

**BRENT WHEELER**

**BRENT WHEELER LIMITED**  
| economics - corporate finance - investment banking



**TAUPO URBAN COMMERCIAL  
AND INDUSTRIAL STRUCTURE  
PLAN :**

**ECONOMIC ASSESSMENT**

NOVEMBER 08

## ECONOMIC ASSESSMENT – SUMMARY

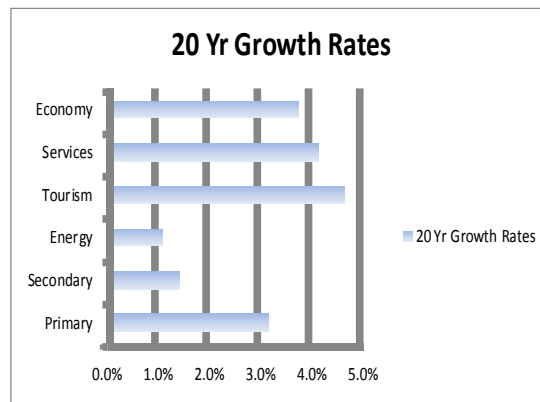
Present performance, likely future trend changes and performance are discussed in detail on a chapter by chapter basis in the Assessment Report. The following highlights major points.

SECTOR ISSUE	QUANTITATIVE	TRENDS COMMENT
Economic Structure	<p>The key components and organisation of the local economy has the following form:</p> <div data-bbox="483 894 1010 1119" style="text-align: center;"> <pre> graph TD     DE[District Economy] --&gt; S[Services]     DE --&gt; P[Primary]     S --&gt; B[Business]     S --&gt; H[Households]     P --&gt; T[Tourism]           </pre> </div> <p>The local economy – like the rest of N.Z. has recently enjoyed some 5 – 7 years of strong growth.</p> <p>It is unlikely that TDC will outperform the N.Z. economy as a whole in terms of volume of trade or “turnover”. What does seem likely is that there will be qualitative change:</p> <ul style="list-style-type: none"> <li>▪ More focus on margin than volume in traditional productive sectors,</li> <li>▪ Heavy focus on improving “experience and process” (as opposed to simple product focus) in retail, tourism and servicing.</li> </ul> <p>Trends which move the local economy toward high quality and margin based business are likely to favour TDC since its size means that competing on volume based business models is difficult.</p> <p>A final important point is that the district economy is not one where there is a single “clear leader” but rather a set of integrated and overlapping activities</p>	<p>Key leaders in the economy look set to continue to be the agricultural sector and the tourist sector. Most significantly both sectors have strong links to the service sector – in retail and business services respectively.</p> <p>The economy is and looks as if it will continue to be an importer of more goods and services than the economy viewed as a whole – there is some dependence on strong links with external markets and suppliers.</p> <p>In simple terms qualitative change rather than quantitative growth is likely to characterise Taupo’s economic future. As that change unfolds it is likely that “per unit value” will increase across a wide range of goods and services. Such change leads to new opportunity and increased value for consumers looking for more than quantity.</p>

SECTOR ISSUE	QUANTITATIVE	TRENDS COMMENT
--------------	--------------	----------------

which provide both opportunity and afford diversification.

Current Status



The Taupo economy has a strong record of growth across the majority of sectors even when viewed on a 20 year time scale.

In line with the rest of N.Z. (and the OECD more generally) only conventional manufacturing has grown slowly as different, less costly ways are found to source manufactured inputs.

The spinoffs created by the major sectors are significant – as shown below.

Value Added Multipliers	
Broad Sector of Activity	Type II Multiplier
Primary production	1.45
Secondary production	1.32
Energy production and transmission	1.48
Tourism activity (all types)	1.42
Servicing (of households and businesses)	1.43

Each of the sectors main activities generates multiplier effects throughout the economy as shown for local GDP and FTE employment.

The activity of primary production in particular tends to create demand and thus spinoffs in secondary sectors. The size of those effects is apparent in the multiplier estimates.

FTE Employment Multipliers	
Broad Sector of Activity	Type II Multiplier
Primary production	2.46
Secondary production	3.21
Energy production and transmission	3.14
Tourism activity (all types)	1.91
Servicing (of households and businesses)	3.18

SECTOR ISSUE	QUANTITATIVE	TRENDS COMMENT						
Demography	<p>Expectation of growth to between 33,000 – 38,000 as a medium range.</p> <p>Care is needed in interpreting “raw” population projections – not so much because they may be “wrong” as because their meaning is limited.</p> <p>Household formation is likely to be of more relevance or to generate demand “as if” population growth was stronger than simple figures suggest.</p>	<p>Growth by natural increase minimal, migration significant with aging structure.</p> <p>Household formation more important than raw growth.</p> <p>Trend to increased rate of formation, smaller more numerous households.</p> <p>Demand driven by households.</p>						
Primary Sector	<p>Expectation of local GDP growth in:</p> <table data-bbox="467 793 748 898"> <tr> <td>Forestry</td> <td>3.5%</td> </tr> <tr> <td>Agriculture</td> <td>6.5%</td> </tr> <tr> <td>Energy</td> <td>2.0%</td> </tr> </table> <p>Both agriculture and forestry are heavily affected by the performance of the global economy (in respect of prices and to a lesser extent costs) as well as macro economic variables such as exchange rates, interest rates and fiscal conditions.</p> <p>The local economy like its national level counterpart is a price taker in this area. This places a premium on efficient treatment of such factors as can be influenced locally – for example management of environmental effects and impacts.</p>	Forestry	3.5%	Agriculture	6.5%	Energy	2.0%	<p>Significant issues for both primary segments in environmental area – discharge for agriculture and climate change policy for forestry.</p> <p>Additional importance in this sector arises from the demand it generates for local servicing and manufactured inputs.</p> <p>New generation initiatives offer scope for growth. As with agriculture and forestry, even modest growth generates strong services demand.</p>
Forestry	3.5%							
Agriculture	6.5%							
Energy	2.0%							
Secondary	<p>Growth characterised by:</p> <ul data-bbox="516 1423 1036 1780" style="list-style-type: none"> <li>▪ Rates in line with the other sectors supported (primary sector)</li> <li>▪ The N.Z. economy as a whole on an optimistic basis founded on servicing the broader local economy</li> <li>▪ In this sense the secondary sector – and especially distribution, storage and communication are best looked at as part of the service component of the economy.</li> </ul> <p>Growth expectation 2.5% - 3.5%.</p>	<p>The importance of manufacturing has diminished over time as imported manufactures grow, as production technologies alter and as the export mix for N.Z. goods changes.</p> <p>The prognosis for manufacturing and associated activity in Taupo is driven largely by the out turns for other sectors.</p>						

SECTOR ISSUE	QUANTITATIVE	TRENDS COMMENT																								
<p>Tourism</p> <div data-bbox="472 344 1021 680"> <table border="1"> <caption>Expected Visitors</caption> <thead> <tr> <th>Year</th> <th>Domestic Total Visits</th> <th>International Total Visits</th> </tr> </thead> <tbody> <tr> <td>2007f</td> <td>1,746,546</td> <td>490,169</td> </tr> <tr> <td>2008f</td> <td>1,779,414</td> <td>506,167</td> </tr> <tr> <td>2009f</td> <td>1,786,190</td> <td>525,440</td> </tr> <tr> <td>2010f</td> <td>1,796,524</td> <td>544,673</td> </tr> <tr> <td>2011f</td> <td>1,806,741</td> <td>582,978</td> </tr> <tr> <td>2012f</td> <td>1,817,754</td> <td>593,549</td> </tr> <tr> <td>2013f</td> <td>1,829,564</td> <td>616,373</td> </tr> </tbody> </table> </div> <p>Again simple growth figures are less meaningful than trends and changes. Raw growth appears likely to be fairly flat but spend may increase.</p> <ul style="list-style-type: none"> <li>▪ Domestic spend growth 2.8%</li> <li>▪ International spend growth 6.7%</li> </ul>	Year	Domestic Total Visits	International Total Visits	2007f	1,746,546	490,169	2008f	1,779,414	506,167	2009f	1,786,190	525,440	2010f	1,796,524	544,673	2011f	1,806,741	582,978	2012f	1,817,754	593,549	2013f	1,829,564	616,373	<p>This sector is showing strong growth potential in the international area even though the base numbers it is building from are lower than domestic.</p> <p>Spend by international visitors is also greater “per unit”.</p> <p>The key trends are toward “experience” based tourism, demand for “sustainable” tourism and an emphasis on active rather than passive experiences.</p>	
Year	Domestic Total Visits	International Total Visits																								
2007f	1,746,546	490,169																								
2008f	1,779,414	506,167																								
2009f	1,786,190	525,440																								
2010f	1,796,524	544,673																								
2011f	1,806,741	582,978																								
2012f	1,817,754	593,549																								
2013f	1,829,564	616,373																								
<p>Retail</p> <p>Retail is a crucial component not just of the domestic economy in the TDC area but also as a lynch pin in the tourist sector.</p> <p>The expectation is for:</p> <ul style="list-style-type: none"> <li>▪ Growth of around \$4.2m in direct output can be expected with over \$6.0m in total; and,</li> <li>▪ A significant number of new FTE positions are created most of which remain in the district.</li> </ul> <p>It seems likely that there will be demand for establishment of large format retail in the district. Savings to consumers – which favour those on low and fixed incomes – after total costs are considered are likely to be worth an annual amount of at least 3.0% - 5.0%.</p> <p>There would seem to be ample land provided for in the town centre area with scope for consolidation and a more dense pattern. There is evidence of this happening already with frequent “make over” and renovation activity exceeding green field development.</p> <p>The impending state highway 1 diversion and associated network changes offers a unique opportunity to enhance the quality and value adding</p>	<p>The retail sector in Taupo along with the rest of N.Z. and the wider world is experiencing significant changes in the character of consumer demand. Trends include:</p> <ul style="list-style-type: none"> <li>▪ More emphasis on experience;</li> <li>▪ Loss of the “mid” price offering;</li> <li>▪ Offering of “cross products” in same outlets;</li> <li>▪ Consumer buying at both top and bottom end of the market.</li> </ul> <p>The development of retail strategy and the treatment of public open space, and urban design features are significant keys to future growth in the sector.</p>																									

SECTOR ISSUE	QUANTITATIVE	TRENDS COMMENT																		
Land Supply	<p>capacity of the TDC retail sector.</p> <p>The key driver of land supply is likely to be activity in other sectors which, summarised is expected to be in the order of:</p> <table data-bbox="467 499 706 653"> <tr> <td>Agriculture</td> <td>6.5%</td> </tr> <tr> <td>Forestry</td> <td>3.5%</td> </tr> <tr> <td>Energy</td> <td>2.0%</td> </tr> <tr> <td>Tourism</td> <td>4.0%</td> </tr> <tr> <td>Retail</td> <td>5.0%</td> </tr> </table> <p>Specific demand might reasonably be expected, over two decades, to be of the following orders of magnitude:</p> <p>Estimates of land required are:</p> <table data-bbox="467 926 1016 989"> <tr> <td>Industrial</td> <td>Low 81 ha</td> <td>Mid 92 ha</td> <td>High 129</td> </tr> <tr> <td>Non CBD commercial</td> <td>Low 14 ha</td> <td>Mid 15 ha</td> <td>High 22</td> </tr> </table>	Agriculture	6.5%	Forestry	3.5%	Energy	2.0%	Tourism	4.0%	Retail	5.0%	Industrial	Low 81 ha	Mid 92 ha	High 129	Non CBD commercial	Low 14 ha	Mid 15 ha	High 22	<p>The key trend in commercial and industrial land use is the decrease in the relative importance of land as a factor input relative to other factors such as human capital (skilled and experienced personnel) and IT. While remains important the part it plays in overall decisions is likely to diminish.</p>
Agriculture	6.5%																			
Forestry	3.5%																			
Energy	2.0%																			
Tourism	4.0%																			
Retail	5.0%																			
Industrial	Low 81 ha	Mid 92 ha	High 129																	
Non CBD commercial	Low 14 ha	Mid 15 ha	High 22																	

## CONTENTS

Summary

The Economy of the Taupo District

The Size and Shape of the Future

Roles and Functions in the Economy

The Retail Sector

Commercial and Industrial Land Supply

SWOT Analysis

SWOT Summary

Annex I: Full Forecasting Results

Annex II: Projected energy workforce

Annex III: Large Format Retail Discussion

# THE ECONOMY OF THE TAUPO DISTRICT

## INTRODUCTION

This report provides an economic assessment of the Taupo District as defined by the local government jurisdiction known as the Taupo District which falls under the purview of the Taupo District Council (TDC). The assessment is provided as one of several inputs to the development of the **Taupo Urban Commercial and Industrial Structure Plan** (the Structure Plan).

## PURPOSE

The objectives of the economic assessment as expressed by the TDC are:

1. To provide a vision for the future economic purpose and function of Taupo urban area.
2. To provide direction on improving the look, feel, safety and functionality of the Taupo town centre.
3. To form a view about the location and form of future commercial and industrial growth within the Taupo township that is consistent with the strategic objectives outlined in Taupo District 2050 and taking into account the Taupo Urban Structure Plan 2004 and Taupo Town Centre Structure Plan (2004).
4. To ensure that future infrastructure serving commercial and industrial areas are environmentally and economically sustainable.
5. To identify the role that large format retail will play in Taupo, and provide direction on its scale and location if it is appropriate.
6. To provide direction on how to improve connections between the Taupo town centre and nearby open spaces and the lakefront.
7. To provide a framework within the District Plan with which to assess development proposals.
8. To appropriately zone identified greenfield areas for commercial and industrial land uses thus encouraging the availability of appropriately zoned land for future investment in commercial and industrial development.
9. To provide alternatives to the District Plan to implement non-regularity parts of the structure plan.
10. To identify and manage the potential effects of the timing and location of commercial and industrial growth in Taupo on the existing Taupo central business district and other identified growth areas.
11. To have consistency in design and approach for upgrades of public streetscape and other public land in the town centre area and commercial and industrial areas.
12. Assess zoning and function of other commercial areas such as neighbourhood shopping areas and appropriate regulatory controls.



## PRELIMINARY

The following concepts have are used throughout this assessment:

### Taupo District 2050

An important framework which this economic assessment looks to is **Taupo District 2050: District Growth Strategy (TD2050)**. This document assesses critical issues in the management of growth for the District and sets out 12 strategic Directions which underlie the development of policy in the district. Conclusions from the economic assessment should be considered in the light of TD2050.

### GDP and GDP Output

Frequent use is made of the term “GDP” and GDP output”. The term is used to denote Gross Domestic Product, a common economic term used to signify annual flow of goods and services through the economy over a specified time period such as a quarter or, more typically in this report a year.

While there are several ways to define GDP (on the basis of all income earned or all expenditure over a given time period), in this report all GDP numbers are derived or reported directly from the N.Z. Department of Statistics series which uses a series of sophisticated methods which ensure consistency and reliability.

Because GDP statistics are not generally produced for sub national areas (apart from a regional series discussed below), various methods have been used to derive estimates. These are estimates and no more than that, are constrained in terms of accuracy by the assumptions underlying them and should be treated accordingly, i.e. with some caution.

