value chains by Auckland business will require collaboration that at some levels may appear anti-competitive, but at others may be a precondition to a global presence. It may call for some losses of autonomy, or a reduction in local identity and presence. It may also call for support from the public sector in forging trans-national relations with other governments or their agencies.

Implications

- A policy focus on labour productivity is appropriate, at a time when interactions among labour, material and capital productivity may be critical.
- The relative importance of labour may be less about quantitative gains (labour force expansion) and more in qualitative shifts (employment skills).
- Market failure is regarded as an exception; that is markets are seen as pre-existing. But, the real issue has always been the struggle to create markets, not prop them up.
- Infrastructure is privileged as a stimulus to growth. Private investors will not readily invest in infrastructure unless in private-public partnership, and prefer the state to divert taxes into infrastructure.

3 Stretching the Policy Framework

3.1 The Conventional Model and Missed Opportunities

A first step in stretching the regional policy framework to incorporate capability oriented productivity goals is to recognise the restrictions imposed and obstacles raised by conventional thinking, and the potential raised by leaving behind traditional assumptions.

The conventional model for analysing productivity improvement and possibly policy intervention can be summarised as follows:

Investment – assumes firms have capacities to seek, achieve, maintain and extend productivity gains; misses out the complexities of firm-environment relations and the influence of these on productivity performance.

Employment – gives priority to skills for jobs when the key concern is skills for emerging and different situations and skills for ongoing up-skilling – that help build and sustain a better performing economy.

Trade – sees firms as involved in one activity; and misses involvement in multiple value chains or positioning in value chain as a basis for higher productivity.

Sectors – considers sectors differentiated only on the basis of what they produce and not in terms of industry cultures and their effects on productivity, and underplays the growing role of services and the value they create.

The Region – national bounding and black boxing of the firm misses the internal (often international) geography of business, the wider contributions of firms to joint productivity, the dependence of individual organisations on support and stimulus from others, and the role often played by organisation culture in improvement and innovation.

Demand and supply – Demand is driven by the intermediate and final consumption (households and government) sectors, supplemented by exports. These sectors also require the input of services to business and households. As long as seeking out new markets can expand demand, producers can create wealth and distribute it within a region through the employment of labour and the purchase of inputs (materials, components and services).

Wealth created in this manner may be amplified through the domestic demand it sustains. Demand may also be met by imports.

In this model, the capacity to move goods efficiently between demand and supply sectors is one key to productivity. Another is to limit transaction costs in the production and supply chain. This may be achieved through vertical integration of successive operations, or by encouraging co-location of complementary activities.

Organisation – the firm is the basic unit of production and wealth creation. Large firms can exploit scale economies, especially in production, and internalise the integration of successive production processes. These sources of firm growth give rise to productivity gains and are traditionally the basis of competitive restructuring in maturing industries.

The firm, therefore, is the target of intervention, whether through subsidising inputs (including infrastructure) or investment costs, or providing support to market development. Niche development and specialisation may be critical to retaining a position in globalising markets and there are limits to the advantages of scale economies in an increasingly fragmented and dynamic production environment.

Intervention – the assumption that market failure is an exception means little priority is given to how firms (or organisations generally) are integral to making markets on an on-going basis, this opening up fresh opportunities for productivity gains.

3.2 The New Model and New Possibilities

A second step in bringing capability-based productivity into the regional policy framework is to highlight the content of a different framing of economic processes that will encourage innovative questioning about productivity initiatives.

This summary is aimed at bringing together dimensions that are especially germane to the Metropolitan Auckland Project productivity project.

Investment: The focus is on quality of investment and the capacity to create and capture wealth, not on its location. The challenge is to sustain an environment appealing to dynamic capital – one that is stable, attractive, and productive.

Labour: The focus is on capability, flexibility, and mobility (through and across value chains, and spatially). This raises new perspectives for training and skills for individuals, which become part of a seamless learning environment to which a wide range of organisations and experiences contribute. Learning for employment is extended to include skills that increase the potential for occupational and geographic mobility and enable individuals to move across value chains.

A revised approach to participation might recognise, also, the value that a distinctive population mix offers. At one level, this raises the possibility of greater creativity and innovation in the work place. It also offers connections to other parts of the world. Like scale, diversity increases economic as well as social possibilities. New ways may be needed to tap into these.

Trade: The value chain, not a product or technology, is the basis for conceptualising issues around participation in globalising production and consumption. The prospects are for individuals and organisations to participate in multiple value chains. Some will be confined in time and place. Others will be expansive and potentially global in nature. The chains they participate in will extend individual and corporate potentials. The reach of this participation will drive the wealth of the region.

Sectors: Services are as critical to adding value as manufacturing, increasingly more so. Industry sectors cannot be considered as fixed and enduring, but instead are reshaped as tastes, demands and technologies shift, and are ideally associated with distinctive and coherent value chains.

