Competitive Cities and Prosperous Economies: The Role of Urban Design

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SGS Economics & Planning

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1 Overview

Living standards in NZ will continue to depend on export competitiveness. One focus for improving competitiveness is to push down input and transaction costs per unit of production. This has been a key focus of economic policy in the country since the days of 'Rogernomics'. Considerable effort has gone into opening up NZ's markets to international competition and investment, liberalising the labour market and making the providers of basic infrastructure more efficient and responsive to customer demands. These efforts have been reasonably successful. However, they have been conceptualised and implemented in a macro-economic, or 'aspatial', environment. The next wave of reform in terms of cost competitiveness is to reshape and refine the production machinery that is the metropolis. Recent evidence from Australia shows that better structured cities can deliver productivity dividends of the same order as national competition policy.

As well as by addressing basic input costs, productivity and living standards can be boosted through innovation; that is, enhancing the value (price) of NZ's exports through better design and service packaging, and better ways of combining inputs to further reduce production costs.

Innovation can take a variety of forms including the much feted 'strategic leap', where a brand new product or service is born out of laboratory research, and less dramatic but equally effective 'organic improvements' in product design, production technology and corporate management. Regardless of the type of innovation under discussion, research shows that Advanced Business Services have a key part to play in bridging from new ideas to better jobs and incomes.

Recent research also shows that Advanced Business Services are essentially 'social' in character and are subject to place and culturally specific modes of commerce. While Advanced Business Services can, and indeed must, service spatially remote clients, they do their best work in terms of technology diffusion *locally*. A strong local base of Advanced Business Services is therefore essential if a city or region is to enjoy sustained prosperity and high living standards.

Advanced Business Services cover much the same groups in the labour market as 'Symbolic Analysts' and the 'Creative Class' to use the terms coined by Robert Reich and Richard Florida, and otherwise known as 'knowledge workers'. Some commentators, led by Florida, argue that livability and urban quality are key determinants of whether a city or region may attract and retain knowledge workers (read Advanced Business Services). These theories hold best in the US for reasons of market size and the high domestic mobility of labour and capital. In Australasia, liveability is not enough. Macro policies must also be applied to ensure that the nation as a whole can maintain a critical mass of Advanced Services. These policies relate to education, public investment in R&D and skilled migrant attraction. It also requires the deliberate fostering - by governments - of particular service industries as occurred in the case of IT in Ireland, but a practice which has been eschewed in Australia and New Zealand for much of the past two decades.

Given successful macro policies of this nature, urban quality can be expected to play a vital role in the spatial distribution of Advanced Business Services within the country, and the potential for these Services to build on themselves in a kind of 'thinking industry multiplier'. 'Urban quality', in this context, needs to respond to the social nature of these industries. Emphasis on the public

domain, gathering spaces, identity and culture, mixed use, walkability and public transport would seem to be keynotes for the competitive city of the 21st Century. Indeed the competitive city of today has more in common with the 'city states' of pre-industrialisation than the cities of separation and sterility generated by the industrial revolution and the car.

2 New Zealand's Economic Challenge

NZ's small domestic market compels it to look to export driven prosperity. The nation's exports profile is changing, with elaborately transformed manufactures making a significant and growing contribution to merchandise sales (Table 1). Nevertheless, this profile remains strongly biased towards lower value added commodities. There is relatively little scope to lift value added margins through product differentiation in these markets, so competitiveness is dependent on keeping volumes high and production costs down.

Indeed, cutting the cost of doing business in NZ and removing any drags on the smooth flow of capital and labour resources to competitive sectors has been an abiding theme in national economic policy since the days of 'Rogernomics'. From 1984 through to the end of that decade, Treasurer Roger Douglas pursued an aggressive program of economic reform under the auspices of the Lange Labour Government, a project carried further by the National Government in the early 1990's. Douglas and his policy heirs attacked agricultural subsidies and privatised a range of infrastructure providers in the interests of efficiency. The Government retreated from active planning of the economy (rather disrespectfully referred to as 'picking winners') in favour of a facilitation role.

Faced with similar challenges in terms of declining growth in living standards, Australia embarked on a similar process of radical economic re-engineering, albeit tempered by the politics of a federated and bi-cameral system of government. The first wave of reform was the internationalisation of the Australian economy under the stewardship of the Hawke – Keating Government. This was the flurry of activity around floating of the dollar, bank deregulation and rolling back of tariffs in the auto, TCF and other sectors. The second wave was National Competition Policy (NCP), prosecuted with equal vigour by Keating and the current Howard Government.

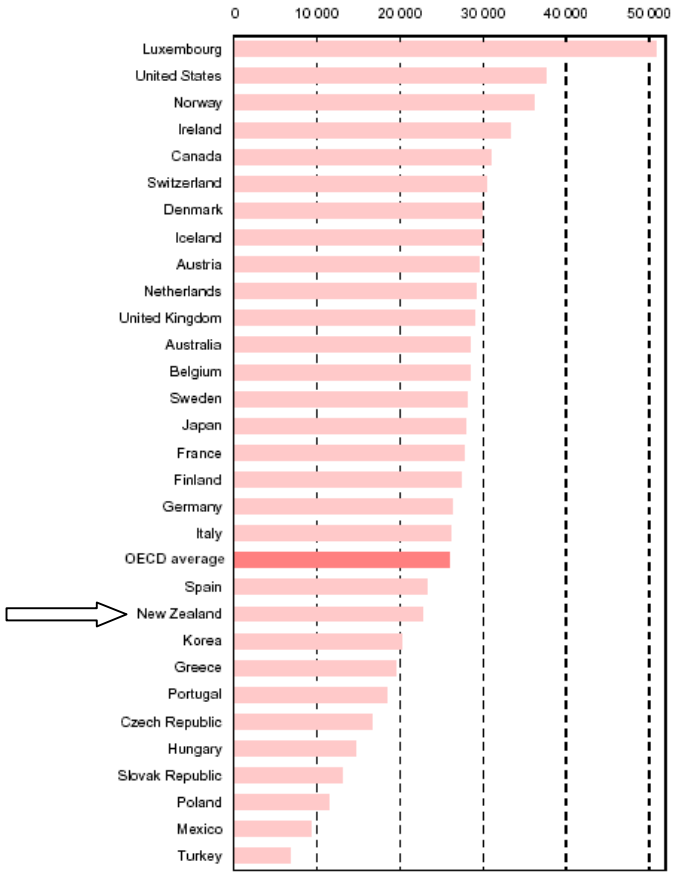
Table 1. NZ's Top Ten Merchandise Exports – Year Ended April 2005

Milk powder, butter and cheese	26.0%
Meat / meat products	24.3%
Logs, wood and wood articles	10.5%
Mechanical machinery and equipment	8.4%
Fruit	6.7%
Fish, crustaceans and molluscs	5.9%
Aluminium and aluminium articles	5.6%
Electrical machinery and equipment	5.3%
Iron and steel	3.7%

Casein and caseinates	3.6%

Economic reform appears to have served NZ well. Today, the country has a reputation for dynamism and entrepreneurship, combined with highly refined governance, judicial, financial and prudential institutions, which are keys to international investment attraction. NZ retains a standard of living close to the OECD average; a major achievement given the limited palette of exports, the small domestic economy and the geographic isolation of the country (Figure 1).

Figure 1. GDP Per Capita, 2003



Source http://www.oecd.org/dataoecd/55/60/33747039.pdf

Whilst NZ may have held its own in the OECD 'league ladder' over the past half decade or so[1], there is no room for complacency in making the most efficient use of the nation's limited resources. In this respect, NZ, like Australia, needs to break free from a 'spatially blind'[2] approach to economic policy making.

[1] NZ ranked 27th in 1999 compared to 21st in 2003

[2] To borrow a phrase from Prof Brendan Gleeson (Griffith University, Queensland)

3 Productivity Gains through Urban Restructuring

Cities are where the bulk of value adding activity and labour market transactions take place. If NZ needs to optimise factor productivity, it is surprising that the cities as 'production machines' are not given more attention in national economic policy.

SGS recently undertook some econometric modelling of the impacts of Melbourne 2030, the Victorian Government's plan for reshaping metropolitan growth in that State. This strategy calls for the creation of a 'city of cities', with significantly reduced outward urban growth in favour of 'densification' around major activity centres. Social, environmental and cultural factors have been the primary inspiration behind the plan. But its potential contribution to economic competitiveness is also important.