The purpose of the measure in this report is to provide indications of economic health across different sectors in the economy and through time.

## NATURE AND FUNCTIONING OF THE TAUPO DISTRICT ECONOMY

This section of the report deals with the structure of the economy as it currently stands. It provides a descriptive view of the allocation of resource in terms of the labour market and GDP output. The purpose of this is to identify:

- The key drivers of economic activity in the district;
- The likely demands which the Structure Plan will have to cater for;
- The land supply likely to be sought including its location; and,
- The key infrastructure requirements which the Taupo economy is likely to impose.

These factors are critical to meeting the objectives set out above.

The section deals with:

1. Structure of the district economy
2. Performance of the district economy
3. Analysis of major sectors
4. Concluding overview and introductory implications

While forming part of the wider assessment, this section of the report may also be read and treated as a standalone section.

## BRIEF HISTORY

The relevance of the history of the district is that both the Pākehā and the Maori experience of constructing individual and family lives along with the enterprises which support those, have been and remain today the fundamental points of departure for economic process in the area. From earliest human settlement in the mid 14<sup>th</sup> century the idiosyncratic combination of volcanic environment and process coupled with the lake – itself a volcanic feature have been inseparable from the development of human endeavour in the area.

For Māori, the environment proved harsh and challenging. For Pakeha too, remoteness, harshness of climate, and cobalt deficiency in soils meant that the “standard” colonial agricultural settlement model did not unfold as it did elsewhere in New Zealand. For both groups today’s burgeoning domestic and international tourist industry though, stretches in its genesis back to very early times as a positive use of the rugged and spectacular environment, represents one of the longest economic partnerships in the country.

Rapid and comprehensive growth since the 1950s has seen appraisal and reappraisal of the district’s resources with the development of farming (now more widely agri-business), forestry, energy (both geothermal and hydro electric) and the many ever present tourism ventures.

Central throughout this history is the physical environment. It’s dominance is difficult to over emphasise and successive evaluations of the opportunity and constraint it offers are key to understanding the economic processes which drive many of the issues affecting the district wide growth issues and, more narrowly, the immediate concerns for the urban commercial and industrial structure planning process.

## RELEVANCE OF STRUCTURE AND PERFORMANCE OF THE ECONOMY

In the present context the structure and performance of the economy is important because it helps determine likely demand for land suited to investment and development as well as likely requirements for linkages between such development – requirements which have implications for transportation of people and goods.

In addition, structure is one determinant of the nature and extent of external impacts and their management requirements. Such effects include (but are not limited to) noise, emissions, discharges to the physical environment and other adverse effects. Conversely beneficial external effects might include recycling of steam as a by product of processing, the generation of recreational opportunities and the improvement of tourist resources.

Structure is thus important in respect of the nature of activity (allocation of resource) and performance is important in respect of factors such as speed, direction and magnitude of activity (operation and management of resource). Trends and changes in these factors are also of obvious significance.

## STRUCTURE OF THE DISTRICT ECONOMY

This may be divided into first, a sectoral view which provides a simple picture of the size and relative importance of various activities in the district and second, a view of the way each of the sectors interacts with other parts of the economy.

The first view provides some idea of the components, or what makes up the economy while the second provides an idea of how those components work together.

## SECTORAL VIEW

The following table shows GDP Output and employment for the district as at 2006. That year is chosen so that Census data collected most recently in 2006 can be compared directly with GDP Output.

Taupo District - Economic Structure 2006

Sector	Employment	Share	GDP est	Share
Agriculture, Forestry and Fishing	1,470	9.9%	\$ 84.32	9.6%
Mining	140	0.9%	\$ 37.61	4.3%
Manufacturing	1,350	9.1%	\$ 109.16	12.4%
Electricity, Gas and Water Supply	130	0.9%	\$ 62.49	7.1%
Construction	1,100	7.4%	\$ 48.18	5.5%
Wholesale Trade	430	2.9%	\$ 40.42	4.6%
Retail Trade	2,330	15.7%	\$ 82.93	9.4%
Accommodation, Cafes and Restaurants	2,310	15.6%	\$ 47.65	5.4%
Transport and Storage	540	3.6%	\$ 46.40	5.3%
Communication Services	70	0.5%	\$ 23.46	2.7%
Finance and Insurance	170	1.1%	\$ 29.22	3.3%
Property and Business Services	1,200	8.1%	\$ 109.15	12.4%
Government Administration and Defence	350	2.4%	\$ 32.78	3.7%
Education	970	6.5%	\$ 32.38	3.7%
Health and Community Services	920	6.2%	\$ 41.75	4.7%
Cultural and Recreational Services	650	4.4%	\$ 32.51	3.7%
Personal and other Services	670	4.5%	\$ 19.34	2.2%
<b>Total</b>	<b>14,810</b>	<b>100%</b>	<b>\$ 879.75</b>	<b>100.0%</b>
Notes:				
GDP prices are in 2006 dollars (millions)				
Employment numbers Census 2006				
Note elsewhere Classified category excluded				

The table reflects the dominance of the key underlying driver of economic process in the Taupo District – the physical environment. This can be seen in the shares attributable to individual categories but can be seen much more obviously when placed in the context of the N.Z. economy as a whole.

The following table places the sectoral structure of the Taupo economy alongside that of N.Z. as a whole. Each sector's share of the Taupo economy is shown as a multiple of the same sector's share in the N.Z. economy considered as a whole.

Sector	GDP Share Relative to NZ
Agriculture, Forestry and Fishing	1.53
Mining	5.27
Manufacturing	0.87
Electricity, Gas and Water Supply	3.87
Construction	1.20
Wholesale Trade	0.60
Retail Trade	1.53
Accommodation, Cafes and Restaurants	3.42
Transport and Storage	1.13
Communication Services	0.45
Finance and Insurance	0.52
Property and Business Services	0.64
Government Administration and Defence	0.85
Education	1.09
Health and Community Services	0.90
Cultural and Recreational Services	1.89
Personal and other Services	1.52

From this table it is more readily apparent that natural resource use, primarily agriculture and forestry, ( while the multiple for mining is high the low absolute numbers make this a little misleading) activity at one and a half times that of N.Z. as a whole is critical and that support for tourism (primarily driven by natural environment features, including the location of Taupo) seen in accommodation, cafes and restaurants is dominant as well. Finally the significance of energy and related activity becomes clear when contrasted with the rest of the country.

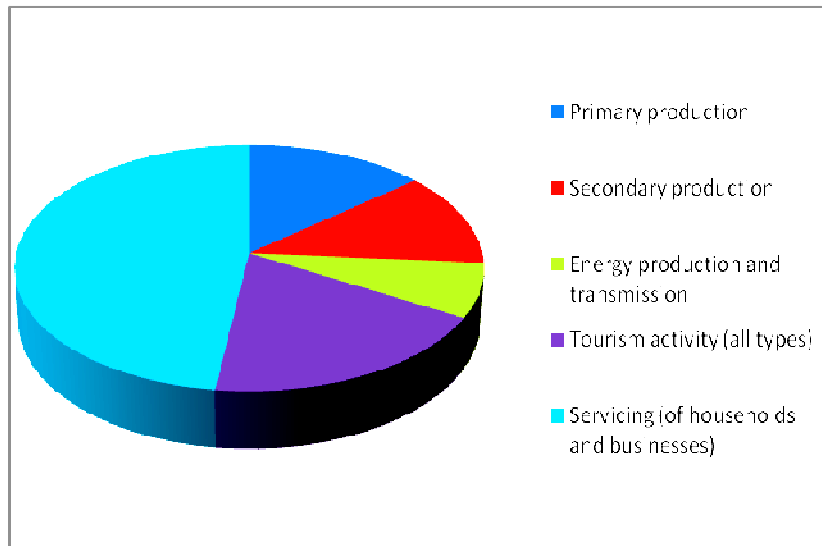
There are always difficulties with categorising various activities – construction for example might be deemed to be a service industry in the sense that its output provides services. On the other hand it can be argued that buildings and other built structures represent “plant”. Semantic debate about categories is unproductive. It helps instead to accept some overlap and develop a workable summary. Such a summary is shown in the following table:

Broad Sector of Activity	GDP est	Share
Primary production	\$ 121.92	14%
Secondary production	\$ 109.16	12%
Energy production and transmission	\$ 62.49	7%
Tourism activity (all types)	\$ 164.43	19%
Servicing (of households and businesses)	\$ 421.75	48%
	\$ 879.75	100%

#### INTERPRETATION

Primary production includes agriculture, forestry, fishing, mining while secondary production is manufacturing. Both definitions are as for the NZIC categories used by the Department of Statistics. The same applies to Energy production and transmission which includes gas and water supply activity.

Tourism is more difficult to define in a useful manner. In this case where activities associated with tourism such as accommodation, restaurants, retail, recreation and like activities in the Taupo District exceed the levels typically expected in N.Z. estimates (based on the proportion of excess from the average) have been attributed to tourism. This allows an estimate which reflects the impact of the activity more accurately.



Expressed in this fashion:

The Taupo economy may be seen as one in which:

- Significant production, both primary and secondary (26%), is coupled with
- Two specialist sectors – tourism and energy (16%),
- All supported by a significant service sector (58%).

This may be contrasted with the N.Z. economy in total where services dominate at 63% and production activity accounts for the remaining 37%.

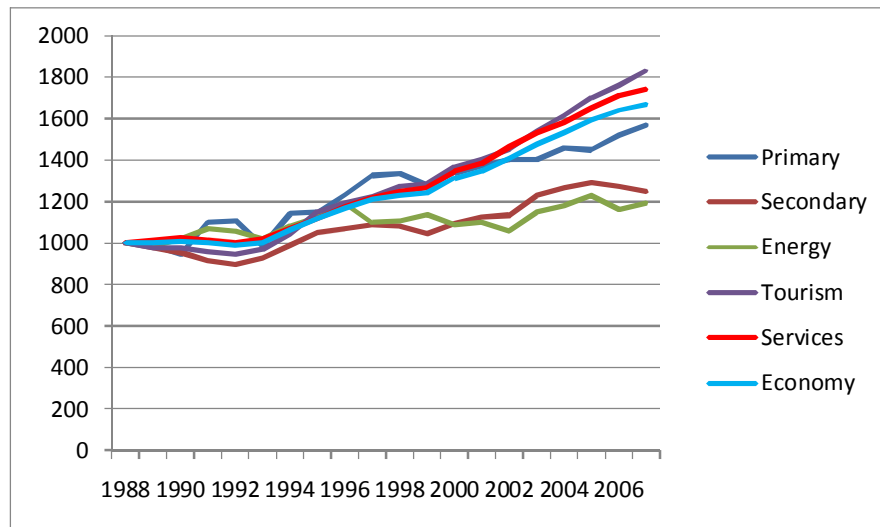
## PERFORMANCE OF THE DISTRICT ECONOMY

There are several ways to examine the performance of the local economy. Of particular interest are the rates of growth in the various sectors which dominate the structure of the economy as described above.

The following table provides a 20 year view of growth in the sectors of concern. Data has been standardised to allow a common point of departure so that trends become apparent by indexing to a start value of "1,000". The final column in the table shows nationwide growth performance with averages for the 20 years shown at the foot of the table.

Sector Growth	Primary	Secondary	Energy	Tourism	Services	Economy
1988	1000	1000	1000	1000	1000	1000
1989	989	977	985	976	1010	1001
1990	943	954	1020	978	1027	1009
1991	1100	915	1071	956	1012	1001
1992	1108	895	1056	948	998	987
1993	984	925	1022	973	1019	1002
1994	1142	986	1084	1044	1070	1061
1995	1147	1052	1123	1152	1121	1119
1996	1231	1071	1187	1191	1174	1167
1997	1325	1089	1098	1226	1220	1208
1998	1334	1080	1108	1270	1248	1232
1999	1277	1042	1137	1284	1265	1241
2000	1336	1096	1086	1365	1345	1312
2001	1373	1125	1098	1401	1382	1347
2002	1402	1135	1059	1455	1463	1408
2003	1404	1230	1150	1542	1530	1478
2004	1458	1266	1177	1616	1580	1530
2005	1448	1293	1231	1702	1649	1592
2006	1521	1275	1161	1762	1709	1640
2007	1569	1251	1193	1831	1742	1670
Annual Ave	3.2%	1.4%	1.1%	4.6%	4.1%	3.7%

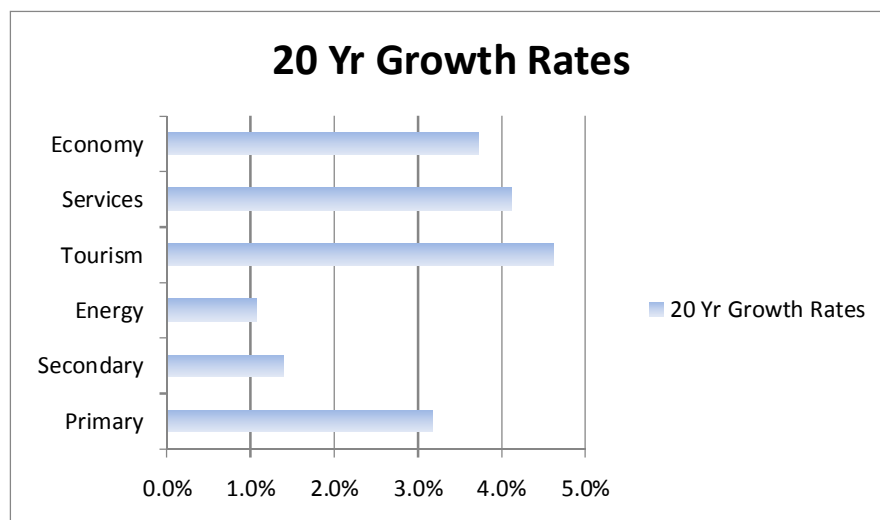
The following diagram (populated from the table data) illustrates both the fluctuations in growth and the trends in each sector:



Points to be noted from the data and the graph are:

- The significant fluctuations in growth rates. The turn down in the 1989 – 1992 period is readily apparent and affected all sectors;
- There is a clear and growing separation in growth rates between the “traditional” energy and manufacturing (secondary) sectors and the rest of the economy;
- The significance of services and service industries is also apparent. While the popular notion of strong economic growth as being primarily concerned with pastoral activity and manufacturing, the data suggest that services are likely of greater significance; and,
- The significant growth of tourism, overtaking primary industry and stretching its leads toward the more recent past is also apparent.