The Region: The production and consumption relations that mark an urbanised area stretch over a much larger region than defined by Auckland's administrative or built up boundaries. "Scaling up" the Region makes sense when the focus on development is participation in the wider Australasian, APEC and global economies. A Northern North Island Region places capacity and infrastructure issues in context, and encompasses significant sectors of specialisation. It creates a scale of resources, skills and infrastructure that substantially increases economic development possibilities.

Demand and Supply:

Demand and supply are closely tied into value chains, the local organisation of economic activities and, increasingly, people's lifestyle choices. Traditional categories and forms are less relevant, and the ways in which production and consumption are organised do not necessarily reflect those categories, regional or national boundaries, or firm structures.

In this sense, productivity gains might be achieved by moving within a value chain, from production to distribution, for example, or from component supply to integrating components and assemblies via a design path. It may become a way to simultaneously make gains with key customers in final demand markets and with intermediate suppliers within or outside the region

New patterns of demand and supply elevate the role of lifestyle as a key to productivity in a globalising world. In this way, combining and recombining resources in a regional environment will enable people and enterprises to extract additional value from global production and consumption.

Organisation: The role of different organisations is prioritised. What actual firms do becomes very important – especially 'lead firms', 'prime movers', 'best practice firms', 'large firms in the region'. The different situations of regional producers (and their environments) call for different models of production organisation, firm organisation, and regional organisation, with different expectations around skills and career paths.

Alliances across organisations and mediation across organisational boundaries (including outsourcing of a range of otherwise internal functions) become as important as internal structures in achieving productivity gains. Ways of harnessing the culture of innovative small and medium firms need to be found without threatening their autonomy.

Intervention: The focus of intervention should be on partnerships, alliances and networks within particular value chains, not on individual firms. Intervention may also have to be recast to reflect current industries. This will influence, among other things, our understanding of structural issues and our assessment of progress (including monitoring).

Following the alternative model developed here, a focus on regional economic development will benefit from a wider conception of region and a capacity to collaborate across the Northern North Island.

Intervention may also legitimately focus on consumption and lifestyle issues in promoting this wider region within the global economy, particularly in the pursuit of productivity through the development of high value added business.

Under these circumstances, intervention is to do with:

- Promoting the attraction of a place to mobile capital and labour. This means a strong focus on the quality of the environment and the quality of local governance;
- Facilitating and expanding local participation in international and global value chains;
- Supporting initiatives that enhance lifestyle as well as production throughout the wider region;
- Supporting policies that mobilise minorities and marginalised groups, and promote social inclusion;
- Encourage the range of organisations involved in different value chains (or the "new industries") to build their capacities and networks within the wider region as a platform for participation in global value chains.

3.3 Moving Beyond the Constraints of the Cluster

A value chain approach to productivity focuses on the international presence, participation and relationships of organisations across a region, rather than on the localised clusters of economic activity as catalysts to growth. A number of mechanisms through which a business complex might evolve to build a region's presence in global value chains are described below.

Increased demand from enhanced regional transactions: This can be achieved by networking, perhaps facilitated by physical clustering. Physical proximity is helpful, but not essential for businesses to interact or build synergies. The expansion to a substantially wider regional frame of reference multiplies the possibilities.

This may require, initially, an institutional framework through which complementary (and competing) interests and capabilities can be drawn on across the wider area.

Capacity to compare performance; Proximity may provide a basis for the comparing performance among cluster members. However, intermediate agencies, secondary sources (including public statistics) and intelligence derived from wider networking can be exploited within a context of cross-agency collaboration and networking to provide deeper insights into industry and competitor performance, and the associated opportunities and threats without the constraints of propinquity.

The public sector may have a key role to play in promoting and supporting unconstrained networking.

Enhanced product differentiation: A close association among complementary players in a value chain should generate awareness and enhanced capacity to refine and develop products, to provide innovative solutions for existing products and services, and to increase market size through observation, information exchange and collaboration.

Collaborating in research into markets, the value chain, products and services is one way the public sector might work with the private sector to promote the knowledge and skills required to support a successful differentiation strategy.

Networking initiatives, alliances, and joint ventures: Building inter-firm knowledge and associations should generate the capacity to do new things, potentially through new organisational arrangements. Collaborative strategies can be developed for entering new markets, with the critical mass of skills, and resources drawn across members of the network, and risk laid off across several collaborators.

In the expanded view of the economic region, the possibilities for these forms of collaboration and growth will be multiplied by over-riding the limits of localised scale and scope.

The policy contribution might be to recognise possibilities for alliances, to help bring them about, and to ensure that a balance is brought to the public interest in promoting domestic competition while collaborating to capture significant wealth from international value chains.