Figures 2 and 3 indicate how Melbourne 2030 would shift the spatial distribution of jobs and housing in the metropolis over time, compared to a 'Base Case' which would see a 'business as usual' or trend based growth pattern in the city. The increased 'nodality' of urban development and reduced sprawl on the urban fringe is clearly evident. SGS's analysis also included an Accelerated Outward Expansion (AOE) scenario which would see a larger proportion of Melbourne's future housing needs met in new low density suburbs located up to 70 klm from the city centre.

Figure 2. Melbourne 2030 vs. Base Case: % Change in New Dwelling Distribution by Travel Zone (2031)

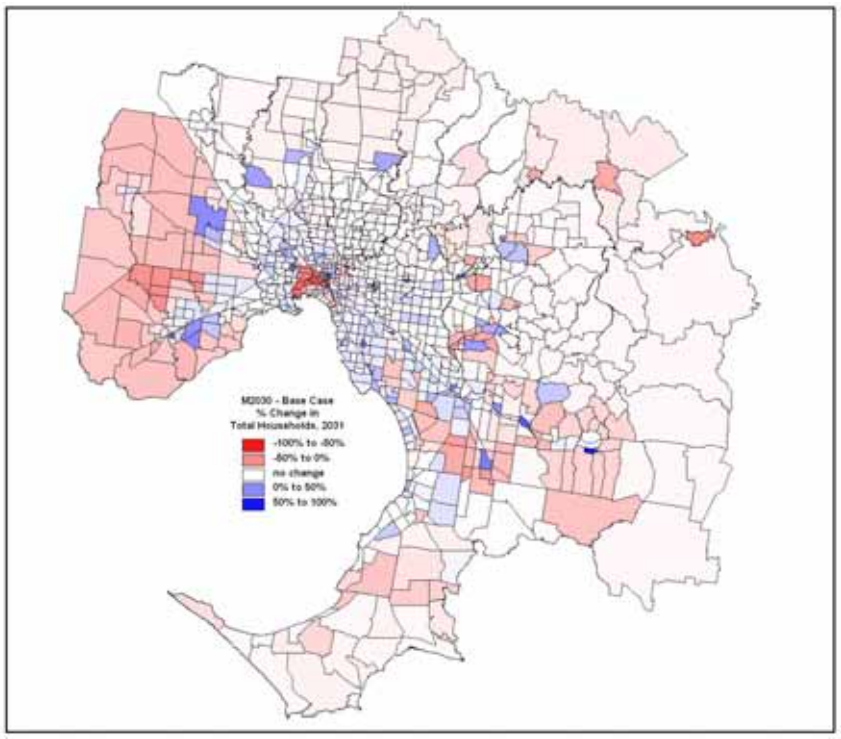
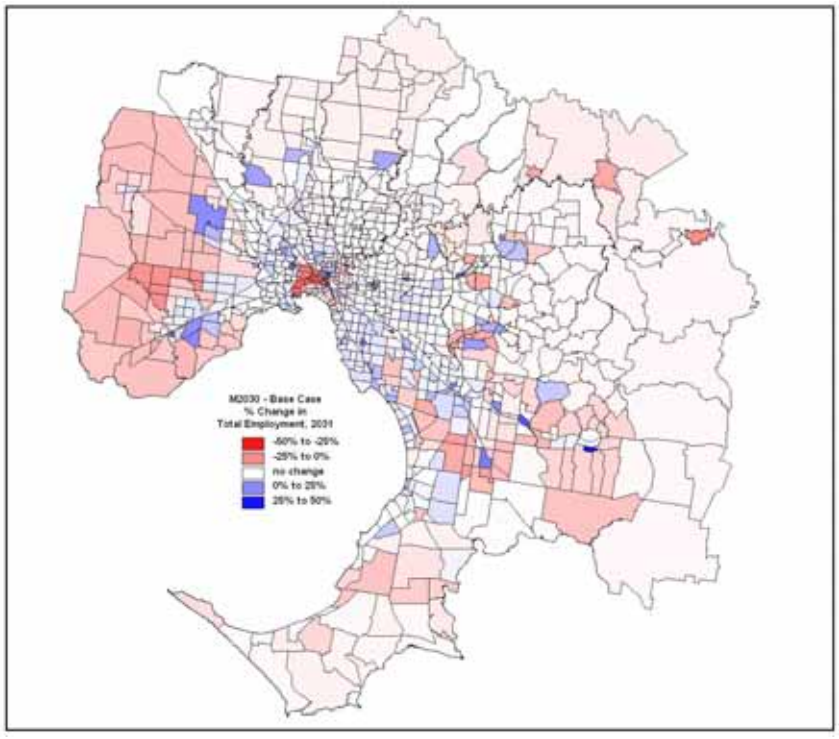


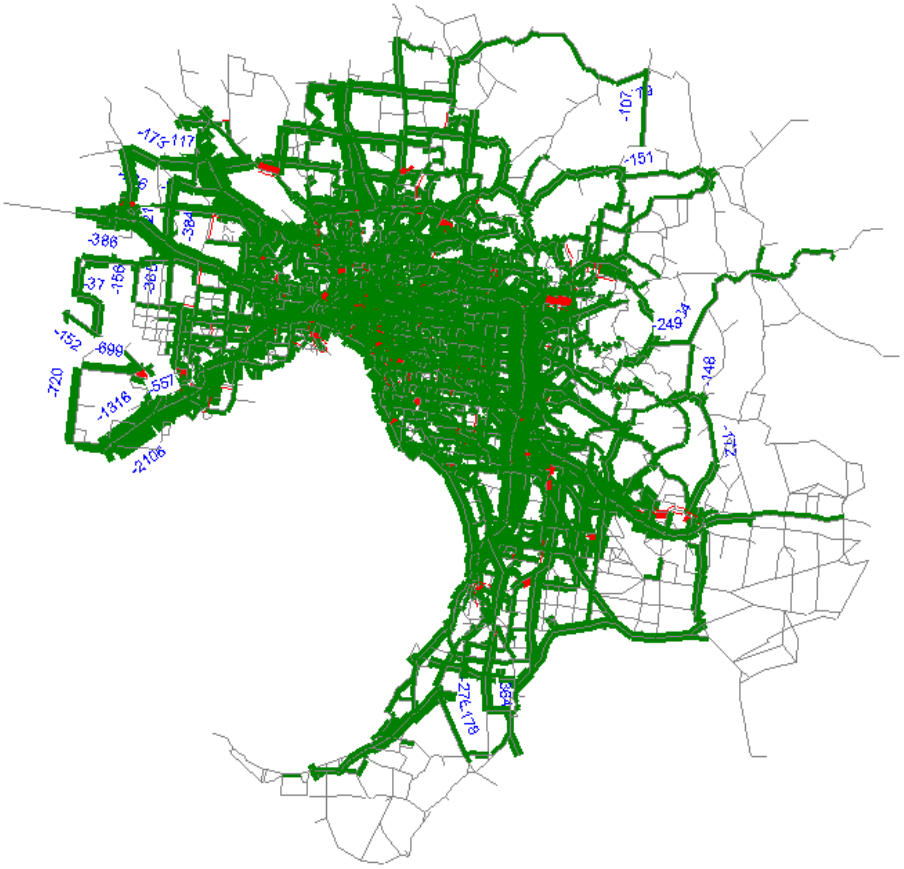
Figure 3. Melbourne 2030 vs. Base Case: % Change in New Employment Distribution by Travel Zone (2031)



Redirecting Melbourne's growth along the lines of Melbourne 2030 would affect a range of key economic inputs, not the least of which would be the journey to work. The strategy seeks a better match between jobs and residential development, as well as reduced demand for vehicular travel by encouraging more multi purpose trips and walking trips. These outcomes are reflected in modelled travel patterns for the Base Case and Melbourne 2030 scenarios (Figure 4). Shifting to a policy driven urban structure would, over 25 years, lead to a 12% reduction in vehicle trips (compared to the Base Case), a 14% reduction in vehicle kilometres travelled per year and, most importantly, a 23% reduction in time spent travelling, measured in vehicle hours.