These points are summarised in the following graph which depicts the annual growth rates as experienced over 20 years:

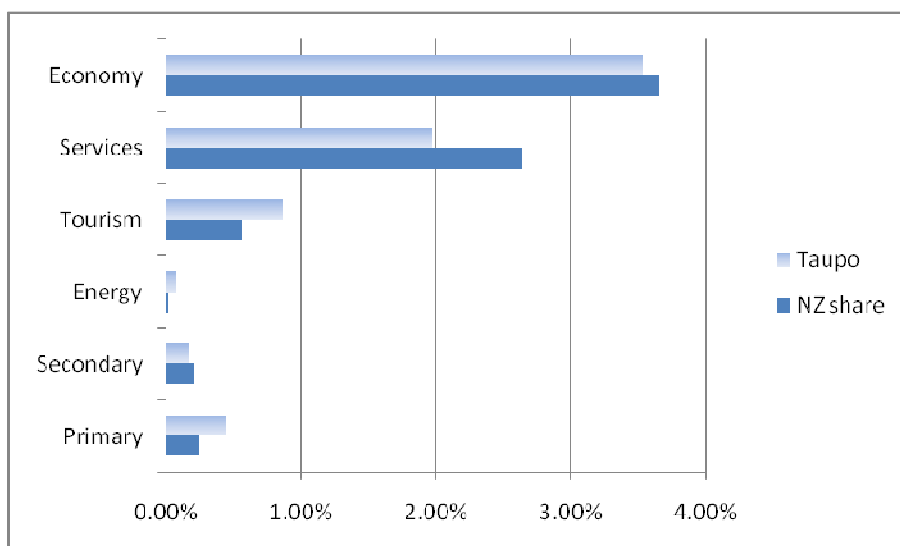


## EFFECT ON TAUPO

In the following table account is taken of the relative importance of each sector in the Taupo economy compared with the nationwide economy. The table addresses the questions “what is the relative importance of each sector?” and “which are the important drivers of economic growth in Taupo?”. To give some yardstick for comparison, the national figures are shown alongside.

	Primary	Secondary	Energy	Tourism	Services	Economy
Growth rate	3.2%	1.4%	1.1%	4.6%	4.1%	3.65%
TDC share	14%	12%	7%	19%	48%	100%
Growth adjusted for share	0.44%	0.17%	0.08%	0.86%	1.98%	3.53%
NZ share	7.5%	14.5%	2.1%	12.0%	63.8%	100%
Growth adjusted for share	0.24%	0.20%	0.02%	0.56%	2.63%	3.65%

The terms “TDC share” and “NZ share” mean the share of each sector found in these economies, and the term “Growth adjusted” means the growth rate having regard to sector size. Under the heading “Economy” the rates represent growth throughout the Taupo and NZ economies respectively.



The diagram makes the conclusions reasonably obvious. Taupos growing sectors are tourism, the primary sector and to a lesser extent (though still ahead of N.Z. as a whole) energy. It also seems likely that, given the dependence of tourism on services, Taupo is a significant “importer” of services since growth rates in the service sector are behind those for the economy as a whole.

In terms of the economy as a whole, the last twenty years have seen the NZ economic growth experience in aggregate (3.65% p.a. average) broadly matched by the experience in Taupo (3.53% p.a. average).

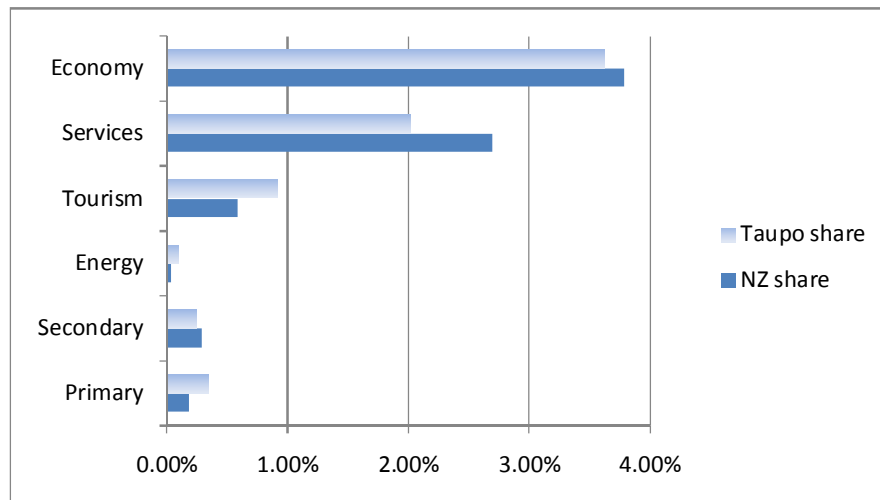
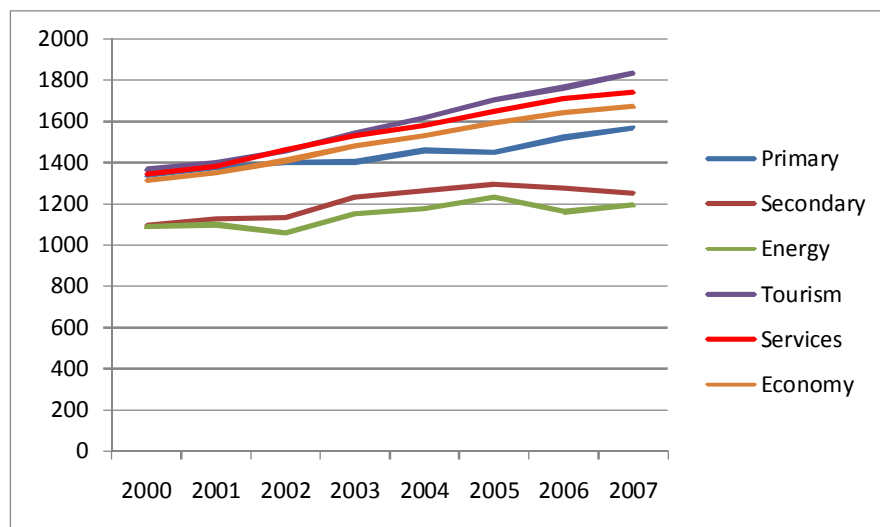
## HAVE PATTERNS CHANGED RECENTLY?

A reasonable question concerns whether or not recent years have seen changes which might be lost in the averaging effects of the twenty year view. The data suggest no and that, in fact, the trends observable are reinforced when viewed over a shorter time frame. This can be seen in the following summary table and graphs for the period 2000 – 2007.



## National Growth Rates

Sector	Primary	Secondary	Energy	Tourism	Services	Economy
2000	1336	1096	1086	1365	1345	1312
2001	1373	1125	1098	1401	1382	1347
2002	1402	1135	1059	1455	1463	1408
2003	1404	1230	1150	1542	1530	1478
2004	1458	1266	1177	1616	1580	1530
2005	1448	1293	1231	1702	1649	1592
2006	1521	1275	1161	1762	1709	1640
2007	1569	1251	1193	1831	1742	1670
Average Growth	2.5%	2.0%	1.4%	4.9%	4.2%	3.9%



Recent experience emphasises then:

- The dominance of the growth rates by tourism;
- The split of traditional sectors away from service oriented economic activity; and,

- The generally shared nature of the aggregate NZ economy and Taupo economy experience.

---

## RELATIONSHIPS AND INTERACTION BETWEEN SECTORS

As well as the structure which characterises what activity takes place, the relationship between activities is of great significance since no economic activity occurs in isolation. Every activity is linked in one way or another to other activities. Most commonly these links are thought of in the following terms.

- The benefits of any commercial enterprise do not begin and end solely with the firm in question but instead extend into the wider economy through supply and demand relationships with numerous suppliers and households throughout the economy.
- Analysis of these relationships typically seeks to quantify these “spin off” or “multiplier” effects in terms of additional expenditure, value added and employment benefits created in the economy as a whole.

Three types of impact are generally recognised:

### Direct Impacts

The dollar output and employment effects of expenditure by enterprises in the economy. This impact comprises total staff employed and annual expenditure on all of the inputs required to operate the enterprises including the expenses or overheads and the capital investment required to run the enterprise.

### Indirect Impacts

The dollar output and employment effects of expenditure by all those suppliers who provide services, goods and equipment for the running of enterprises. These include support items such as plant, maintenance and transport services as well as consumables such as fuels and electricity.

### Induced Impacts

All of the staff involved directly and indirectly with the enterprise come from households (including one person households) which create demands in the economy for services such as rent and house purchases, electricity, communication services, and goods such as food, clothing and so on.

All enterprises then, create economic benefits in the form of dollar output and employment through their own activities, the operations of those supplying them and the economic activity of the households supporting all of these activities.

There are various ways of measuring these economic impacts which are also referred to as multiplier effects or spin off effects. There are debates about the most appropriate methods but, for the present, the conclusions are that:

- The most appropriate measure is the Value Added multiplier which is a measure ensuring that no “double counting” of effects confounds the estimates;

- FTE employment multipliers provide an estimate which is appropriate for considering labour market impacts; and,
- Traditional “output multipliers” based on expenditure, while arguably creating double counting problems, are still in common use and ought to be identified if not applied in policy decisions.

The following table shows the multipliers for the Taupo economy structured as discussed above, for all three measures and estimated for “Type II” multipliers, i.e. multipliers which include household or “induced” impacts. Data used in estimating these multipliers have been drawn from the Department of Statistics Inter Industry Study series and the NZIER Study of multipliers (NZIER, University of Auckland 2002). While adjustments are sometimes made to the multipliers in an attempt to adjust for regional differences these effects are picked up more directly in this report where the multipliers are used for specific purposes (such as estimation of the impacts of, say, retail development) in Taupo.

Total Expenditure Multipliers	
Broad Sector of Activity	Type II Multiplier
Primary production	2.99
Secondary production	2.79
Energy production and transmission	2.92
Tourism activity (all types)	3.14
Servicing (of households and businesses)	3.16

Value Added Multipliers	
Broad Sector of Activity	Type II Multiplier
Primary production	1.45
Secondary production	1.32
Energy production and transmission	1.48
Tourism activity (all types)	1.42
Servicing (of households and businesses)	1.43

FTE Employment Multipliers	
Broad Sector of Activity	Type II Multiplier
Primary production	2.46
Secondary production	3.21
Energy production and transmission	3.14
Tourism activity (all types)	1.91
Servicing (of households and businesses)	3.18

## INTERPRETATION

At the simplest level the multipliers show the strength of the relationships between sectors in the Taupo economy and beyond. Activity in any one sector implies activity in other sectors. The converse applies as well with reductions in any sector having significant effects on activity in other sectors.

Something of this effect can be seen in the following table where the value added multipliers have been applied to the GDP estimates for 2006 for the TDC area:

Value Added Multiplier Effects			
Broad Sector of Activity	Direct	Total	Multiplier
	Est GDP	Impact	Effect
Primary production	\$ 122	\$ 177	\$ 55
Secondary production	\$ 109	\$ 144	\$ 35
Energy production and transmission	\$ 62	\$ 92	\$ 30
Tourism activity (all types)	\$ 164	\$ 233	\$ 69
Servicing (of households and businesses)	\$ 422	\$ 603	\$ 181
<b>TOTALS</b>	<b>\$ 880</b>	<b>\$ 1,250</b>	<b>\$ 370</b>

Note: not all impacts felt in Taupo (see below).

Points of note regarding multipliers and the Taupo economy are:

- The significant leverage which multipliers create. For each new FTE job in the service sector for example some 2.18 additional jobs (  $1 \times 2.18$  ) are created elsewhere in the economy as a whole. The converse applies as well showing the vulnerability which multipliers can contribute to;
- Obviously not all of the value add and FTE positions are created or supported (or lost) in the Taupo District. In fact a significant proportion of the “servicing” of, say, primary production arises from outside the district. This is a common pattern in regional and local economies which are much more open than their national counterparts;
- The openness of the economy does place a premium on the distribution sector – transport, storage and communications – since other local production is dependent upon efficient, low cost trade with other regions. By the same token, efficiency in this sector benefits local production since other regions are “importers” of Taupo’s output; and,
- The multipliers associated with the service sector are just as large and significant as those associated with the production sector. Traditionally commentators have tended (throughout the OECD – for example the CER agreement for services came much later than for goods) to play down the role of the service sector relative to manufacturing. In terms of value add and FTE job generation this is to understate a major driver in the economy.

Finally the caveats and assumptions common to all multiplier analyses should be noted. The analysis assumes constant levels of productivity (where in fact productivity might improve where there is existing under utilisation of capacity), constant relationships over time (where in fact relationships are likely to alter), close to full capacity utilisation (where in fact some sectors may be “under worked”). Violation of the assumptions does not invalidate the analysis providing care is taken in interpretation and spurious precision not attributed to analyses.

## THE MAIN SECTORS: CURRENT CHARACTERISTICS

In the following sections a picture of the present characteristics of the main sectors is provided. This forms the base for reviewing likely future trends and patterns.

### PRIMARY INDUSTRY

The key purpose in understanding the main features of primary activity in the area lies first in the natural resource requirements which that industry has and secondly in the servicing demands which the sector has, particularly as these impact on the Taupo urban complex.

Some picture of the predominant primary activity in the territorial district which is the TDC can be gained from the following table:

Land Use TDC Area 2002			
Tussock and danthonia used for grazing	Number of Farms	15	1%
	Area in Hectares	2 244	1%
Grassland	Number of Farms	440	38%
	Area in Hectares	113 753	31%
Arable crop land, fodder crop land and fallow land	Number of Farms	55	5%
	Area in Hectares	2 827	1%
Land in horticulture	Number of Farms	40	3%
	Area in Hectares	193	0%
Planted production forest	Number of Farms	180	15%
	Area in Hectares	196 171	53%
Mature native bush	Number of Farms	45	4%
	Area in Hectares	7 089	2%
Native scrub and regenerating native bush	Number of Farms	100	9%
	Area in Hectares	35 250	10%
Other land	Number of Farms	290	25%
	Area in Hectares	11 904	3%
Total Land	Number of Farms	1 165	100%
	Area in Hectares	369 431	299%

Note that one farm may have several land uses.

Source: Ministry of Agriculture and Forestry

The dominant feature is the two way split between pastoral farming activity (31% of land) and forestry (53%). Adding in various native and regenerating forests would lift the forestry share still higher.

Traditionally sheep and beef has dominated pastoral farming however, like most rural areas in N.Z. recent times have seen conversion to dairy where feasible. Beef numbers too grew throughout the 1990s while declines in were seen in sheep farming activity. The fortunes of both sheep and beef and dairy depend on and ride with the external forces affecting the pastoral sector as a whole in New Zealand.

For the Taupo district the servicing spinoffs from the sector are significant with services at intermediate level (energy, maintenance, vehicle servicing) and the household level (labour, household support services).

Planted production forests in the area form part of the extensive middle North Island forestry complex which accounts for a third of all N.Z. forests. Forestry is a notoriously cyclical industry and while great hope has been held out for the economic value of forestry for N.Z. the reality has been involved a mixed experience. The country is a price taker, it is difficult to add value to raw material in N.Z. at competitive costs and the raw material is far from major markets. Processed product – pulp and paper for example, also involve volatile cycle ridden markets in which N.Z. product is a price taker.

The result is that the industry does not generally enjoy high margins especially risk adjusted. Its significance for Taupo however lies in the very significant servicing requirements which the industry generates at both service levels (the need for engineering services, plant, equipment, energy inputs), the logistics and distribution sectors (storage, transport) and the household sector (labour, household support services).

To document further the significance of the servicing demands created by the primary sector, the following table breaks out the sector into its major components and shows value added and FTE employment total impact multipliers.