Specialisation and flexibility: The separation of functions otherwise internalised within a single producer may facilitate increased specialisation in materials and components, generating efficiencies, more intensive quality control, enhanced flexibility and the capacity to response rapidly to changes in markets. A collective industry presence creates opportunities for specialised suppliers of components and materials.

Reaping external economies: The development of expertise within both organisations and a cross-region labour pool will generate efficiencies that should compound as the network expands. The collective experience and expertise that accumulates among participants should reduce transaction costs. As the complex deepens and expands, these advantages cumulate, lifting the profile of the widened region and its capacity to attract capital

The direct public role in sustaining external economies of scale may reside simply in protecting the physical, social, and participatory nature of the regional economy.

Learning and knowledge advantages: As the complex develops, so too does the embodied industry knowledge. A deepening of knowledge is a consequence of increasing specialisation and is an intrinsic element in the extension of transactions among members.

Capturing and building on this knowledge, especially in a complex, mobile and growing industry, can be achieved through the growth of local expertise. It can be supplemented and extended, though, by the establishment of repositories of relevant knowledge and environments for experimentation, research and development within science, research, education and training agencies. Forging relationships between universities, training facilities, schools and the industry is a key to long-term growth.

Capturing more value: The development of new suppliers of services and intermediate goods within a region will increase the share of the value chain captured there, especially if it increases sales internationally.

The likelihood in northern North Island, though, is that these will be niche or specialist goods and services, rather than volume components and subassemblies, engines, servo-mechanisms, electronics, and the like, for which Asia will continue as the lowest cost source.

However, streamlining channels for accessing such inputs in response to growth in regional demand will keep costs down. More than that, it will oblige a migration up the value chain, so that final producers focus on (international) distribution and customer service as the basis for maximising value captured.

Product broadening: The complex may become a “learning organisation” in its own right, with internal exchanges drawing in a wide range of “external” (or even global) knowledge from individual participants.

This, in turn, may lead to the identification of new opportunities, either elsewhere in the same value chain, or through “jumping chains”. This is equivalent to realising economies of scope, as existing skills and technologies are turned to complementary business opportunities in parallel chains. Such a prospect cautions against defining clusters too tightly in structural, functional or organisational terms.

Brand development: Participants in an industry complex can benefit from collective branding associated with the wider locality. It is significant that on an international stage this branding tends to be national rather than regional (e.g., Italian leather, Scandinavian furniture, French clothing, Japanese cars).

The strength of this wide geographical association is that the expansion of transactions extends participants’ knowledge and the capabilities at relatively little cost. It creates opportunities for capturing more value from the chain through a rage of processes: technology advancement, outsourcing, collaboration, joint ventures, risk sharing, new product development, and enhanced business and commercial processes.

The possible weakness of *cluster* policy, though, is that it tends to be place-bound, consequently of limited relevance to the global value chains within which the localised transactions are taking place. Over-emphasis on geographic concentration may be worse than that, as it engenders an unnecessarily narrow vision of opportunities. It seems critical, then, that some members of a cluster have strong connections beyond that cluster, ideally through linkages with international markets or value chains.

Another weakness is that local relations are constrained by gate-keeping behaviour among larger players, and patch protection among smaller ones. Indeed, the globally connected members may, by their dominance, limit the potential of other members of the cluster.

The revised economic framework, and acknowledgement of global markets and value chains suggests that the theoretical advantages of clustering are more likely to be realised through an expanded conception of place. There is no technical reason that an industry complex should be tightly constrained by geography.

Communications, quality internal transport links, information and enhanced distribution systems, more reliable manufacturing systems and quality controls facilitate effective production and service relationships over significant distances.

The glue for a regional complex of the sort evoked here lies not so much in contiguity, then, as in shared economic and social interests, a common culture, the capacity for some members to meet relatively easily from time to time, the interest promoted by key development agencies, and a shared interest in capturing increasing value from international value chains.

3.4 Conclusion

We return to our introductory letter. The development challenge for the Metro Project is to determine the ways in which regional policy intervention might influence organisations and individuals so that they have the capability as well as the capacity to exploit the possibilities suggested. The issue is not about identifying what has been successful or not. The point of our discussion is that if we want private and public investments to transform our productivity performance we need to understand how we got to where we are, and how we might reshape our productivity efforts.

This paper has argued for less of the same and more that is different in terms of productivity ideas. To date, Auckland's regional policy processes have not attempted to develop initiatives for productivity. The Metro Project is thus timely and strategic. This *is* a moment when consideration of productivity as an issue is crucial. Productivity is an idea that can do different kinds of work for Auckland. But what work it is allowed to do depends on the content we give to the idea. How we envisage productivity will shape how the public and private sectors respond to the challenges of global engagement.