The Melbourne 2030 scenario also delivers significant resource savings in housing construction, infrastructure extension/augmentation costs for new housing development and land for urban expansion. Realising this package of resource savings will require an additional investment from Government compared to the Base Case, particularly in fixed rail public transport. But the benefits far outweigh costs. Over 25 years, the implementation of Melbourne 2030 would deliver a present value (net) benefit of between $25 billion and $43 billion depending on what discount rate is used. The plan would deliver a benefit of around $3.50 for each dollar of extra cost incurred by comparison to the Base Case (Figure 5 and Table 2).

Figure 4. Traffic Modelling -AM Flow Differences: Base Case → M2030



Red Shading – Increase in Flow
Green Shading – Reduction in Flow

Scenario	Vehicle Trips	Vehicle KM Travelled	Vehicle HRS Travelled
Base Case	2,523,192,966	40,531,147,167	1,132,100,557
M2030	2,217,934,260	34,967,908,008	875,260,857

Source: Hyder Consulting Pty Ltd

Figure 5. Composition of Base Case → M2030; Base Case → AOE Costs & Benefits ($M)

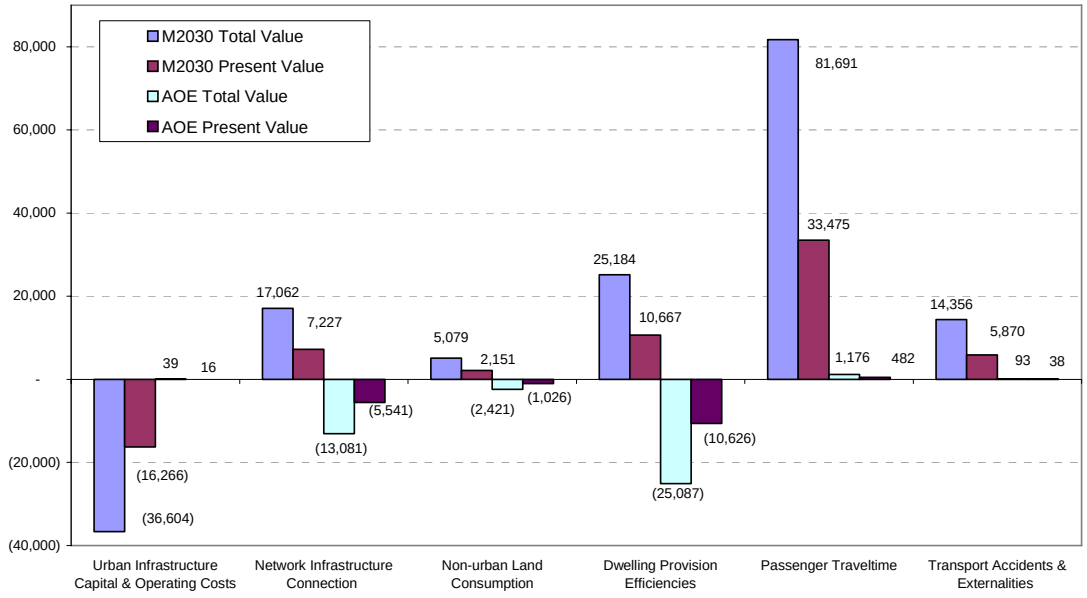


Table 2. Cost Benefit Analysis, Reshaping Melbourne's Growth from the Base Case to M2030

	Discount Rate		
Performance Measure	6%	8%	10%
• Net Present Value (NPV)	$43 billion	$33 billion	$25 billion
• Benefit Cost Ratio (BCR)	3.7	3.6	3.4
• Economic Internal Rate of Return (EIRR)	105%	105%	105%

These substantial net resource savings from Melbourne 2030 provide the impetus for a significant productivity boost in the Victorian economy. Productivity will improve under Melbourne 2030, because, amongst other things, freight costs will be lower (with more efficient transport), labour costs will be lower (as there will be less pressure for wage increases to compensate for lengthening journey to work times etc), and other resources that would be consumed by a city with comparatively 'unmanaged' growth will be freed up for investment in more productive uses.

SGS applied a relatively simple input-output modelling approach to assess the impact of Melbourne 2030 on levels of economic activity (GDP) in Victoria[3]. This logic of this approach is summarised in

[3] The principal limitation of this approach is that it does not allow for lagged feedback effects given the estimated stimulus or 'shock' to the economy. It assumes that the economy

Figure 6. At the heart of this modelling procedure is a comparison between the Victorian economy operating under the Base Case versus the economy operating with M2030 outcomes. If the efficiencies estimated in the cost benefit analysis are delivered, it will be possible to generate the aggregate production in the Victorian economy in a 'test year' at a lower resource cost than would have otherwise been the case. If it is assumed that the economy is operating in a capacity constrained way in that test year, the resources saved as a result of implementing M2030 can be deployed in expanding output.

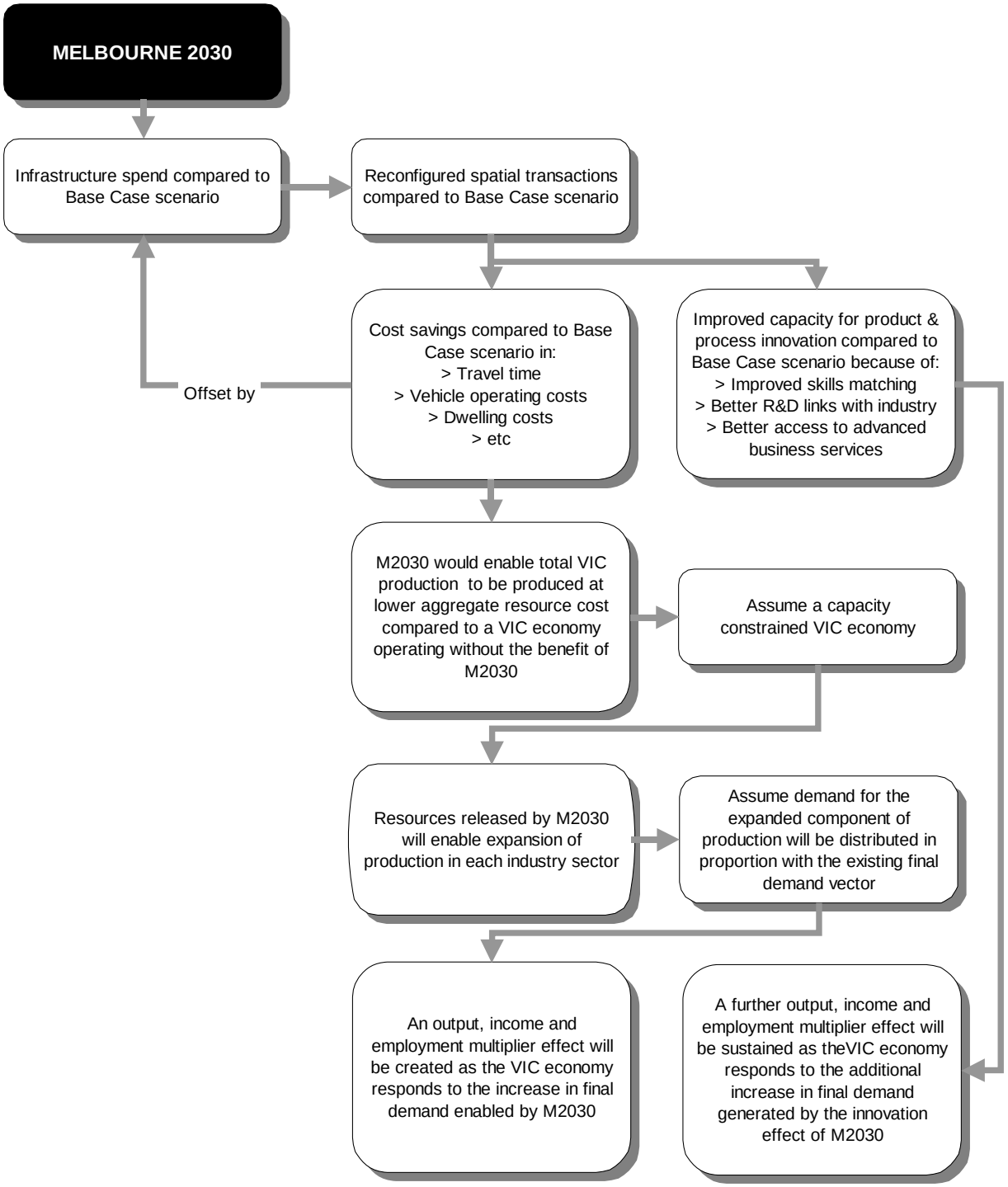
Assuming that the demand for this expanded output will be distributed across the various industry sectors in Victoria in accordance with the proportions that would apply in the Base Case scenario, it is possible to 'shock' the test year economy with a specific vector of increments in final demand. A multiplier effect will be set in train. Not only will each sector sell more in its own right, because its costs have been reduced enabling expanded production, it will be called upon to expand production even further to meet the input demands of other sectors that are similarly engaged in meeting new demand. This productivity multiplier is also augmented by the increased spending of households.