Multiplier type	Mixed livestock and cropping	Sheep and beef cattle farming	Dairy cattle farming	Other farming	Services to agriculture, hunting and trapping	Forestry	Services to forestry	Logging
Value added multiplier	1.40	1.37	1.53	1.42	1.45	1.41	1.58	1.63
FTE employment multiplier	2.20	2.02	2.10	1.57	2.03	8.66	2.01	1.86
Services to the sector	1.68	1.64	1.54	1.30	1.51	5.24	1.35	1.31

Particular note should be made of the “services to sector” line which splits out servicing derived from manufacturing, maintenance, construction, fuel and energy, transport and storage industries. The forestry sector in particular, is a major consumer of intermediate goods and services.

## MANUFACTURING AND SECONDARY INDUSTRY

The term “manufacturing” is something of a misnomer in the context of the TDC economy because much of the manufacturing activity exists as a result of primary sector servicing requirements rather than in terms of standalone sector activity. Various statistics and studies undertaken in the past (for example ARP Skills Study 2004) have identified this characteristic.

More than half those employed in the manufacturing sector work in firms undertaking some form of downstream forestry processing. Working from the ARP Report 2003 figure of 38 businesses involved in wood

product manufacture and processing and taking account of declines and flat real growth in the industry suggest that this number is likely to have remained the same or perhaps even dropped.

Outside of the downstream forestry industry the same “service manufacturing” effect can be noted with demand generated by the farming sector. Both forestry and farming generate work in light engineering, metal fabrication and maintenance product manufacture.

Beyond these service industries there is some niche manufacturing but not of any dominant nature.

---

## ENERGY

The opening up of the Taupo district to growth and a broader economic base that began with the wider development of primary sector activity in the 1950s may be said to have been galvanized with the rapid and significant scale development of energy resources in later decades. The area is rich in “raw material” for energy production and national demand for energy, most notably electricity, has grown consistently over a long period of time.

Key activity based around these developments at present are:

### Hydro Electric Power

With two major contributors being the Tongariro scheme and the Waikato scheme for which Lake Taupo is the critical feed. The Waikato accounts for 13% of all HEP generation in New Zealand while Tongariro accounts for 4% of total electricity generation.

### Geothermal

Based on the Wairakei geothermal field. Energy from this resource has three uses. Direct heating for example in public and private buildings, in industrial and commercial processes and in applications such as swimming pools. Secondly conversion of heat to electricity – by far the major application in terms of volume and dollar value, and third through extraction of minerals in the steam and geothermal gases.

### Natural Gas

Closely related to geothermal and having similar applications but with the majority of the resource sold on a domestic basis to households as an electricity substitute and competitor.

From the perspective of the economy, the chief impacts arose from the construction and development phases of these projects and their multiplier effects. Currently as employers the sector participants are of much less significance.

This can be seen in the fact that the entire sector accounts for less than 1% of TDC area employment but accounts for some 7.1% of local GDP output. The latter is some 3.9 times the equivalent national share and so is important in both a relative and an absolute sense.

This value lies not only in direct production (on a value add basis) but also in terms of value added spin offs with the sector having the highest of the value added and expenditure based multipliers in the five sector economy model used above. Consequently the “district export” value of the energy sector is significant.

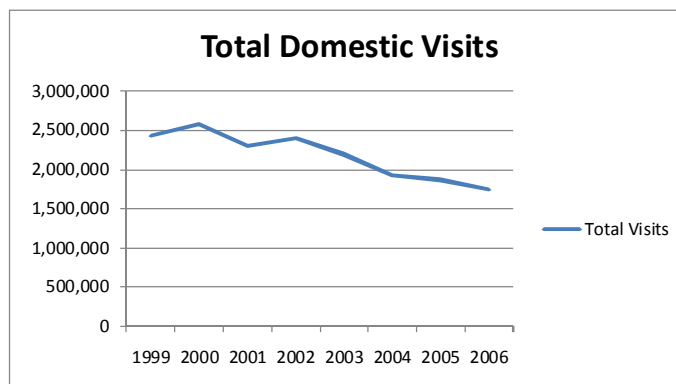
## TOURISM

There are a large amount of data collected about tourism, largely from the Ministry of Tourism's survey programmes. Summarising the main findings from this allows the main features of the recent past and present to be developed.

The following tables and graphs summarise this:

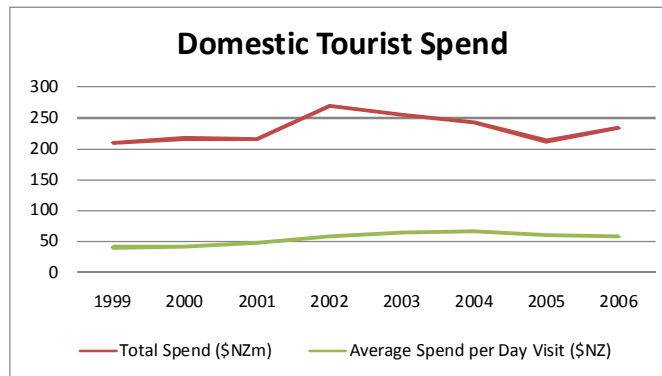
From an economic perspective the key drivers are visitor numbers, total spend and average daily spend of tourists. For Taupo the domestic tourist market is of particular importance constituting some 79% of total visits and 63% of total spend in 2006.

Year	Total Visits	Total Spend (\$NZm)	Average Spend per Day Visit (\$NZm)
1999	2,428,757	210	41
2000	2,584,259	217	42
2001	2,302,113	216	48
2002	2,399,298	269	58
2003	2,194,482	255	65
2004	1,920,529	242	67
2005	1,869,628	213	60
2006	1,741,714	234	58



In terms of total visits it can be seen that the trend has been down with a drop of more than 25% since 1999. Given the strong performance of the economy over that period the drop is likely to have reflected competition from other destinations – notably overseas destinations. That trend is likely to have been exacerbated by competition driving down total costs of overseas travel.

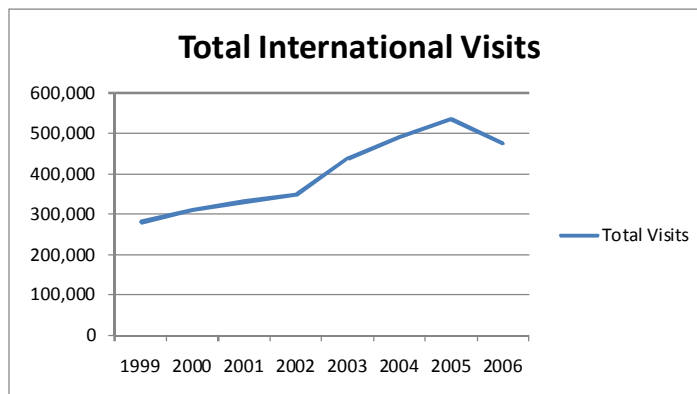




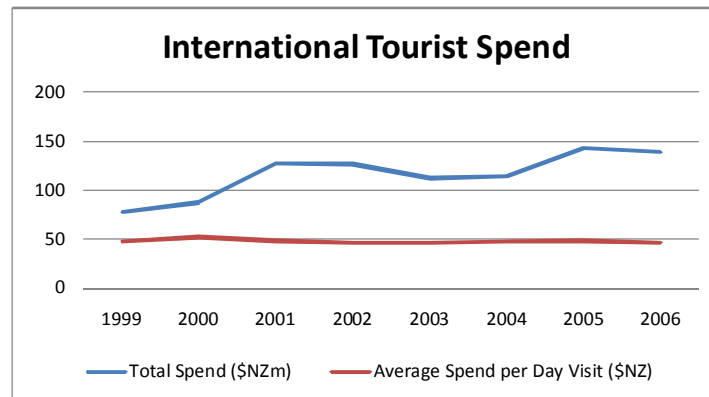
Domestic tourist spending on the other hand has remained relatively flat both in terms of total and average spend (although this is likely to mean a slight drop in real terms has been experienced). It is important to note then, that while tourism is of great significance to the local economy the sector is not immune to competition and is subject to external (including international influences).

The picture in respect of international tourism is rather different. Its share of visits was 21% while share of total spending was some 37% in 2006.

Year	Total Visits	Total Spend (\$NZm)	Average Spend per Day Visit (\$NZ)
1999	279,633	78	48
2000	311,127	88	52
2001	330,517	128	49
2002	348,095	127	47
2003	438,176	112	47
2004	490,718	114	48
2005	536,143	143	48
2006	476,056	139	47



The strong rising trend is of most significance, particularly considering that the period covers the 9/11 events after which international tourism suffered a general decline. The growth in numbers being over 70% for the period shows a significant increase even given the downward spike from 2005.



The trend in spending by international visitors reflects the rise in visitor numbers but it should be noted that average spend has not increased suggesting that while volumes may increase, per unit spend does not necessarily.

#### RELATIVE VALUE – DOMESTIC VERSUS INTERNATIONAL

It is worth noting that the relative value of international visits is significantly higher than domestic visits. The number of total visits by domestic tourists was 3.6 times that of international tourists but the total spend of domestic tourists was only 1.7 times that of international.

The picture then is one in which:

- The most valuable segment of the tourist market, while lower at present in absolute terms is growing rapidly and its spending exceeds the domestic segment; while,
- The strong domestic market has seen a significant decline but remains important in terms of absolute spending but much less so in respect of relative spending.

Such declines in both visits and spending as are experienced seem likely to be offset by growth in the international sector.

It should be noted that in 2006 some 56% of total visits were reported as being for holiday purposes – showing that visits for reasons other than holidaying are important. Spending however is 63% related to holidaying with 17% related to business.

These statistics do suggest that tourism involves quite diverse activity and generalization about visitor and spending patterns are likely to be dangerous.

## RETAIL

In this sectoral analysis the retail sector has been split out from the simple model of the economy discussed above for three reasons:

1. Retail serves both the “standard” service sector which takes the form of households and communities, but
2. Retail in Taupo is an “input” into the tourist sector where it forms an integral part of the product offering in that sector; and,
3. Many of the resource management issues which the TDC wish to address (future form of CBD, land supply, commercial development control etc.) are inextricably linked to retail activity of one sort or another.

Issues concerned with item three above are dealt with in detail elsewhere but the purpose of the following is to outline the overall structure and performance of the retail sector.

The following table shows an aggregate view of the structure of the retail sector for the district as a whole with changes since 2000 . It should be noted that there are overlaps in certain categories and that some categories involve service as much as sales (for example repair services).

The subsequent two sets of tables indicate the relationship between enterprises (of interest in that number and change in enterprises has impacts on built form and urban characteristics) and employment (of interest because there are differing levels of productivity and employment opportunity associated with different segments).

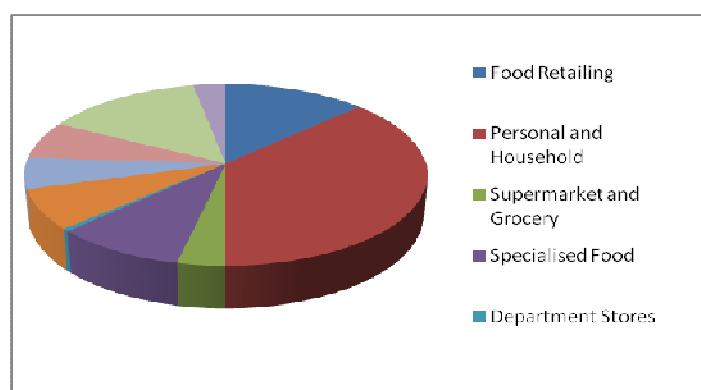
In both cases (enterprises and employment) changes over time are shown.

		2003	2004	2005	2006	2007
Retail Trade	Enterprises	600	628	616	630	638
	Employee Count	3,455	3,512	3,605	3,738	3,678
Food Retailing	Enterprises	86	89	81	81	82
	Employee Count	880	900	890	870	920
Personal and Household	Enterprises	214	225	227	234	237
	Employee Count	840	850	910	1,000	920
Supermarket and Grocery	Enterprises	22	23	21	21	22
	Employee Count	480	470	460	470	470
Specialised Food	Enterprises	64	66	60	60	60
	Employee Count	400	430	430	410	440
Department Stores	Enterprises	3	3	2	2	3
	Employee Count	120	120	120	140	140
Clothing and Soft Good	Enterprises	36	36	40	48	46
	Employee Count	150	160	180	210	200
Furniture, Houseware, Appliance	Enterprises	35	38	40	35	35
	Employee Count	160	140	160	160	160
Recreational Good Retailing	Enterprises	39	41	43	45	43
	Employee Count	150	160	160	180	160
Other Personal and Household	Enterprises	85	88	83	86	91
	Employee Count	260	270	280	280	250
Household Equipment Repair	Enterprises	16	19	19	18	19
	Employee Count	15	12	15	18	18

The significance of the various segments of the retail sector can be seen in the following tables along with the way in which their relative importance has altered over the last five years.

		2003	2004	2005	2006	2007
Retail Trade	Enterprises	600	628	616	630	638
Food Retailing		14%	14%	13%	13%	13%
Personal and Household		36%	36%	37%	37%	37%
Supermarket and Grocery		4%	4%	3%	3%	3%
Specialised Food		11%	11%	10%	10%	9%
Department Stores		1%	0%	0%	0%	0%
Clothing and Soft Good		6%	6%	6%	8%	7%
Furniture, Houseware, Appliance		6%	6%	6%	6%	5%
Recreational Good Retailing		7%	7%	7%	7%	7%
Other Personal and Household		14%	14%	13%	14%	14%
Household Equipment Repair		3%	3%	3%	3%	3%
		100%	100%	100%	100%	100%

The split out amongst enterprises for 2007 is shown diagrammatically below:

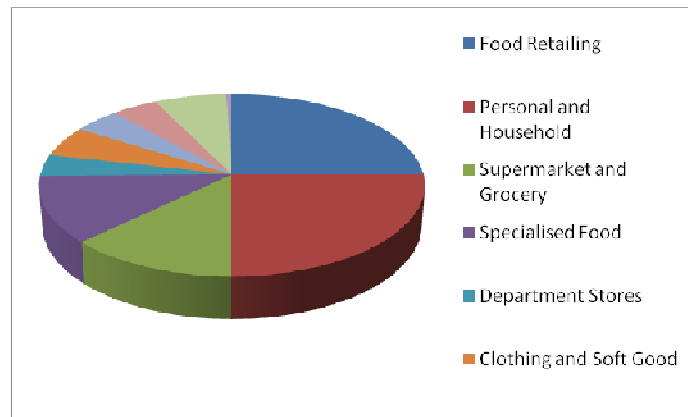


The significance of the various segments of the retail sector can be seen in the following tables along with the way in which their relative importance has altered over the last five years in respect of employee counts.