SGS 'shocked' the Victorian input-output model by applying a vector of expanded end user demand totalling some $4.3 billion which is the average 2006 to 2030 resource saving provided by Melbourne 2030 as estimated in the cost benefit analysis. This showed that upon maturity, Melbourne 2030 would induce an additional $5.8 billion in GDP and generate an extra 82,000 jobs, compared to letting Melbourne follow a 'business as usual' growth pattern. For reference purposes, the value added benefit associated with the movement to Melbourne 2030 equates to a 2.8% lift in current GDP levels, suggesting that urban policy could well deliver a productivity boost to the Victorian economy of the same order as the much vaunted National Competition Policy.

Similar arguments are no doubt applicable to the NZ economy. Making Auckland more efficient through better urban form, including greater nodality, is likely to generate a significant national productivity benefit, though this remains unmeasured. Making the system of major urban centres in NZ more efficient through better design at the macro level would further multiply these benefits.

adjusts instantly to changed demand conditions. Another limitation is that the ratio of inputs from different supplier sectors to enable a unit of output from a given sector is assumed to be constant; in other words, the technology governing production is assumed to be fixed. To some extent, these limitations are overcome in more elaborate, 'general equilibrium' models. But this may come at the price of diminished transparency, with a 'black box' governing modelling outcomes, rather than the readily explained phenomenon that an expansion in demand will spark successive rounds of output increases in the economy. Moreover, the inherent limitations of the input output approach are moderated when the purpose of the modelling is to establish the order of magnitude of the impacts in question as opposed to precise measurement and forecasting.

Figure 6. Impact Modelling Logic



As important as this nexus between urban form and the costs of production is, it is only a part of the story about how urban management and urban design can influence sustainable prosperity. Costs can be trimmed through better logistics and urban management as discussed, but there is

further scope for productivity gains via smarter management techniques, better financial brokerage and better production technologies. Moreover, for NZ to regain its position amongst the top dozen countries in terms of living standards (measured in GDP per capita), it must break the tyranny of commodity based trade where cost competitiveness is king. This means diversifying into high value added services and elaborately transformed manufactures, where price is as much a function of the design and 'thinking power' embodied in the offering as it is of the substantive materials consumed. In short, NZ need to be operating as close as possible to the innovation frontier.

Urban design, in the broad sense, can influence the propensity for innovation in an economy, though the pathways for this are not necessarily straightforward. In exploring the spatial dimension of innovation, it is useful to firstly consider the nature of innovation and how it is transacted in the modern, 'post industrial' economy.

4 The Spatial Dimension of Innovation[4]

A Typology of Innovation

Much of the classical literature on business innovation implicitly if not explicitly reflects the Schumpeter perspective characterised by the notion of 'creative destruction'. That is, innovation in market economies revolves around the periodic introduction of new products or production processes which, more often than not, are derived from fresh knowledge created through scientific enquiry and deliberative research. These new products and approaches to production ultimately overwhelm competitors and establish a new platform for further innovation.

Business innovation featuring distinctively new products involves a 'strategic leap' in the market place that is readily measurable and open to study. As recorded by Berry (2003) many commentators have examined what it takes to maintain a healthy flow of new knowledge and, perhaps more importantly, to harness this flow and turn it to commercial advantage. Even amongst those writers who recognise that innovation systems vary with cultural and governance characteristics across nations, there is a tendency to focus on the crystallisation of new knowledge in new product offerings.

Recent commentary on the Australian innovation system, and more particularly, the performance and prospects of the Australian manufacturing sector, breaks with this tradition. The Australian Expert Group (2003) has documented the subtle but highly significant shift in Australian manufacturing since the dismantling of generic protection in the early 80's. Many of these firms, especially those in the industrial machinery, transport and scientific instruments segments of the sector which have enjoyed relatively strong growth in export markets, see themselves as providers of 'solutions' to customer needs, rather than simply as designers, builders and shippers of discrete products. Thus, for example, a manufacturer of specialised industrial equipment is also likely to provide consultancy services on how best to capitalise on this investment, how to train operatives in the use of this machinery and how to monitor performance with a view to improving the next

[4] This section draws heavily on PhD research currently being undertaken by M Spiller

round of equipment purchases. This establishes a mutually beneficial relationship between manufacturer and customer which supports continuous product and service improvement.

These observations regarding the re-invention of Australian manufacturing bring into focus the prospect that a great deal of the innovation occurring in competitive economies is of an 'organic' nature, as distinct from the 'strategic leap' phenomenon that has historically captivated commentators on the knowledge economy.

Organic innovation is nurtured and supported by business networks. These are expanding as value chains unbundle rapidly under the influence of improved communication technologies, and as they rebundle in regional clusters.

Meanwhile, analysts and policy commentators have revisited the 'strategic leap' phenomenon itself. Contemporary interpretations of this process emphasise that it requires much more than quality R&D and an efficient venture capital market. Firms need to be part of 'learning networks' that will often stretch out to include a multiplicity of suppliers and customers, and key advisers from within the business services sector. In these interpretations, 'strategic leap' innovation is not as sharply differentiated from organic innovations as it might have been in classic texts.

Based on this literature review, three constructs for thinking about innovation emerge. These include; ***organic innovation*** which is most likely to flourish in a network environment; ***Schumpeterian strategic leap***; and '***contemporary' strategic leap***.

Schumpeterian strategic leap and 'contemporary' strategic leap are distinguished, firstly, in terms of the core drivers of innovation. In contemporary accounts, innovation is closely geared to proven market opportunities. In the more classical account the technology break-through in question is what sparks the innovation process, creating product possibilities in search of a market (the challenge of 'commercialising' research). Secondly, these two notions differ in terms of the scope of the supporting business relationships required to successfully deliver the innovation. Classical analyses focus on a narrow group of transactions (e.g. the relationship between 'venture capital and inventor'), as opposed to the wider opportunities to garner strategic knowledge.

Organic innovation differs from both the strategic leap forms in that it need not involve discrete, patentable knowledge.

The Appendix elaborates on the distinguishing features of these three notions of innovation. They are not mutually exclusive; in the process of organic innovation a firm may stumble across a sufficiently distinctive idea that warrants patent protection and a research and development strategy to capitalise on this intellectual property. Nevertheless, the nature and culture of innovation in the three modes can be seen to be quite different.

Organic and contemporary strategic leap innovation prosper in a 'business cluster' environment, where firms readily learn from each other through sub contracting and, occasionally, co-marketing initiatives. That is, 'tacit knowledge' on new and effective ways of conducting business is gradually built up to the point where a region acquires a robust competitive advantage.

In organic innovation and even contemporary strategic leap innovation, formal links to universities and research institutes are not likely to be of critical importance, although continuous access to 'smart' workers is vital and the 'old school tie' networks sourced to particular universities may also be crucial from time to time. In this context, the preoccupation in Australian cluster policy with the creation of highly structured industry and university collaborations may be misplaced. The fact that surveys repeatedly show that linkages between dynamic businesses and universities are weak in Australia (Marceau and Davison, 2003, Econsult, 1988) may simply reflect a different form of innovation, where policy may be better directed at facilitating business to business links, and less formal interactions between 'town and gown'.

While the three notions of innovation differ in many respects, they share one important characteristic; *Advanced Business Services*[5] are vital to their success. Innovation based on formally protected intellectual property under both the classical and contemporary notions of 'strategic leap', requires extensive involvement by patent attorneys, research institutes, business strategy consultants and design engineers or scientists. Later in the innovation cycle, marketing and business development consultants play a major part as the host firm seeks to maximise the commercial advantage from its break-through product or service offering.

[5] For the purposes of this paper, 'Advanced Business Services' are defined as "Enterprises providing a largely customised, problem solving service to other businesses, where the services in question require application of significant intellectual effort or capital". They encompass firms that:

- Derive most of their sales from **business clients**; and
- Provide product development and / or cost management solutions which are specifically **tailored** to the needs of clients; and
- Apply a high degree of **creativity and intellectual analysis** in delivering these solutions; and
- Act as the **primary provider** of intellectual content as opposed to acting as agents for other corporations providing pre-designed goods and services.

In terms of the Australia and New Zealand Standard Industrial Classification (ANZSIC), Advanced Business Services are generally covered by the following sectors:

7511 Financial Asset Broking Services
7519 Services to Finance and Investment n.e.c.
7730 Non-Financial Asset Investors
7810 Scientific Research
7821 Architectural Services
7823 Consultant Engineering Services
7831 Data Processing Services
7832 Information Storage and Retrieval Services
7834 Computer Consultancy Services
7841 Legal Services
7842 Accounting Services
7851 Advertising Services
7852 Commercial Art and Display Services
7853 Market Research Services
7854 Business Administrative Services
7855 Business Management Services
7861 Employment Placement Services
7869 Business Services n.e.c.
8431 Higher Education
8432 Technical and Further Education
9621 Business and Professional Associations

In the case of organic and contemporary strategic leap innovation, Advanced Business Services play a different and/or complementary role. Instead of devising strategies to trap and optimise the monopoly rent attaching to a new discovery, they become carriers of new ideas between businesses. For example, specialist business analysts engaged to assist a small manufacturing firm with its cost accounting system will, if successful, both deliver this service and put themselves in a position to replicate the strategy, perhaps in a significantly improved way, for the next client.

The Geography of Innovation

Thus Advanced Business Services have a pivotal role in the innovation process, whatever pathway it takes. It is therefore of great interest from a planning and urban design point of view that Advanced Business Services are prone to 'social' models of business transaction. In these models networks of contacts and place specific protocols and customs for making and using these contacts are critical to commercial success (Clark, 2005). This modus operandii implies that the quantity and quality of contacts between Advanced Business Services and their clients diminish with increasing distance from the key supply points for these Services. That is, with increasing distance the relevant social networks might be expected to become diluted and/or the transactions in question pass through into new geographic territory where different mores apply. This, in turn, suggests that the propensity for business innovation and sustainable prosperity will also diminish with increasing distance from Advanced Business Service supply points.

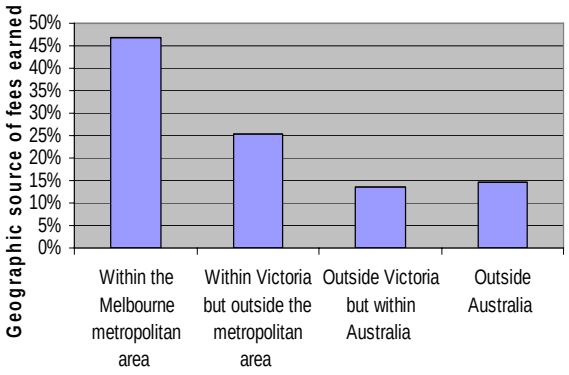
Recent research in Melbourne strongly supports this hypothesis of distance decay in the propensity for innovation. Spiller (2006) undertook a random sample survey of more than 100 Advanced Business Service firms located in Melbourne[6].

This showed that while inter-regional sales are undoubtedly important to these enterprises, the lion's share of their interaction with clients, and, by implication, their innovation boosting effect occurs within the host region.

In the survey, the amount of fees earned from various classes of client was used as a proxy for the extent of interaction between a client class and the Advanced Business Service in question. Figure 7 shows Melbourne based Advanced Business Service firms generated close to half their fees from within the metropolitan area. This area accounts for only 20% of total Australian business activity, that is, for only one fifth of all potential clients of Advanced Business Services. While Melbourne is supposed to be a strategic exporter of Advanced Business Services to the whole nation, its exporter firms in this sector appear to be heavily preoccupied with the local patch.

[6] Private research undertaken by M Spiller as part of current PhD studies.

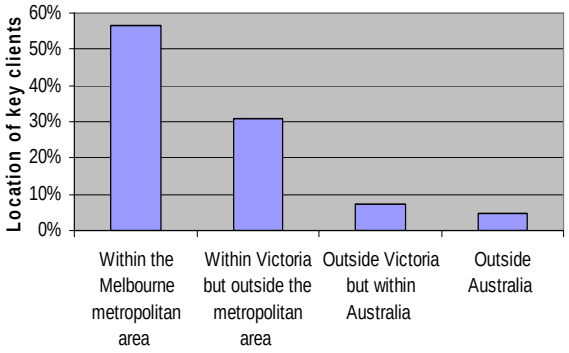
Figure 7. Fees Earned by Geographic Area – Advanced Business Services Firms in Melbourne



Source: (Spiller, 2006)

This focus on the local market became even more pronounced when respondents were asked to identify the geographic distribution of their 'regular clients', described in the survey as *'those (clients) with whom you enjoy significant repeat business'*. Notwithstanding the fact that they were all exporters of Advanced Business Services, the surveyed firms indicated that 57% of their regular clients were found in the local region (Figure 8).

Figure 8. Location of Regular Clients – Advanced Business Services Firms in Melbourne



Source: (Spiller, 2006)

The 'localism' which appears to characterise the operation of Advanced Business Service firms is further highlighted by the survey's findings that 78% of the Victorian clients of the surveyed firms were located no further than 20 kilometres from the office of the service provider in question. Thirty seven percent of these Victorian clients were located within a mere 5 kilometres of the provider's site.

Provision of effective advice in most fields of Advanced Business Service requires good relations with the client and a high degree of mutual trust. As noted, it is a 'social' as well as business process. It is, perhaps, not surprising that these firms are drawn into much closer relationships with a local and readily accessible clientele. The policy issue raised by this confirmation of steep distance decay in client relationships for Advanced Business Services stems from the fact that most Australian States do not have their own significant hub of these Services. Indeed, location quotient analysis would suggest that almost 80% of Australia's Advanced Business Services are concentrated into just two centres – Sydney, with about 50%, and Melbourne, with about 30% (Spiller, 2003). This spatial bias in the distribution of these firms implies a similar bias in the propensity for innovation across Australia's States and regions. Australia may well be in danger of developing a 'core and periphery' pattern of development – of ideas driven economies on the one hand, centred on Sydney and Melbourne, and 'client' economies elsewhere.

This logic raises two important questions regarding the innovation capacity of the NZ economy. Is it strong enough in Advanced Business Services, or is it part of the incipient 'core and periphery' pattern of economic development in Australia? Secondly, are Advanced Business Services reasonably well distributed within NZ or is an intra-national divide opening up in the geography of innovation in this country as well?

Some data is available on the second of these questions. This requires an assumption that 'advanced' business services are those which …

- fall broadly into the ANZSIC groups noted above; and
- are engaged in inter-regional exports.

If a further assumption is made that in those cities with a Location Quotient (LQ) greater than 1.0 for the selected ANZSIC categories as a group, the surplus jobs vis a vis an LQ of 1.0 are jobs in firms which are engaged in inter-regional exports of advanced business services, two cities in NZ account for 100% of all Advanced Business Services in the country – Auckland with a share of 57% and Wellington with 43%. This may not be surprising, but it does not bode well for the evenness of innovation across the nation.

5 Securing the Agents of Innovation[7]

Given that those regions without a healthy body of Advanced Business Services may suffer long term inferiority in their capacity to maintain competitive economies, what scope is there for public intervention in the geographic distribution of these activities? The literature appears to be divided on this issue. On the one hand there are those writers who broadly support the Sassen (1991) theory of skills agglomeration which would see the 'inevitable' concentration of Advanced Business Services into a small number of 'command and control' cities. Other analysts contend that matters of urban quality and livability are important in the locational choices of such enterprises and their workers.

[7] This section draws heavily on PhD research currently being undertaken by M Spiller

Resolution of this issue is of great policy interest. If lifestyle, liveability and urban amenity are significant drivers of locational behaviours, proactive policies to enliven lagging cities, build up their social and physical infrastructure to support knowledge based activity and clean up the environment – a la the regeneration policies and 'structural adjustment' assistance employed in parts of the EU - may well deserve high priority in terms of optimising national economic performance. If, on the other hand, the location of Advanced Business Services is characterised by a kind of inertia, such policies may still be justified but with a different focus, namely, redistributive measures to avoid excessive divergence in living standards between leading and lagging regions.