		2003	2004	2005	2006	2007
Retail Trade	Employee Count	3,455	3,512	3,605	3,738	3,678
Food Retailing		25%	26%	25%	23%	25%
Personal and Household		24%	24%	25%	27%	25%
Supermarket and Grocery		14%	13%	13%	13%	13%
Specialised Food		12%	12%	12%	11%	12%
Department Stores		3%	3%	3%	4%	4%
Clothing and Soft Good		4%	5%	5%	6%	5%
Furniture, Houseware, Appliance		5%	4%	4%	4%	4%
Recreational Good Retailing		4%	5%	4%	5%	4%
Other Personal and Household		8%	8%	8%	7%	7%
Household Equipment Repair		0%	0%	0%	0%	0%
		100%	100%	100%	100%	100%

Note "zero" percentages arise because of the small numbers in a given category relative to totals for some categories.

The split out amongst enterprises for 2007 is shown diagrammatically below:



Points to stand out from the data are:

- While there is a significant variety of outlet types, there is very significant concentration in certain areas. The food retailing and personal & household categories for example accounted for 50% of enterprises in 2007;
- Different segments involve different numbers of employees with some operations being considerably more labour intensive than others. Some 75% of employees work in the food and personal, household segments which account for 64% of the enterprises;
- The standout feature of changes over time is that, from an aggregate perspective, these have been relatively small. Most segments have remained largely unchanged in terms of their presence in the industry from both an employee count and an enterprise point of view.

Aggregate values expressed in terms of their relationship to the total industry may mask some changes as the absolute number changes suggest. The following changes over the last five years for example are worth noting despite their being “swamped” when the sector is seen as a whole.

Segment	Measure	Change
Food Retailing	Enterprises	-4.7%
	Employee Count	4.5%
Personal and Household	Enterprises	10.7%
	Employee Count	9.5%
Supermarket and Grocery	Enterprises	0.0%
	Employee Count	-2.1%
Specialised Food	Enterprises	-6.3%
	Employee Count	10.0%
Department Stores	Enterprises	0.0%
	Employee Count	16.7%
Clothing and Soft Good	Enterprises	27.8%
	Employee Count	33.3%
Furniture, Houseware, Appliance	Enterprises	0.0%
	Employee Count	0.0%
Recreational Good Retailing	Enterprises	10.3%
	Employee Count	6.7%
Other Personal and Household	Enterprises	7.1%
	Employee Count	-3.8%
Household Equipment Repair	Enterprises	18.8%
	Employee Count	20.0%

- The clothing and soft goods category has seen significant growth;
- Recreational goods outlets have increased but employment has not risen at the same rate;
- Both personal and household goods categories have increased in number of outlets but not personnel;
- In direct contrast specialised food outlet numbers have declined but number of employees has increased.

The comparison of growth rates confirms the detail set out above. Significantly too, the pattern in Taupo is much the same as for New Zealand as a whole with number of enterprises growing more slowly than employee counts.

Area	2000	2001	2002	2003	2004	2005	2006	2007	Ave Gwth
N.Z. Enterprises	N/A	-4%	-1%	2%	6%	2%	1%	0%	1%
Employee Count	N/A	2%	3%	4%	5%	2%	3%	2%	3%
TDC Enterprises	N/A	-2%	2%	0%	3%	0%	3%	1%	1%
Employee Count	N/A	0%	6%	5%	3%	1%	3%	-1%	2%

Finally it should be noted that on these two measures at least the retail sector in Taupo has grown more slowly over the last seven years than the economy as a whole – as has been the case for retail nationwide.

#### RETAIL PERFORMANCE

The similarities between the national retailing experience and that of Taupo mean that similar performance features are common. The following tables provide indications of recent performance. Key sources are the N.Z. Statistics Department Retail Trade Surveys and the Retailers Association publication and databases.

The following table shows percentage increase in turnover over the last five years. While these increases are based on nominal values (not adjusted for inflation) they indicate that growth has been strong and at least equal to or better than the economy as a whole (approximately 3.5% over the period).

	2002	2003	2004	2005	2006	2007
Change in retail turnover ( % )		5.2	7.4	6.3	5.2	6.1
Average	6.0					
Standard deviation	0.9					

Growth does not necessarily translate into profit however, since most retail operations work to a volume based model in spite of branding, differentiation strategies and the like. The following table shows net profit margins before tax over time for the major retail activities located in Taupo.

Net Profit Before Tax %	2002	2003	2004	2005	2006
Fruit & Vegetable	2.6	6.8	6.7	10.1	6.8
Liquor Retailing	2.0	4.0	3.2	4.9	6.0
Takeaway Foods	8.2	6.5	5.9	5.4	4.4
Clothing Retailing	8.3	8.3	6.0	8.1	8.9
Footwear Retailing	5.6	7.3	8.8	4.3	6.6
Fabrics & Other Soft Goods	1.7	5.8	5.0	10.3	0.9
Furniture Retailing	5.7	8.7	7.4	4.5	3.4
Floor Covering Retailing	6.1	7.0	7.1	9.9	8.1
Domestic Hardware/Housewares	5.3	7.3	6.4	2.7	1.6
Domestic Appliance Retailing	4.7	5.2	5.2	4.1	3.2
Sport & Camping Equipment	6.1	10.4	4.4	4.8	11.0
Newspapers, Books, Stationery	5.0	5.4	6.0	5.3	4.4
Pharmaceuticals/Cosmetics/Toiletries	9.8	10.5	12.8	10.3	8.2
Garden Supplies Retailing	4.3	7.6	5.1	7.1	4.5
Watch & Jewellery Retailing	5.4	11.7	11.7	N/A	9.2
Automotive Fuel Retailing	3.9	3.3	3.0	1.6	1.7
Tyre Retailing	9.4	9.6	9.0	7.9	11.4
Total All Retail	5.5	6.3	5.5	5.2	5.3

It is clear that profit margins vary considerably both as between segments and over time. There are no clearly discernable trends in terms of increases or declines (takeaway food is a possible exception with a decline along possibly with hardware and appliances) and the picture is one of a relatively static margin situation with growth and total profitability thus depending on sales and sales growth – as noted – a volume model.

The following table gives an indication of relative profitability of segments over time. Of particular note is that Taupo has strong (relatively) shares in the higher margin businesses as might be expected given the tourist and tourism servicing functions noted previously.

Net Profit Before Tax % - long run averages	
	Pre Tax
Pharmaceuticals/Cosmetics/Toiletries	10.3
Watch & Jewellery Retailing	9.5
Tyre Retailing	9.5
Clothing Retailing	7.9
Floor Covering Retailing	7.6
Sport & Camping Equipment	7.3
Fruit & Vegetable	6.6
Footwear Retailing	6.5
Takeaway Foods	6.1
Furniture Retailing	5.9
Garden Supplies Retailing	5.7
Newspapers, Books, Stationery	5.2
Fabrics & Other Soft Goods	4.7
Domestic Hardware/Housewares	4.7
Domestic Appliance Retailing	4.5
Liquor Retailing	4.0
Automotive Fuel Retailing	2.7

## CONCLUSION

Taupo has a retail sector with GDP output proportionately 1.5 times that of the New Zealand sector as a whole. In general terms though the structure, splits and enterprise / employee composition is not dissimilar to the rest of the economy.

In short, the sector is much the same as that found in the rest of the economy only considerably bigger for the size of the district economy – this being attributable in large measure to the tourist activity – both domestic (accounting for the national / local similarities since domestic consumers are from other areas making up the New Zealand economy) and international found in the TDC area.

## EXTERNAL MACRO FACTORS AND THE DISTRICT ECONOMY

The majority of the analyses contained in this assessment focus on sector and industry level economic structure and process. For the sake of both completeness and because of their importance brief identification of external macro economic factors affecting the district is important.

It is clear from the structure of the economy and the performance of the industries making it up that:

- At least half of the industries are directly affected in their costs, revenues and investment decisions by prices for finished product (for example dairy goods and forest products) and factor inputs (for example fuels and plant) set in global markets beyond New Zealand. The economy will thus gain and lose according to world economic trends.
- The “other half” of the economy – the more than 50% which is involved in servicing – is heavily influenced by New Zealand domestic market prices (for example for labour and property), fiscal policy (for example tax regimes and tax rates), regulatory policy (for example OSH, RMA, ACC) and macroeconomic policy (for example monetary policy).

What goes on outside the district then is vital to performance within the district. That is the case for all regions in New Zealand as indeed it is for the country as a whole.

While it is typically the case that there is little in the way of practical policy initiatives which can alter these realities, their recognition does place a premium on a consideration of the way local (and regional) policies affect:

- Ability for households and firms to change, adapt and innovate;
- Ease with which firms can diversify in various processes in businesses so as to manage risk;
- Ease and costs associated with exiting some markets and moving into others as conditions alter; and,
- Costs and quality of locally provided public services such as infrastructure and regulatory services.



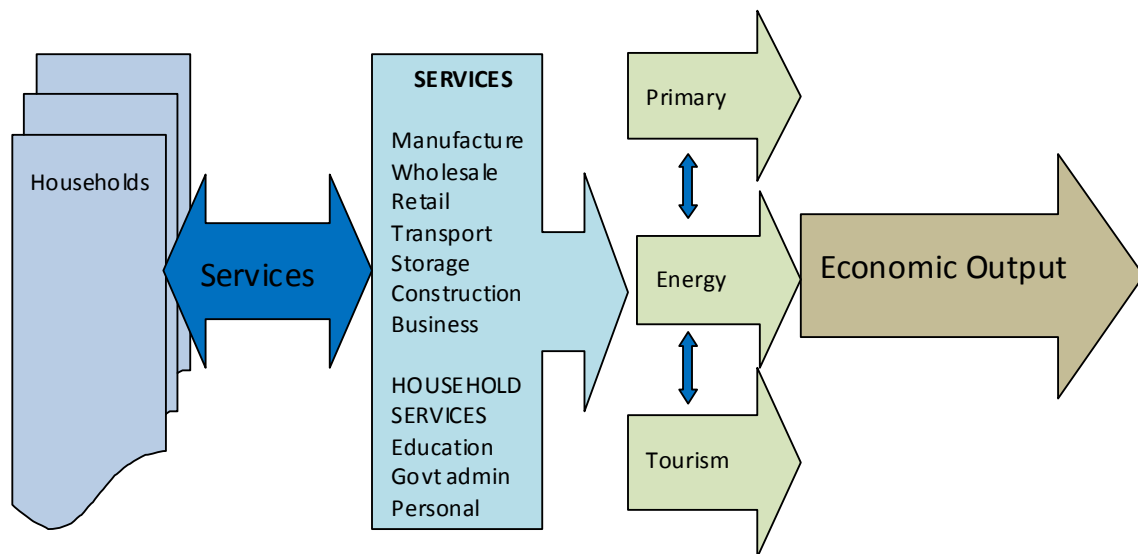
## CONCLUSIONS: CHARACTERISING THE ECONOMY AND ITS CRITICAL DRIVERS

Perhaps unsurprisingly there are many senses in which the Taupo economy is a microcosm of the New Zealand national economy – striking reliance on natural resources, rich environmental resource which passive and active value, heavy dominance of pastoral activity, gradually declining manufacturing sector increasingly being supplanted by tourism, and a heavy dependence on the service sector.

In both cases the economies are price takers in a world economy which has a strong influence, and both are heavily dependent on trade with neighbours.

This parallel can also be seen statistically in workforce structure, population growth rates and economic performance.

It is helpful to summarise the processes of the district economy and the functions performed by the urban concentration which is Taupo in the following terms:



The diagram seeks to illustrate the idea that the economy is split almost evenly between “export” activities in the primary, energy and tourism sectors with these sectors serviced by a multi faceted service sector which produces inputs (intermediate goods and services) for these three while at the same time and equally importantly for both households and individuals.

The following table summarises the district economy in Taupo and identifies some of the resource management implications and planning issues as a thumbnail sketch.

---

**BROAD ECONOMIC CHARACTERISTICS, PERFORMANCE AND TRENDS**

SECTOR	KEY CHARACTERISTICS	POTENTIAL RESOURCE MANAGEMENT AND PLANNING ISSUES
<b>Primary</b>	<p>Land use dominated by pastoral farming and forestry in a 50% and 30% respectively. Sector draws strongly on intermediate industries such as engineering services, energy supply, transport, storage, communications.</p> <p>Experiencing similar trends to remainder of N.Z. pastoral – conversion to more intensive uses notably dairy.</p> <p>Fortunes heavily dependent (as are those of the inter related service sectors) on global prices and trends and nationwide primary sector performance.</p>	<p>Land use allocation issues:</p> <ul style="list-style-type: none"> <li>▪ For primary land uses, and,</li> <li>▪ For servicing industries.</li> </ul> <p>Management of external impacts on / between servicing sites. Mixed uses in servicing areas.</p> <p>Infrastructure – notably roading , water and wastewater services.</p>
<b>Manufacturing</b>	<p>Typically associated with support of forestry and farming. Not a dominant force in the economy but a significant one nonetheless.</p>	<p>Continued demand for space and light industrial production with associated emission and discharge management issues.</p> <p>Continuation of moderate demand for infrastructure.</p> <p>Significant links to transport and storage requirements including links to national distribution.</p>
<b>Energy</b>	<p>Traditionally and as a critical part of its development through the 1960s to modern times, the energy sector has been driven by external national energy demands and characterised by a series of project economies.</p>	<p>Water resource management and allocation issues will continue to figure.</p> <p>Competing demands</p>

---

---

## BROAD ECONOMIC CHARACTERISTICS, PERFORMANCE AND TRENDS

---

At present the FTE job contribution of the sector is small at less than 1% but its GDP output equivalent is more than three times the national average making the sector a major contributor.

between agriculture, urban and energy will remain challenges.

Re assessment of geothermal resource always possible. Significant external impacts and management issues.

National importance of energy security likely to impact decisions.

<b>Tourism</b>	<p>The last five years have seen declines in the dominant segment of the industry (domestic) while international tourism, starting from a significantly lower base has shown significant growth. Spending in the international segment is, relative to volume, higher.</p>	<p>Some more obvious issues include:</p> <ul style="list-style-type: none"> <li>▪ Pressure on high value sites and vantage points.</li> <li>▪ Ability to grow high value CBD spaces and facilities to service high value tourism niches.</li> <li>▪ Flexibility and adaptability in development control to allow innovation.</li> <li>▪ Provision of high quality retail infrastructure while providing for permanent communities.</li> </ul>
<b>Retail</b>	<p>In line with other elements of the Taupo economy the retail sector shows striking similarities to its national level counterpart. It is however some 1.5 times bigger reflecting the impact of tourism.</p> <p>Changes in number of enterprises and even</p>	<p>Relatively few changes in enterprise numbers means the sector can experience significant growth and vibrant performance without built form necessarily changing</p>

---

---

**BROAD ECONOMIC CHARACTERISTICS, PERFORMANCE AND TRENDS**

---

employees tell little of the story of growth which the turnover figures attest to over the last 5 – 7 years. Thus the built environment may appear not to have changed but the types of use and intensity of use has increased significantly.

significantly or more land being consumed.

Such growth will still have (perhaps less visible) impacts – on transportation, parking, land use intensity, pedestrian flows and uses of CBD spaces.



# DEVELOPING: THE SIZE AND SHAPE OF THE FUTURE

This section of the report deals with the possible future economic experiences which will characterise Taupo. All futuristic exercises are saddled with the dominating historical fact that they have a significant tendency to be “wrong”. It is typically the case that projections, forecasts and speculation tend to under or over estimate quantities, mis judge timing and location, miss what turn out to be the most significant factors and overstate the importance of others.