The two schools in the literature are reviewed in the following pages.

Creative Talent – Footloose Maker and Breaker of Regions?

There is a significant body of research and commentary on the strategic importance of 'creative talent' in the knowledge economy. For the purposes of the current discussion the term 'creative talent' can be taken to be broadly consistent with the scope of Advanced Business Services in labour market terms. More than 4 in 10 workers employed in Advanced Business Services in Australia have a Bachelor degrees or higher. Of greater significance is the fact that Advanced Business Services account for one fifth of all employed Australians whose highest qualification is a Bachelor Degree, 30% of all workers holding a Masters Degree as their highest qualification and over half of all workers with a PhD[8].

A focus on the links between access to creative talent and regional development began to develop in the 1980's with growing recognition that markets for growth exports (services and elaborately transformed manufactures) are not driven by cost containment / price advantage, although such issues obviously remained important. In these writings, the crucial ingredient was product differentiation, which was seen to flow from knowledge, design, quality and packaging. These factors, in turn, were seen to be inextricably linked to the creative potential of the workforce (Spiller 1992).

A number of researchers began to refer to the rise of 'soft economics'. The decisive competitive factors in this type of economics were development of employee skills, bolstering engineering and research capabilities, upgrading planning and development divisions within corporations, introducing flexible organisational and business systems, and tapping outside talent (Kennedy, 1991).

In parallel with Reich's (1991) conclusions that workforces were rapidly moving onto a knowledge driven footing as a result of these competitive pressures, Blakely (1991) predicted that knowledge based employment in the US would reach 50% of all jobs by the end of the 20th century compared to around 2% 1n 1920.

[8] Source, ABS special cross-tabulation, 2001 Census

Writing in an arts journal, Gilmour (1990) made the highly insightful observation that ..

> *If we are, in fact, moving towards a situation in which value derives from the knowledge embedded in a product rather than the materials it is made of, then creativity and innovation become the primary form of capital. (p 17)*

Commenting on the literature of the 1990's, Berry (2003) noted the continuation of this regional development theme and its then confident conclusion that 'two economies' had emerged within advanced, market based nations. One economy, sometimes referred to as 'old economy' industries dealt essentially in 'congealed resources' plus relatively small quantities of knowledge and behaved in ways generally consistent with the principles and propositions of the neo-classical school of economic theory, that is, price based competition and diminishing returns to scale. These industries could include agriculture, mining, basic (commodified) manufacturing, retailing and other personal services. Alongside this economy, a second world was seen to operate in line with the predictions of the new growth theorists. This economy traded in 'congealed knowledge' plus small quantities of physical resource, implying industries like telecommunications, information technology and biotechnology.

The idea of a 'dual economy' has less resonance with observed market behaviour today, compared to the heady days that preceded the crash of technology stocks. Indeed, more recent commentators are at pains to emphasise that there is "no such thing as old economy industries, only old economy firms". Rather than seeing innovation and the creation of 'congealed knowledge' as the primary province of technology or science based industries, there is now a greater recognition that the application of knowledge and commercial insight is relevant, and indeed, essential across the spectrum of industries. For example, the production of shoes, textiles and garments, once written off as low technology, commodified industries that are at the mercy of low wage behemoths like China, continue to generate significant wealth for some of the wealthiest regions on the globe, including, as cited by Porter (2002), Northern Italy. The reasons reside in the application of concentrated knowledge and experience in design, marketing and enterprise management as well as overtly 'technological' advances in fabric development and production methods.

Thus, the notion that access to creative skills is crucial to corporate and regional competitiveness has continued to gather strength. Florida (2000) is the most recent and, perhaps, the most forceful advocate of this proposition. Expanding on themes pioneered by McNulty (1985), Kennedy (1991) and Blakely 1991, Florida (2000) contrasts the types of strategies needed for regional success in the past with those required in the globally competitive economy.

> *"The key to success in the old economy was simple –costs. In the mass production era, regions established competitive advantage via advantages in natural resource endowments, transportation access, the cost and productivity of physical labour, and by reducing the overall costs of doing business. Driven to reduce costs, firms selected locations that provided low-cost land, cheap or highly productive physical labour, and a cost-conscious business climate. Regional development strategies typically emphasized the use of so-called business incentives, designed to win over businesses by pushing their costs even lower. The environment and natural amenities were seen as sources of*

> *raw materials or as places to dispose wastes. In the new economy, regional advantage comes to places that can quickly mobilize the best people, resources, and capabilities required to turn innovations into new business ideas and commercial products. Leading regions establish competitive advantage through their capabilities. …… For these reasons, the nexus of competitive advantage shifts to those regions that can generate, retain and attract the best talent. This is particularly so since knowledge workers are extremely mobile and the distribution of talent is highly skewed" (p.8).*

Accompanying recognition of the paramount importance of talent and creative skills in economic prosperity has been scholarly enquiry regarding what motivates the creative class and what corporations and regions need to do to capture this advantage. One important issue in this regard is the continuing importance of face to face transactions undertaken in central or strategic locations. It has been known for some time that new communication technologies do not provide a complete answer to accessing creative talent (Moss 1991, Daniels 1991 and O'Connor 1990). Not surprisingly, while rapid suburbanisation of routine or direct client contact functions in Australian, British and American cities occurred during most of the post WWII period, many corporations continued to insist that senior, strategic and key problem solving staff remain in central business areas. Moreover, these corporations were prepared to pay the premium rentals involved. In their assessment of the strengths and weaknesses of London as a world city in the early 1990's, Coopers and Lybrand recommended an active policy of accelerating the decanting of less vital functions from the central area to make room for activities which can add to, and benefit from, downtown agglomeration economies (Kennedy 1991). Subsequent property market trends in central London underlined the prescience in these recommendations.

As well as a capacity to transact business on a face to face basis, it was recognised that modern 'talent based' business required a certain scale in the local labour market. This was a natural outworking of the need to draw inputs from a variety of specialised sources and to develop individual skills. Only relatively large and sophisticated cities, together with their commuting fields, were likely to support the required pool of diverse skills. As evidence of this, Daniels (1991) noted that 'productivity (value added per worker) for services rose 10% as city size doubled'.

While scale is a necessary condition for the attraction and retention of talent, it is not sufficient. An abiding theme from the initiation of this literature has been the need for quality and vibrancy in the living environments on offer. Some 20 years ago, Malecki (1984) observed that;

> *An urban environment of some threshold size seems most critical… Generally, an urban milieu with excellent universities, abundant social and cultural activities, and a job market that allows individuals (and spouses) to switch jobs without relocating is the type of place where high tech activities are found. (p. 266)*

Blakely (1991) extended such observations to conclude that quite radical shifts are required in planning and urban design practice if regions are to fully capitalise on the move towards knowledge based economies.

> *"…lifestyle and creative atmosphere are major locational factors. While lifestyle means different things to different people, there are several important co-incidental*

> *ingredients in communities ranging from Seattle to Los Angeles. These factors include relatively easy access to preferred recreational areas, good housing and school choices, cultural diversity and an active community social life. In essence, the community presents a milieu that is attractive for a lifelong experience and not merely for work. The new city will merge those things that modern life has split apart – work, play, shopping, education and leisure. In essence, the physical zoning of the past and the current regulatory systems will be rethought to provide a more homogeneous environment that allows functional rather than territorial discrimination….(However), the notion of planning a city as a social experience rather than to accommodate business activity is not well developed in the professional planning literature." (p. 232)*

As alluded to earlier, Florida (2002) has taken these themes further to a more general theory of regional development based on the attraction and retention of knowledge workers. He claims that this segment of the labour market is footloose and highly particular about where, and with whom, it is prepared to work. Businesses must either follow the creative talent, or actively transform the local urban environment to appeal to this dominant 'creative class'. Based on focus group discussions and literature searches Florida (2000) concluded that knowledge workers ….

> *"… prefer places with a diverse range of outdoor recreational activities (e.g., rowing, sailing, cycling, rock climbing) and associated lifestyle amenities. Access to water and water-based recreation is of particular importance to these workers. Knowledge workers prefer regions where amenities and activities are easy to get to and available on a 'just in time' basis. Due to the long hours, fast pace, and tight deadlines associated with in high technology industries, knowledge workers require amenities that blend seamlessly with work and can be accessed on demand. They favour cities and regions that offer a wide range of experiences, and are somewhat less concerned with 'big ticket' amenities such as 'high' arts and culture or professional sports. Knowledge workers also express a strong preference for progressive regions that are youth-oriented and supportive of demographic diversity" (p. 6).*

Florida, Cushing and Gates (2002) stress demographic diversity as a key feature of regions which are proven talent magnets. Indeed, they argue that regions which are over-endowed in 'social capital', in the sense of homogeneous values and widely shared expectations of community activism in things like service clubs and churches, may dampen creative potential. Tolerance and openness to new ideas – often associated with larger, 'cosmopolitan' cities – must be present if a place is to register on the radar of the Creative Class.

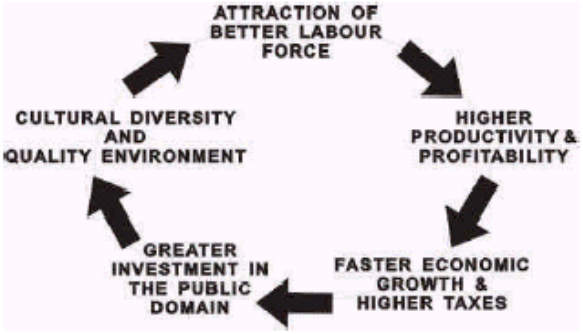
While Florida (2000) fervently prosecutes the case for talent as the pre-eminent driver of regional economic prosperity, he stresses that a region must also have a 'thick labour market' for knowledge workers; that is an abundance of employment opportunities in high technology sectors. His prescription for sustained regional prosperity includes:

- Making quality of place a central feature of economic development strategies.
- Integrating amenities and natural assets into all aspects of regional economic development, talent attraction, and marketing efforts.

- Investing in outdoor, recreational and lifestyle amenities as a component of regional economic development and talent attraction efforts.
- Developing a comprehensive amenity strategy for university districts and integrating them into economic development strategies.
- Encouraging 'smart growth' (the American term for 'urban consolidation').
- Creating mechanisms for harnessing the knowledge and ideas of all citizens at the neighbourhood, local, and regional levels, for improving the quality of place around the environment and amenities.

One of the collaborators in the Florida project – Gary Gates (2000) – has proposed that successful application of such 'place based' economic development strategies can set up a virtuous circle as shown in Figure 9.

Figure 9. The Virtuous Cycle of Talent Based Regional Development (after Gates, 2000)



Florida (2000) warns against excessively defensive regional strategies – for example campaigns to retain home grown talent and attract back 'expat' knowledge workers. Such strategies fail to understand the dynamism of the new economy and the almost inevitable desire of knowledge workers to move through a range of industries and environments. Rather, local economic planners should accept that there will be substantial 'churn' in the high end of the labour market and concentrate on keeping the inflows skilled labour ahead of the outflows.

Bound by Golden Chains?

As mentioned, the notion of a footloose 'creative class' which can determine the rise or fall of regions based on their lifestyle preferences is not without controversy in the literature. Neither is the implied proposition that Advanced Business Services are highly mobile.

Rather than focussing on amenity as the principal factor explaining the behaviour and location of producer services, Sassen (1991) sees 'distributed production systems' in global trade as driving an overwhelming trend for centralisation of such services into a relatively small number of major cities. According to her thesis, ICT and global trade have enabled decentralisation of manufacturing production sites, but this has strengthened the need for strong command and

control functions in corporations, which tend to concentrate in bigger cities. It is these command and control functions that create the greatest demand for advanced services so, these too, tend to concentrate in central locations. The suburban, regional and off-shore production sites are not as big a source of demand for advanced services. As physical production becomes more decentralised the feasibility of advanced services following these clients becomes more problematic, adding impetus to the default strategy of concentrating into a strategic centre.

Another important factor according to Sassen is that producer services gain agglomeration benefits by centralising into established 'command and control' cities. These benefits obtain mainly from a labour market perspective, and the potential for inter-firm collaborations – something which is critical when services are so specialised. Sassen (2000) writes … 'the commonly heard explanation that high level professionals require face to face interactions needs to be refined …Producer services, unlike other types of services, are not necessarily dependent on spatial proximity to buyers – that is, firms served. Rather, economies occur in such specialised firms when they locate close to others that produce key inputs or whose proximity makes possible joint production of certain service offerings. The accounting firm can service its clients at a distance, but the nature of its service depends on proximity to specialists, lawyers, and programmers. ….. Frequently, what is thought of as face to face communication is actually a production process that requires multiple simultaneous inputs and feedbacks. At the current stage of technical development, having immediate and simultaneous access to the pertinent experts is still the most effective way to operate, especially when dealing with a highly complex product.' p 72

Baum and O'Connor (2004) also adduce evidence about the tendency of advanced business services to agglomerate in established cities with the required infrastructure and skills, notwithstanding wider trends towards decentralisation or faster population growth in more desirable 'sunbelt' locations. They show that Melbourne and Sydney in particular continued to attract a disproportionate share of employment growth in 'Property and Business Services and Communications' in the decade to 2001, even though they experienced a fall (in Melbourne's case) or modest increase (in Sydney's case) with respect to share of population growth over this period.

Certainly, agglomeration economies in the producer services sector can be very long lived. They can dictate the geography of this economic activity for generations if not centuries. For example, Price and Blair (1989) reflect on the fact that the City of London built up a complex network of financial, insurance and brokerage institutions as part of its central role in organising nineteenth century world trade. The City emerged as the world's first 'truly international centre of finance', a role which has 'survived the decline of the empire'.

Such evidence and arguments challenge the idea that a region can redress a creative talent deficiency, or Advanced Business Services shortfall, simply through appropriate investment in urban quality. In fact, far from portraying the 'creative class' as footloose and attracted to places with Florida's 'three T's' (Technology, Tolerance and Talent), Sassen (1991) describes knowledge workers almost as victims, tied to their cities not by lifestyle preference but by the golden chains of their high incomes and their commitment to an international business culture. Yes, these cities are characterised by a cosmopolitan vibrancy and, ostensibly, a high quality of life, but, according to Sassen, these features of the urban fabric are merely the outworking of the superior spending power of knowledge workers as opposed to the magnet which attracts and holds such workers. In

other words, she sees a different flow of causality to that which motivated writers Makecki (1984), Blakely (1991) and Florida (2000, 2001).

> "*They are really not part of the 'power elite'. They are ultimately a stratum of extremely hard-working people whose alliance to the system leads them to produce far more profit than they get back in their admittedly very high salaries and bonuses. In some ways it could be argued that they engage in self exploitation insofar as they work extremely hard, put in very long hours and ultimately make significantly less money than the stratum of top–level managers and executives…"*
> *"The conjunction of excess earnings and the new cosmopolitan work culture creates a compelling space for new lifestyles and new kinds of economic activities. It is against this background that we need to examine the expansion of the art market and of luxury consumption on a scale that has made them qualitatively different from what they were even fifteen years ago – a privilege of elites. The growth of a stratum of very high income workers has produced not only a physical upgrading of expanding portions of global cities, but also a re-organisation of the consumption structure".*
> "*What is notable is the extent to which a numerically small class of workers imposed such a visible transformation – of the nature of commerce and consumption – on strategic areas of these extremely large cities. This is, I argue, connected to questions of the social reproduction of a strategic but powerless class of workers"* pp 334 - 336

Implications for New Zealand

The tension between the Sassen and the 'lifestyle' perspectives regarding the capacity of public policy to influence the distribution of Advanced Business Services is mitigated to a large extent if the degree of specialisation in these services is taken into account. Very high order services directed at an international customer base are likely to be few in number and will need to cluster in a handful of cities for supply side agglomeration economies – hence the emergence of the first tier 'global cities' in New York, Tokyo and London. For all intents and purposes, these services can be considered to be 'locked in' into their current locations, and as they draw more talent into their labour market, the agglomeration economies in question become all the more powerful.

However, the vast bulk of Advanced Business Services lie outside this elite class and, to a large extent, they constitute the vanguard of the innovation process in local and regional communities. These can be considered to be much more footloose, and susceptible to the theories of Florida and others.

But, even with this 'sub-elite' class of Advanced Business Services, the idea that a city or region can boost its capacity for innovation simply by improving its offer of 'urban quality' needs to be treated with caution in Australasia. These theories are most persuasive in a US context. That country can be thought of as a collection of small nations commanding roughly a quarter of global income and enjoying free trade amongst themselves. In this context, it is conceivable that all but the most remote and poorly endowed towns might re-position themselves in the race for 'talent' and reap the consequential investment multipliers.