This cannot be totally avoided. Nor does simply “not forecasting” deal with the problem of needing to follow some expectations in order to provide for long lead times, to prevent foreclosing valuable options, to indicate useful and less useful directions, and, in some cases, to provide leadership and example.

To limit the potential damage of forecast and speculative error when developing expectations the approach in this assessment has been to:

- Stress always that we are dealing with ranges of outcomes not point estimates;
- To expect active revision in the light of experience and to advocate policy which facilitates such revision;
- To consider qualitative as well as quantitative expectations. The nature and character of the way demand and supply unfolds are as important in forming expectations as are apparently “hard” numbers; and,
- To adopt the simple and readily understood over the complex and apparently more rigorous. Experience suggests that it is better to be broadly correct than precisely wrong.

## Section Organisation

This section is organised as follows:

- The relevant likely demographic outcomes are examined;
- A description of methods and assumptions follows;
- A sector by sector analysis of both quantitative and qualitative expectations is undertaken; and,
- A summary with indicative implications is provided.

An annex provides detailed runs of the sectoral analysis model.

## THE DEMOGRAPHIC BACKDROP

This section combines the work already carried by the Council in forecasting ranges of outcome for household and population growth with a simple assessment of population growth and likely change in age structure.

Expected change in the population is important for two main reasons in respect of likely future economic outcomes. First and most obviously the characteristics of domestic (local to Taupo) demand and supply for goods and services are strongly influenced by the strength and direction of population growth. Second, demand and supply per person or household may not necessarily alter but changes in the number of people involved in the process will alter levels of economic activity. That is the simple quantitative story.

In dealing with demographic drivers of change in the Taupo District a number of factors specific to the area which do not necessarily apply elsewhere must be taken into account. The TDC has, over a period of years, studied factors affect growth in the area. These studies and the models developed from them are explained, summarised and incorporated in the projections set out in the Council's District Growth Management Study (TD2050), specifically on pages 23 – 30.

To understand like future development in the area it is worth noting the findings of this work. For present purposes, the important points are:

1. What is meant by Growth – the term, while apparently simple in terms of meaning, can be applied to several different processes. The TDC and TD2050 identify three different ways in which growth should be considered. These are:
2. The growth rates implied for building and land subdivision rates (termed the Development Contributions Growth Model in the Growth Strategy) derived from a trend equation based model drawing data from historical experience. The significance of the forecasts developed from this model relate to the fact that quite regardless of population growth demand exists for the creation of sites (through the subdivision process) and the construction of buildings. Such development clearly creates demand for infrastructure and services supplied (or potentially supplied) by the TDC now or in the future.
3. Department of Statistics Sub national Population and Household Projections. The purpose of considering these projections is twofold. First the simple demographic projections which use actuarial calculations to determine rates of natural increase provide indications, when combined with net migration assumptions, of the simple rate of growth in terms of numbers of people likely to be living in the district. Secondly, and as noted above, the rate of household formation is likely to be of greater relevance since household formation rather than simple population growth is a key determinant of demand for services.
4. Altered Migration Rate (Higher in / lower out) Assumption model. The experience in the TDC area over recent decades has generally been that use of historical data may cause under estimation of population growth and more importantly household formation rates. Underestimation poses greater risks for TDC than over estimation given the likely demand on infrastructure and support services. Consequently the 2050 Growth Strategy employed a set of more aggressive migration assumptions to assess a higher upper limit on growth than that produced by either of the other models.

In the following analysis a simple assessment has been undertaken and then the TDC projection ranges from the 2050 Growth Strategy adopted as a set of working projections.

#### QUANTITATIVE CHANGE

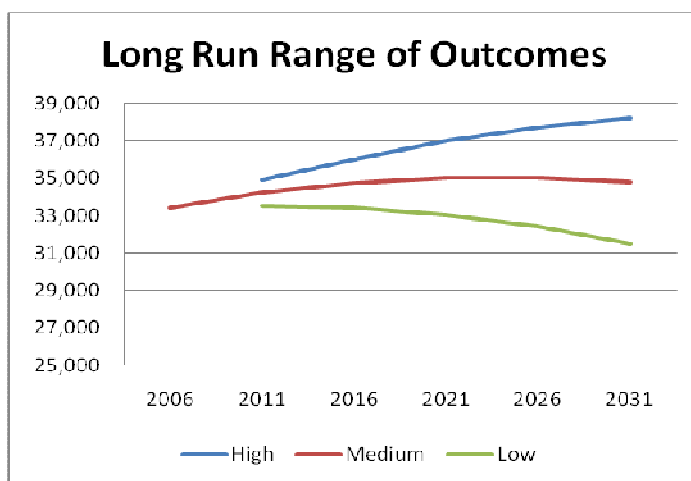
In the following table Department of Statistics Projections are used to provide an indicative picture of likely growth to 2031. The reason these simple (see note on limitations above) projections are used is that they provide the fundamental backdrop upon which the more sophisticated models used in the 2050 Strategy have been based (the Development Contributions Model, the Household Projection Model and the High Migration Assumption Model).

The projections show different scenarios and are derived by considered expected births minus deaths plus net migration where the migration assumption is the medium assumption adopted by the Department. This

approach is consistent with that used in the 2050 Growth Strategy Study which built on this base data by considering development rates and household formation.

Assumption	Population at 30 June					Population change		
	2006	2011	2016	2021	2026	2031	Number	Average annual (percent)
High		34,900	36,000	37,000	37,700	38,200	4,800	0.5
Medium	33,400	34,200	34,700	35,000	35,000	34,800	1,400	0.2
Low		33,500	33,400	33,000	32,400	31,500	-1,900	-0.2

It is clear that under no assumption within this particular model is there anything more than modest growth and under the Low growth assumption there is a net decline. Movements in either direction (up and down) are not dramatic. This is readily apparent when the projections are graphed.

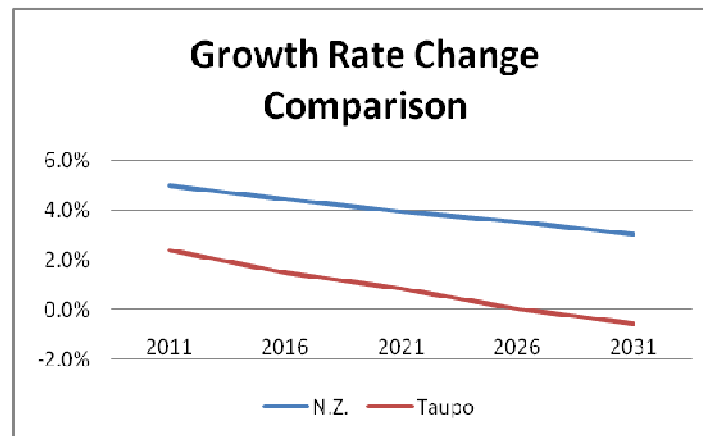


Here, even graphing the expected change on an axis designed to show expected change clearly (thus at least highlighting if not slightly exaggerating differences) it can be seen that dramatic change is not expected.

What is significant here then is that the increases in demand for subdivision and building which generate demand for services – notably local government services cannot be seen in simple projections based on actuarial data and the relatively standard assumptions typically applied in other areas. Outside of public sector activity, there are also demands on the construction industry and the raw inputs into that sector. As a significant employer this sector is important.

Finally, the cumulative effect of the combined public and private sector can generate impacts which are not signalled well by raw growth figures.

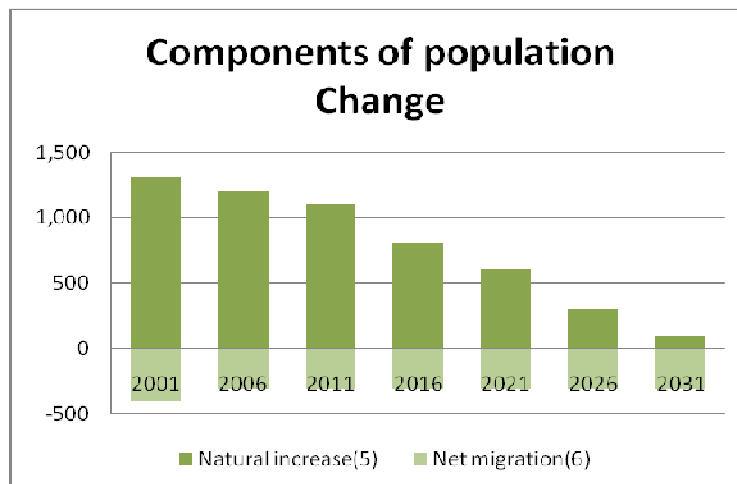
This pattern is not dissimilar to that expected nationally with rates of growth expected to slow throughout the country as the following graph illustrates.



A pronounced downward trend is evident. In the case of Taupo though, the beginning growth rate is slower and the projected rate of change crosses into the decline area.

The most difficult factor to project accurately is net migration – made up as it is of both domestic and international inflows and outflows. Significantly the relative importance of net migration is expected to increase over time meaning that the probability of projections being mistaken (along with decisions based on projections) lies in this area. The table and graph makes this plain.

Components	2001	2006	2011	2016	2021	2026	2031
Natural increase	1,300	1,200	1,100	800	600	300	100
Net migration	-400	-300	-300	-300	-300	-300	-300



Migration is critically affected by government policy. As its relative importance as a component of growth grows, so too will the importance of such policy. For this reason the incorporation of different migration scenarios in the TDC models (see table below) for the Growth Strategy was prudent. Those scenarios address the possibility of lower young adult out migration and increased levels of in migration as drivers of household formation. Careful monitoring of migration policy is likely to be an important element in assessing the adequacy of projections. The Growth Strategy TD2050 advocates a detailed monitoring programme for precisely this reason.



### Adding to Simple Processes

The table below shows the working projections set out in Taupo District 2050 (District Growth Management Strategy) incorporating the assumptions described. These build on the simple projections by adding a further layer of analysis.

	Population	Total Dwellings
Projection 1: Growth Model	13,000	8,400
Projection 2: Stats NZ Med	2,400	3,800
Projection 3: Increased Migration	5,200	5,350
Projection 3a: Higher Migration	7,500	6,500

### CONCLUSION

Taupo is unlikely to experience dramatic change in its population size in the foreseeable future. Instead the district seems likely to share in the nationwide expected fall in growth rates. The most significant variable which might cause this to change is likely to be net migration – the importance of which will increase as the growth rate falls. Of most importance however is that neither simple growth rates nor numbers of people are likely to be of significance in driving demand for services. Instead it is necessary to complement the expected population data with information about household formation, levels of unoccupied dwellings and potential changes in migration processes.

Likely changes in factors driving migration were identified in TD2050. These include society wide alterations and trends which may be seen as “push factor” such as:

- Increased costs of congestion in urban areas;
- Decline in environmental quality in urban areas;
- Crystallising of baby boomer capital gains made in urban areas; and,

“pull factors” such as:

- Attraction of lifestyle locations;
- Improved means for overcoming distance barriers; and,

Living away from traditional place of work.

### QUALITATIVE CHANGES

Expected qualitative change is equally or more important. In particular expected alterations in the age structure of the population are vital. Changes in age structure may have numerous, often quite subtle effects on economic activity.

Population growth for example might remain “flat” and the number of pensioner unit style accommodation dwellings per person aged 65 and over might remain constant but if the proportion of the population made up of persons aged 65+ increases there may be a proportionate increase in demand for this type of accommodation.

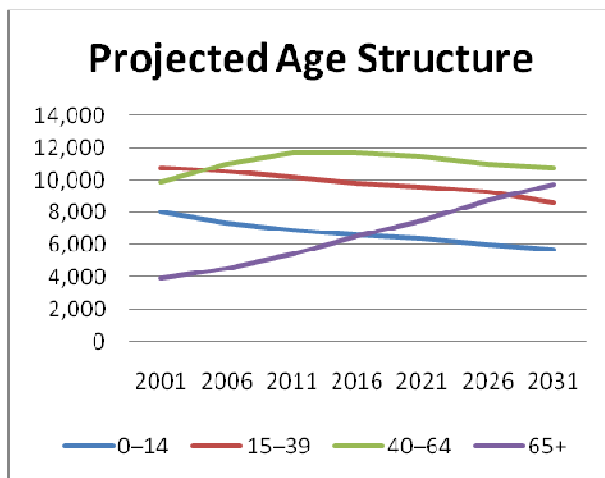
Such effects may also be quite deceptive. The incidence of strokes for example (and thus land and building infrastructure needed to support stroke victims), may appear to be increasing. The increase may however have nothing to do with changes in the putative causes of strokes (stress, lifestyle and other hypothesized causes) but may instead simply relate to increases in the number of people living longer and occupying older age cohorts.

One means for building such considerations into resource management decisions is to pay attention to expected changes in age structure.

The following table and graph depict the Department of Statistics projections for population change disaggregated by age structure. The assumptions are as for the total population projections shown above and adopt the medium growth assumptions for both net migration and natural increase. This assumption is likely to be reasonable given the tight ranges for growth as a whole noted above.

Projected Age Structure				
Year	0–14	15–39	40–64	65+
2001	8,000	10,800	9,900	3,900
2006	7,300	10,600	11,000	4,500
2011	6,900	10,200	11,700	5,400
2016	6,600	9,800	11,700	6,500
2021	6,400	9,600	11,500	7,500
2026	6,000	9,300	11,000	8,700
2031	5,700	8,600	10,800	9,700

As with the total growth projections the expected patterns for Taupo's age structure mirrors that expected for New Zealand as a whole with a strong aging of the population and a lessening in importance of the younger age cohorts. Amongst the several implications of this trend an important impact is that on household composition with the size of household likely to continue to decline. The strength of the trend is underlined by its clear appearance despite the wide age ranges of the cohorts. This can be seen in the graph below:



It should be noted that the projections, while taking 2006 as the base to project from incorporate data back to 2001 and as can be seen the trend noted – growth of the older age cohort numbers and relative decline in others was underway for all but the 40 – 64 year old group. That group's relative decline is likely to have set in by now.

It should be noted too, that flat growth rates for the population as a whole will, by definition, tend to exacerbate changes in the relative age groupings (since there is for example few younger people to expand the early years age cohorts). Care then is again required where growth rates are flat and change can be hidden.

Net migration too remains critical because of its effect on growth and the potential that has to influence age structure. As with total growth attention to policy is warranted.

## CONCLUSION

The experience of Taupo in respect of age structure change is expected to mimic that of the nation as a whole (and indeed the western world and Japan) as rapid aging of currently resident populations takes place against a background of sharply reducing natural increase.

---

## DEMOGRAPHICS IN PERSPECTIVE: THE LINKS TO ECONOMIC ACTIVITY

It is important to stress that the demographic characteristics discussed above and the patterns expected to prevail in future concern the economic activity generated by local demand and supply only and thus represent only part of the picture. Local demographics are but one driver.

As noted in dealing with relationships between sectors, each and every industry has functional links to every other – some strong, some weak – but links nonetheless. It is those links which generate multiplier effects. Not all demand can be met from within the district – thus a significant amount of importing takes place.

Equally not all goods and services produced in the district are consumed in the district – thus a significant amount of exporting beyond the district – to the region, the nation and further afield takes place.

Local demographic effects are thus likely to be supplemented by demand and supply associated with this activity. This is typically the case for all regional and sub regional economies. Generally regional, and even more so sub regional economies are more open to and involved with trade than are national level economies.

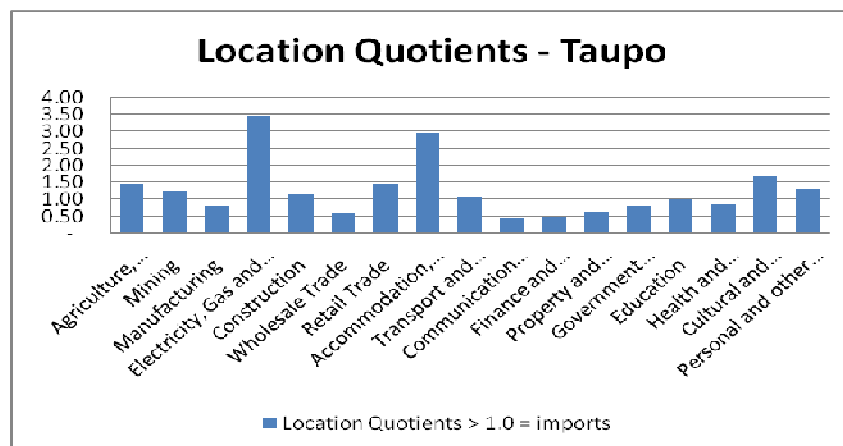
A crude indication of the extent to which population dynamics and the demographic change in regions outside of Taupo affect Taupo can be gained through a measure called a location quotient. This is an index in which values below 1.0 indicate that the district is an importer of specified goods and services, while numbers greater than 1.0 indicate net exporting.

Values for Taupo based on the 2007 GDP estimates are shown in the following table.

Sector	LQs
Agriculture, Forestry and Fishing	1.47
Mining	1.25
Manufacturing	0.85
Electricity, Gas and Water Supply	3.44
Construction	1.15
Wholesale Trade	0.58
Retail Trade	1.48
Accommodation, Cafes and Restaurants	2.99
Transport and Storage	1.08
Communication Services	0.44
Finance and Insurance	0.50
Property and Business Services	0.63
Government Administration and Defence	0.81
Education	1.02
Health and Community Services	0.86
Cultural and Recreational Services	1.69
Personal and other Services	1.32
Average	1.27

While the concept of the location quotient is a conceptual construct it shows quite clearly that in some cases Taupo is an importer (communication services and manufacturing for example) while in others it is an exporter (energy, accommodation). On balance (and adjusting to remove the bias caused by the small numbers in the mining sector), the district economy is a net exporter.

The following chart shows the stand out “export” sectors and those more reliant on imports from beyond the district.



#### INTERPRETATION

Demand in other regions is therefore likely to sit alongside demand generated by the domestic demographic processes identified in generating the drivers of economic activity seen as a totality. It can be expected (as discussed on a sector by sector basis below) that while growth may be slow within the district, other factors are important in determining overall economic output.

### The Importance of Demographic Change

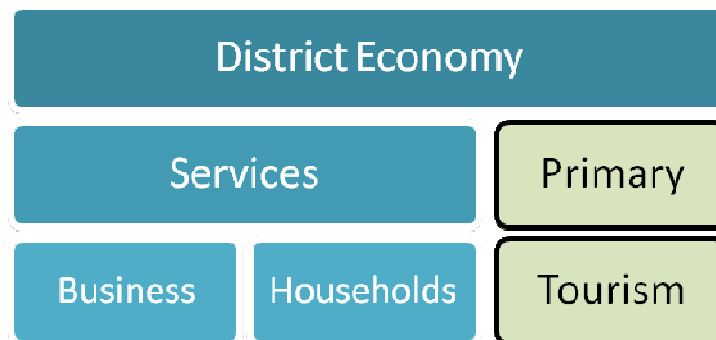
While simple population growth, household formation trends and demand for subdivision is but one component of overall economic growth what is important in respect of developing the Structure Plan is that such change as does occur in these areas has a disproportionate impact of services provided by local government. Where development – even of land which has yet to be built upon or construction of dwellings which (initially at least) might have low occupation rates – takes place, there is demand created for services and impacts on infrastructure.

## BROAD STRUCTURE OF MARKETS AND PRODUCTION IN THE FUTURE

The district economy is at present and will undoubtedly be in the future both complex in terms of each component but also integrated. For example:

- Sectors overlap in terms of their markets, raw material inputs, production methods and marketing. Any representation is therefore likely to be somewhat artificial so spurious precision should be avoided.
- There are not clear and plainly divisible differences between all components. Instead there is change over time, blurring and mixtures of strong and weak relationships. It is important not to be simplistic.

At the same time, some means of understanding the economy as a whole is helpful. The following model provides a framework for thinking about the way the major components “fit” together.



The depiction deliberately sets out economic activity as blocks so as to stress that services and production are of equal significance (providing “goods” is in no way “superior or more valuable” than providing services) and all production has to be supported by business and household inputs. For the purposes of this model, energy is regarded as a service and is not identified separately.

Two factors which are perhaps unusual in the structure of the Taupo district economy are:

- the fact that manufacturing operates to a significant extent as a “servicing” component of primary production. Thus the provision of light engineering products (and services) for farming and forestry generates output and employment which fulfills local demand rather than the “export to end consumers” character of manufacturing typically associated with the wider N.Z. economy; and,

- the relatively small size of the district economy means that projects and developments which might be considered small relative to the national economy (for example a power project generated a few hundred MW of power) can have profound output and employment impacts in the district context.

Turning to future possibilities and the types of institutional arrangements which might allow individuals, households, and businesses to improve their total well being it is possible to suggest the broad shape which the various components of the economy might take.

## SECTORAL MODEL

As part of the analysis of sectors an indicative “what if” model has been developed to generate some idea of what various growth scenarios might imply for the sector under consideration and for the other related sectors. In the text of the report highlights only are noted and discussed while a set of model runs is contained in annex I to this part of the Economic Assessment report. The effect of “one year” at the expected growth rates is reported on in the text and a five year run is provided in the annex.

The model calculates the additional services which will be required as business inputs (through the multipliers discussed earlier) and as other inputs (household and like services). It then establishes an estimate of the quantity of these additional requirements which are likely to be met locally and the quantum which are likely to be obtained from outside the district on the basis of past experience (obviously this may change and changes can be modeled if required – past and current patterns provide a base case).

Sectors which are likely to be most affected by the multiplier effects, ranked in order of most to least affected and an estimate of impacts is produced in respect of output.

Not all sectors are analysed explicitly. In part this is a manageability issue but more importantly the sectors modeled explicitly reflect the model shown above and the organisation of other analyses in the report. The remaining service sector modeling is undertaken slightly differently in that it aggregates services to households but produces results in like form.

It should be stressed that the purpose of the model is assuredly not to forecast with precision likely outcomes. Instead its purpose is to:

- Indicate the orders of magnitude of output and FTE job generation which might be expected in future,
- To identify the size of multiplier effects from such growth,
- To identify the sectors most heavily impacted by change over the period, and,
- To estimate the order of magnitude of those possible impacts.

A full working model with assumptions and notes has been prepared as a tool for ongoing use.

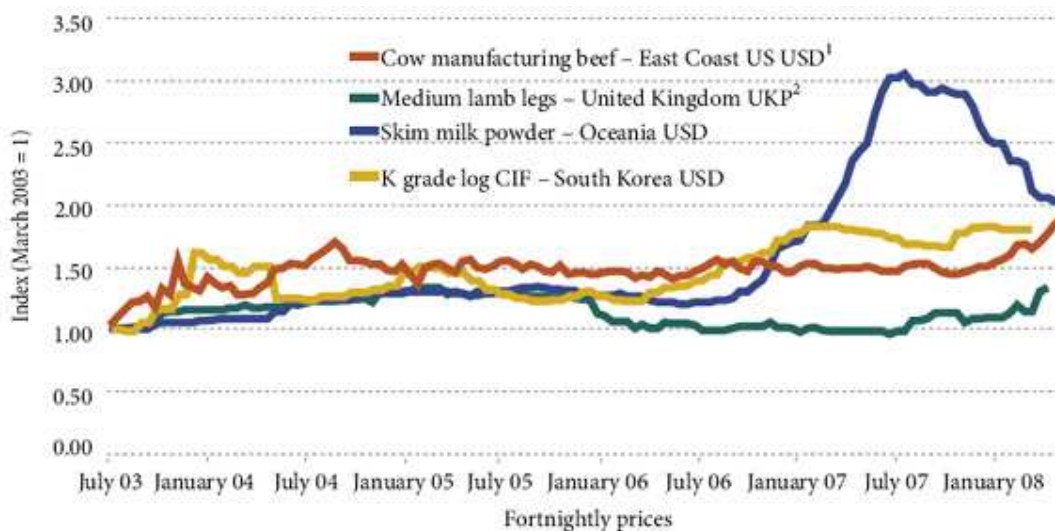
## PRIMARY

The primary sector – consisting of pastoral farming and forestry in the Taupo district – seems set to continue being of central importance in two ways. First as a district exporter and earner of revenue and second as a generator of demand for intermediate business inputs to primary activity (for example creating demand for engineering services, light manufacturing and transport) and household service demands (for example retail and public sector services).

Continued growth and expansion in pastoral farming – especially dairying – is both a blessing and a challenge. Clearly the community benefits from strong performance in the sector with flow on effects benefiting both

businesses and households. At the same time a key challenge is the management of environmental impacts which such growth brings. These issues are discussed in detail below.

The overall situation in recent times has been strong in the primary sector – but on a selective basis. This can readily be seen in the following graph.



The strength of skim milk prices is apparent (and looking at price alone masks increases in volumes demanded at the various prices thereby understating total impact) but the long running flat prices for other commodities should be noted. Beef and more particularly sheep have been poor performers with only a recent (late 2007 – 2008) upturn in prices. Forestry too, while much heralded as an important export has been less than spectacular.

The run up in prices for dairy products and the recent turn arounds in sheep and beef have been driven by a mix of factors. Most important have been the emergence of the economies of India and China – both trends which seem likely to continue to push long run demand for primary produce (simple demand for protein various forms in the agricultural sector, and rapid urbanisation creating demand for wood product in the case of forestry are examples).

Other factors such as demands for land uses for alternative fuels (biofuel) particularly in the U.S., the signing of a free trade arrangement with China and ability to meet increasingly high environmental standards in production processes (assuming such challenges can be met at a level and in a way which exceeds those of competitor producers) seem likely to ensure continued growth.

The primary sector in the TDC area consists of a predominance of forestry (more than 50% of the land use) accompanied by pastoral agriculture (sheep and beef plus dairy making up some 32% of land use).

---

## FORESTRY

Forestry accounts for more than 50% of the land use in the TDC area. The industry can be expected to continue to be an important component of economic activity throughout the planning period growing at around the rate expected for the economy as a whole but with considerable sensitivity to environmental policy settings, competition from other land uses (notably dairy) and the international price – cost equation.

## QUANTITATIVE CONSIDERATIONS

The resource in the TDC area is part of the central north island forestry estate. The Ministry of Agriculture and Forestry (MAF) produce a series of detailed forecasts of wood availability given various assumptions about the harvesting strategies likely to be employed over the period out to 2040.

The forecasts are detailed as to species breakdown, owners intentions, harvest strategy and like factors. Summarising however, the following conclusion reached by MAF is relevant in the present context:

“The forecasts indicate that the availability of radiata pine from the Central North Island forest estate will steadily increase over the next 12 years. Between 2008 and 2016 there is a gradual increase in the Central North Island regional harvest from 7.5 million cubic metres to around 10.2 million cubic metres per year. After 2016 increases in wood availability are expected to result in increased log supply with the potential for significant volume increases to around 12.7 million cubic metres per year after 2020.”

(Central North Island wood availability forecasts for the period 2008–2040, MAF update 2007)

It should be noted that forecasts of availability address only the production side of the equation while economic value and benefit of forestry activity depends critically on market demand at given prices. While production and even production growth looks strong through until at least 2020 this does not necessarily translate into economic value since other factors (most noticeably price and costs but also policy settings) are important.

## QUALITATIVE ISSUES

The key internal issue facing the forestry industry at present relate to climate change policy and the ability / potential for the sector to provide environmental “services”.

The ability to sequester carbon creates both an opportunity to “sell” environmental services and a threat because of possibility of tax or cost based penalties being imposed on certain forms of harvesting. Detail of the latter is of less importance in the long run and the present context than the fact that it is unclear as yet what balance will emerge between what can be gained through the sale of carbon sequestering opportunities (and the incentive for re planting and rotational harvesting strategies this creates) versus the costs and penalties which might be imposed for deforestation and harvesting (and the incentives those create for switching to alternative land uses, divestment and diminished replanting).

As with many factors affecting primary sector economic activity, several important variables are not within national policy grasp (let alone local) since international agreements and undertakings are at issue. Moreover very significant uncertainty surrounds the data gathering, measurement, analysis and scientific interpretation of relevant input and, most significantly from an economic perspective, which side of the cost benefit ledger New Zealand falls under various scenarios.

The standard host of external macro factors – world fuel prices, exchange rates, cyclical demand alterations for wood product as well as pulp and paper and derivative products - will have varying effects as well.

A reasonable expectation would be for output to increase at the rate expected for the economy as a whole (real  $\approx$  3.5%) over the foreseeable future.

## Model Results

With the sector analysis model set for 3.5% growth per year it is apparent that:



- Growth of around \$1.5m in direct output can be expected with over \$2.0m in total;
- A significant number of new FTE positions are created with 70% remaining in the TDC area; and,
- The key service industries to see increases in demand are road transport, business services, wholesaling and specialised services to the primary sector.

---

## AGRICULTURE

At present the outlook for agriculture most particularly dairying has probably never looked better. The lengthy run of poor returns to sheep and beef farming have turned around, first in beef and more recently in the sheep industry. At the same time demand continues to grow in global markets. Most significantly for this assessment the drivers of growth appear to be long term in nature rather than mere fluctuations. A period of sustained strong prices lasting perhaps a decade seems not unlikely.

Accompanying this growth in prices however has been an unsurprising rise in costs. Numerous farm inputs have risen dramatically in the last year to 18 months. Examples include fuel and, even more dramatically, fertiliser and nutrient inputs. Reasons for these increases vary but are the largely unsurprising result of rapidly increasing demand for products in which supply side identification, extraction, processing and delivery can be slow. Supply frequently lags demand under such circumstances with resultant shortages driving costs up.

## QUANTITATIVE CONSIDERATIONS

In recent years the Taupo District has seen declining numbers of beef and cattle and the area has shared this trend with the rest of the country. The future looks much improved however for sheep and beef. Land use in the TDC area suggests that while conversion and sharing in the dairy boom is likely, this will not necessarily be of the order experienced in areas where both farming and dairy within farming is of more significance.