It is not quite so easy outside the big regional economic blocs, and it is certainly not easy in a country like NZ which must overcome the legal, cultural and political facets of 'distance friction', as well as extensive travel and freighting times, in reaching potential markets. In this scenario, urban livability is a necessary but by no means sufficient condition for attracting and maintaining a healthy body of Advanced Business Services. Pro-active strategies at the macro level are likely to be essential to position NZ as a regional leader in at least some niche service areas. In part, this will be necessary to overcome the scale deficiencies in the NZ economy. With Auckland hosting fewer than 2 million residents and NZ just over 4 million, the nation's intrinsic capacity to support a diverse base of Advanced Business Services is limited, particularly given the evidence that such Services are closely tied to hinterland economies. Action is required to accelerate growth in export services with a view to stimulating a reinforcing cycle of services investment (successful exports of services builds critical mass and reputation; as well as boosting domestic incomes, this promotes innovation in local firms which, in turn, generates further demands for business services).

Other small countries have attempted such macro-strategies, some with great success. Singapore actively sought and maintains a leadership role in the export of logistics services and related advice in financial brokerage. Ireland targeted IT and back office services functions. The Australian Government has promoted Sydney as a regional financial transactions hub. Meanwhile, the State Government of Victoria seems to have arrested the steady decline of Melbourne as a financial services centre by reinforcing the city's emergent role in the burgeoning funds management industry, so that Melbourne might become to Sydney what Boston is to New York.

The macro policies which might be applied to this end in NZ include the recruitment of key global institutions and enterprises which fit well with the nation's recognised capacities and 'brand' (e.g. governance and public policy, environmental management, cross-cultural harmonisation, value chain management in food based industries etc). Publicly funded R&D in targeted service areas may also play a part. More than likely, the relevant policies will need to have a long term planning horizon and focus on skills and knowledge development, which means embedding the strategy in national education programs, stretching down into junior schooling as necessary. The so called 'Irish miracle' was preceded by decades of investment in a high quality public education system.

6 The Competitive Post Industrial City

With these macro policies in place, programs to foster 'creative cities' certainly have a role in maintaining prosperity, though, again, scale will condition the particular challenges facing each city. As discussed, Auckland is already the dominant services centre for NZ. Wellington's services future is, to some extent, underwritten by its role as national capital. Other major centres in NZ will have to work particularly hard on their livability and connectivity offer to overcome their lack of critical mass in services.

Designing a city that 'makes sense' in a world where value chains have become unbundled; where the locus of production control and design has become disconnected from the place of manufacture and distribution; and where the capacity for intellectual problem solving is a strategic form of capital, is a vastly different proposition from designing an efficient industrial city, that is, the kind

that we built in Australasia during the long, post war boom. The industrial city was characterised by *separation*, fuelled not only by growing access to the private car but by the very organisation of production itself. Lives were compartmentalised into working (for which there was a separate place), education and training (for which there was a separate place), organised entertainment (for which there was a separate place) and living and leisure (for which there was a separate place). Urban life was deconstructed and reassembled into neat zones. Those parts of the city that didn't fit this new way of living (for example, the inner suburbs of Australia's capital cities) were regarded as relics of a primitive time, worthy only of demolition.

By contrast in the service city, which is focussed on the 'thinking' as opposed to the 'making' parts of the value chain, *integration* looms as the dominant theme in spatial organisation. The economic reforms of the 1980's championed by Roger Douglas (and Hawke/Keating in Australia) effectively closed the book on the long boom and the era of separation. It became clear that future prosperity would depend on flexibility and breaking down the partitions (and still further separations) instituted by the Welfare State. Women flooded back into the workforce; casualisation of labour took hold; and unions positioned around traditional production enterprises struggled to maintain membership and relevance. Suddenly work was blending into education and training, into leisure and into home life. Ironically, Marx's theory of alienation was vindicated. Yes, workers in the long boom had, in effect, become disengaged from their own labour. But this did not play out in revolution, rather in the rise of much sought after professionals (the so called 'Creative Class') on the one hand and the independent, trade based contractor on the other. The worker gained more control over his or her labour but the old separations and routines no longer made sense.

Indeed, the spatial organisations that reflected the long boom no longer make sense. The competitive post industrial city is likely to have more in common with the urban design conventions of pre 1800 Europe than the cities which have mushroomed over the globe since the industrial revolution rippled out from Great Britain. These conventions include; walkability; a public domain that speaks of the culture and values of the host city or neighbourhood; the vertical integration of functions (active street frontages for trade, civic life and education, upper floors for commerce and housing); and the ability to reach a wide range of services with minimal risk of delays; and the opportunity to harness the 'buzz' of city life, for its economic as well as social value (Storper and Venables, 2002). In the official language of the recently released metropolitan strategy for Sydney, this means building 'cities of cities'.

Appendix

Three Models of Innovation

	Organic Innovation	Schumpeterian Strategic Leap Innovation	Contemporary Strategic Leap Innovation
Business model / competitive advantage	Commercial advantage gained from marginal changes to product design, service packaging or value chain management. Innovation may not be a conscious strategy, but rather a culture of business process improvement. Individual initiatives may not warrant the label 'innovation', but collectively they signify a business which over a relatively short period 'reinvents' itself.	Characterised by the introduction of distinctively new products or production management processes, which either create new markets or substantially shift shares in an existing market. Introduction of these products and processes occurs as a business initiative in its own right, while the host organisation continues to generate cash flows from current, 'standard' products. This form of innovation can be a high risk / high return business strategy. There may be long lead times and considerable risk capital invested between conceptualisation of the innovation and its launch into the market place. This form of innovation is often placed in the hands of specialist management teams, or businesses within businesses.	As per the classical formulation
Knowledge / technology platform	The knowledge base for innovation is likely to be tacit rather than documented and commercially protected. Source of innovation may be observation and replication of best practice in similar or allied businesses. The knowledge platform is 'open'. 'Real time' experimentation with business process improvement likely to be used to hone innovations rather than formal R&D.	The knowledge base for step change innovation is likely to be patented technology. Legal recognition and protection of this knowledge base is vital to induce the heavy up-front investment required for commercialisation. This knowledge base is corporately as well as legally defended. The platform is closed even to firms that are otherwise heavily involved in collaborative networks with the host. A long-term commitment to formal R&D is a key to success.	As per classical formulation except that the innovating firm is more open to collaborative partnerships outside the R&D + venture capital links. For example, key distributors and suppliers may become party to the innovation effort.
Driver for innovation	Innovation often undertaken as a low risk / moderate return strategy to keep up with competitors rather than seize outright market superiority.	Opportunity to *create* a market for products and services enabled by new technology	Opportunity to better respond to demonstrated market demands

	Competitive advantage may be fleeting / short-lived. Businesses must maintain a constant flow of organic innovation to remain competitive.		
Inter-firm links	Links to universities and research institutes unlikely to be important in fuelling organic innovation. But security of supply of well-trained and experienced knowledge workers likely to be critical. Observation of product design and value chain management ideas through formal and informal collaborative networks between firms will be an important portal for organic innovation. This form of innovation is more likely to be important to SME's (other than technology based start-ups). Their open, non-bureaucratic structures and their need to forge alliances to gain significant contracts sustain a higher propensity to engage in organic innovation. Advanced Business Services provide a key linkage role to the best practice elsewhere in the industry and allied sectors. Organic innovation is well aligned with 'cluster models' of regional development	Ongoing links to universities and research institutes will be vital. Physical proximity to these facilities may be helpful but is not essential. Relevant research may be syndicated to a range of providers distributed globally as well as regionally. Business cluster relationships not likely to be a key factor supporting step change innovation. SME's unlikely to play a major role, unless they are the inventors of the technology in question. Even then, their lifespan in the innovation process may be limited. Advanced Business Services likely to play an important but different role. This will be focussed on high level legal and commercial protections for the intellectual property in question. Marketing strategies, involving premium specialists, often play a crucial role in step change innovation.	Links to universities and research institutes are important but are likely to be developed simply on an opportunistic, 'as required' basis. Cluster relationships can be important by providing better knowledge of market opportunities. SME's can be strategic partners, especially in market research and financial / technology brokerage.

Source Spiller (2005)

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