What is significant in respect of conversions is that the scale of such conversion as is either proposed or aspired to is large relative to past land use change. The Wairakei Pastoral proposal(s) give a good eidea of this. The company proposes that over a 20 year period some 20 dairy farms comprising 500 ha be converted from forestry to farming. A further 9,000 ha of sheep and beef farmland would also be created with remaining land "retired" for environmental purposes. Carter Holt Harvey – former dominating player in the N.Z. forestry sector is also engaged in large scale conversion.

At present conversions of this scale have been stalled as water allocation issues are considered but they signal that significant land use change – principally away from forestry and into alternative uses.

MAF produce a profit and loss style forecast which provides a useful indication of what might be expected and a growth for the Taupo District is able to be derived from that. Using the original MAF numbers as a foundation, an average of some 6.5% real growth appears to be sustainable over the long run.

## QUALITATIVE ISSUES

As with forestry prospects, a key issue in the TDC area is environmental management. The area has been heavily fertilised for many years and has unusually porous soils. Consequently pollution of the lake plus other waterways with nutrient is a significant concern and, under current practices and technologies likely a constraint on growth.

While popular media attention is currently focused on "dirty dairying" for the TDC grass lands areas the issue of unabsorbed nutrient ending up in waterways applies more widely than to just dairying. It is likely that a combination of improved on farm infrastructure (controlled run off, improving ditches, drainage systems and

effluent disposal) and improved nutrient technologies (slow release nitrogen products, less use of urea style nutrients) will lead to satisfactory environmental management in due course this may slow growth in the near term.

Significant steps have already been taken in respect of managing nutrient impacts. Environment Waikato for example through that part of its “Variation 5” to the part of the Regional Plan dealing with the Lake Taupo catchment has set a requirement for farmers to measure and benchmark their nitrogen discharges and effectively operate at or beneath the cap thus implied unless they are able to offset any additional use through reductions elsewhere in the catchment.

While this requirement may be altered as part of the appeal process applying to the variation the more important point is that such regulatory responses to environmental management issues are likely to form a continuing and increasingly explicit feature of the operating climate for primary production.

#### Model Results

With the sector analysis model set for 6.5% growth per year it is apparent that:

- Growth of around \$2.6m in direct output can be expected with over \$3.7m in total;
- A significant number of new FTE positions are created with 70% remaining in the TDC area; and,
- The key service industries to see increases in demand are business services, wholesaling and fuels notably petrol and related products.

### PRIMARY SECTOR CONCLUSION

The future appears to be steady if not spectacular in the agriculture and forestry sectors. At present forecasting is severely hampered by a number of policy uncertainties which seem unlikely to be resolved in the near term in respect of their long term impacts. Unsurprisingly, there is a significant reappraisal of the likely highest and best use for land taking place – especially as the future of forestry is measured against expectations for agriculture, notably dairying.

The policy uncertainty may be dampening investment but the effect is likely less than the influence of external factors such as growing demand through emerging markets. For the TDC area relatively robust growth slightly ahead of the economy as a whole can be expected to prevail.

### ENERGY

While the era of heavy investment in base load generation of electricity may be largely complete there remain significant drives for continued investment in the energy sector. These arise from:

- Concerns about security of supply arising from absence of significant back up capacity to deal with technical outages along with the weather dependent nature of HEP;
- Run down in gas fired generation with the approaching exhaustion of the Maui gas fields;
- Continued relatively strong growth in demand which accompanies economic growth and both in intermediate and household consumer demand; and,
- Growing pressure to move away from environmentally less acceptable sources such as coal fired plants to innovative use of existing HEP and other resources such as geothermal.

The combination seems likely to mean that demand will continue to grow. Most recent research initiated by the Ministry of Economic Development sees growth to 2025 averaging 1.8% - 2.5% per annum. This is

significantly higher than the average 20 year growth rates ( $\approx 1.1\%$ ) and, given the exposure of the TDC economy to energy developments is important.

It should also be noted that both policy decisions and technological progress might result in “shocks” involving much greater growth should geothermal options be followed more aggressively for example.

#### Planned Expansions

There are already significant expansions and developments planned by Contact Energy and Mighty River Power. While exact dates and stages of these developments are to be finalised, advice from the two generating companies and in some cases the Trusts owning geothermal bores suggests that:

- Over the period 2008 – 2012 additional construction and project work will see a minimum of 120 and a peak of 580 additional FTE jobs required to develop the four planned expansions with an average of more than 300 FTE positions over the period; and,
- Given a multiplier of 2.36 for employment in this sector an overall employment impact of some 708 could be expected. While detail is not entirely clear on the sourcing of this labour a significant level of input is expected by the project planners to be drawn from the existing labour force with some additional inflows to meet this demand.

The current detail expectation is set out in annex II.

As noted elsewhere the primary economic boost in energy development comes through the project phases with on going activity being steadier. In the sector model the growth rate assumed has been 2%.

#### Model Results

With the sector analysis model set for 2.0% growth per year it is apparent that:

- Growth of around \$1.25m in direct output can be expected with over \$1.8m in total;
- In general a small number of FTE jobs may be generated (through direct energy operations) but the majority of these are outside the district;
- Looked at in terms of contribution from the development component of the sector, the key exception will be the planned expansions described above with a strong period of growth over some five years and significant generation of FTE employment; and,
- The key service industry to see increased demand is the business service sector. The other linkages are small and to related areas drawing on services such as engineering.

## TOURISM

Tourism for Taupo, as for the country as a whole, is one of the major growth prospect sectors. It has strong domestic and international components. Just as its antecedents which stretch far back, beyond Pakeha activity in the TDC area, did so present and future patterns of tourism are likely to exhibit patterns of change. Forecasting those changes in detail is difficult. Outlining their likely shape is more realistic.

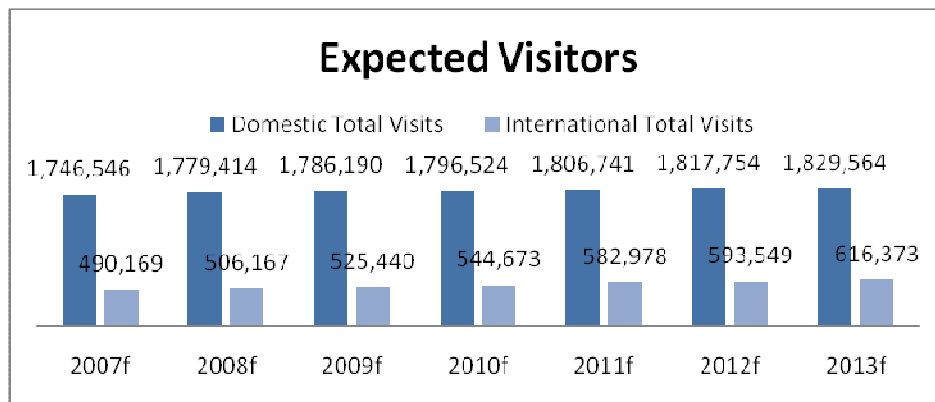
#### QUANTITATIVE FACTORS

The Ministry of Tourism survey based forecasts provide one suitable means for assessing likely growth from tourism. Their forecasts through to 2013 provide a useful starting point and the key data are set out in the following tables and graphs.

Year	Domestic Total Visits	International Total Visits	Domestic Total Spend \$m	International Total Spend \$m
2007f	1,746,546	490,169	239	141
2008f	1,779,414	506,167	249	151
2009f	1,786,190	525,440	255	163
2010f	1,796,524	544,673	261	176
2011f	1,806,741	582,978	268	194
2012f	1,817,754	593,549	275	204
2013f	1,829,564	616,373	283	218

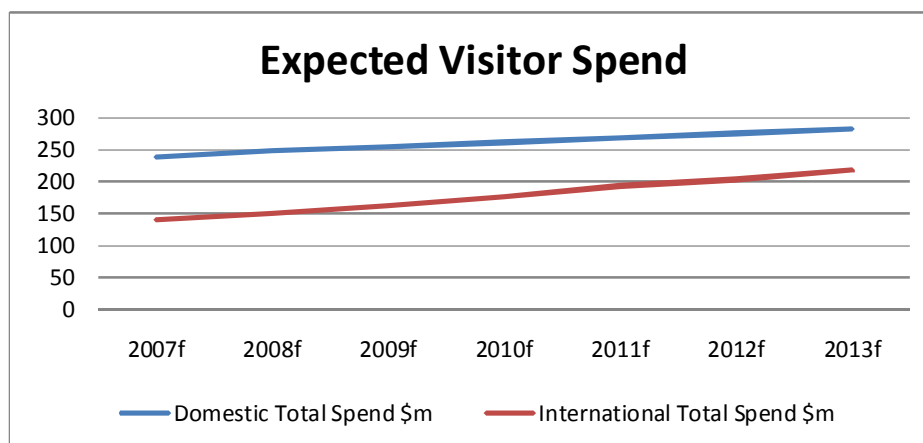
(f = forecast)

Total spend for both markets (domestic and international) represents amount spent per person times volume thus representing changes in amount spent and numbers spending that amount. The following graph highlights expected changes in domestic versus international visits.



In terms of absolute numbers the next five years is not expected to see great change. Expectations of domestic tourism are for growth to be flat. International visits show a modest 3.8% expected and the dominance of domestic visits with their low growth rate drives the combined market expectation down to around 1.4%.

The picture with spending is somewhat different as can be seen in the following table.



In the case of total spending both domestic spend (2.8%) and international spend (6.7%) show growth with international being significant. The latter "starts" well behind domestic in terms of total (because of volume)

but is expected to catch up (through both increased volume and higher average spend). Thus the combined growth expectation for total spend at 4.3% exceeds the consensus for real economic growth ( $\approx 3.5\%$  real).

#### QUALITATIVE ISSUES

Changes in the motivations for, experiences sought from and popularity of types of tourism are likely to be at least as important as the numerical picture over the planning period. These represent the means by which:

- International tourism operators seek custom and make choices about patronizing New Zealand and the TDC area;
- Domestic businesses in the sector shape and grow their customer offerings as do those providing infrastructure (for example second home providers and the accommodation sector);
- Central, regional and local industry bodies and lobby groups direct their spending, research, advertising and lobbying efforts; and,
- Government at a number of levels (local, regional and central) develop policies designed to maximise economic and social benefits arising from tourism.

#### International Popularity

New Zealand has continued to grow in popularity as an international destination. Taupo, behind Queenstown and Rotorua (and ports of entry such as Auckland) benefits from this macro choice. As of July 2008 New Zealand ranked as the 5<sup>th</sup> most popular tourist destination worldwide (see [www.newzealand.com/travel](http://www.newzealand.com/travel)).

The promotion of tourism, its benefits, its characteristics and its potential attract an enormous amount of attention resulting in a somewhat melodramatic picture but the benefits of the activity are not in doubt and the twin challenges of growing the sector while managing the impacts involves some of the most important resource management decisions facing the country and TDC as part of that.

#### Trends

Amongst the several trends two are especially worthy of note in respect of economic activity because of the central importance to likely future tourist activity in the TDC area.

#### Sustainable Tourism

There is little doubt that the tourist industry and players within it see a distinct need for and opportunity arising out of generating sustainable tourism. In simplest (and most defensible terms) this involves the management of impacts so as to minimise impacts on the environment. The great irony of the tourism and recreational sector has always been that tourists may destroy the very phenomena and processes they come to observe by their presence.

From a simple interest in managing on site micro impacts and niche demand for eco tourism however, concern with sustainability has grown to cover much broader concerns with entire systems of mountains and lakes, walkway and access systems, managing human impacts (use of water, impacts of fire, sewage and rubbish disposal), impacts of development of the built environment, biodiversity and most recently climate change becoming important.

Growth in visitor numbers and total "spend" is thus a small part of adequate resource management. Decisions reflecting a more subtle understanding of tourism demand and environmental sensitivity are likely to be required.

### Portfolio of Tourist Activity

Recent decades have seen the types of activity favoured by tourists worldwide take on both a different and a much broader character. Chief amongst these trends has been the move away from “rubber neck tourism” to active, and for many “adventure” tourism.

Given the dominance and unique nature of the physical environment as the foundation for tourism in the TDC area this trend is important. While active tourism has long been a feature of tourism experiences (most notably domestic tourism through fishing, skiing, and like outdoor activity), recent times have seen significant extensions into the international market and ever growing innovation in the provision of adventure experiences.

### “Informal” Accommodation

TDC experience and observation suggests that there has been a growth in the number of visitors staying with friends, relations and, more importantly, “strangers” who have entered an informal market in providing accommodation for visitors through advertising properties on websites. Thus visitors are able to secure price competitive accommodation outside of the traditional formal sector.

This trend has the effect of masking the full growth picture since numbers are not captured in the orthodox statistical measures. While it is not at this stage possible to quantify the trend, it should be noted as another growth factor lying beyond traditional measures.

### TOURISM: CONCLUSIONS

In simple quantitative terms (visitor numbers and expenditure) the TDC economy seems likely to experience modest but not spectacular growth in the immediate future. Of great significance though is the fact that the qualities and characteristics of the tourist experience are altering.

The key requirements in making resource management decisions which are viable over the long run will be attention to environmental impacts defined in a broad fashion and on a broad scale, and attention to altering domestic and international market demands.

As with the other sectors model runs have been produced to examine likely sector activity and impact. Expected activity has been modeled for the accommodation, restaurant and café industries and the recreational sector. The annual growth expectation has been taken from analysis of the Ministry of Tourism forecasts.

### Model Results – (combined accommodation, restaurant, café and recreation, cultural)

With the sector analysis model set for 4.3% growth per year it is apparent that:

- Growth of around \$3.5m in direct output can be expected with over \$5.0m in total;
- A significant number of new FTE positions are created but local impacts are modest; and,
- The key service industries to see increases in demand are business services where there is a strong concentration, food related processing, and wholesaling.

## RETAIL

Retail activity appears in almost all of the economic impacts which other sectors have. In the TDC area the strong links between tourism and retail make the evolution and development of the retail sector critically important in understanding the way in which the most significant parts of the economy are likely to develop.

Retail activity is in the midst of major change and many of the changes affect location, design, impact on built environments and the retailing process itself. Details of these changes are discussed in a specific assessment of the sector later in the report.

For present purposes some key changes which ought to be noted include:

- Most obviously the move to on line shopping for certain classes of items allowing retail activity to grow but with quite different spatial implications since pedestrian count and exposure requirements may be reduced as some retailing moves “off the street and on to the web.”
- Polarisation. A growing trend is the location of items at one extreme or the other of the price spectrum without the “traditional” mid price version. Thus goods tend, increasingly to be sold in either a bargain basement or luxury mode but nothing in between.
- Simultaneous luxury low price consumers. Increasingly consumers occupy and shop in, simultaneously the luxury end of the market and the low end even for similar products. It is these two phenomena (polarisation and simultaneous purchasing) which account for the wide popularity of large format retail which is able to capture the high income end of the market as well as its traditional low end.
- Blurring of offerings. Increasing what have traditionally been items sold separately are sold together – music with coffee, cosmetics with prescriptions as an early example, home appliances in supermarkets.

All of these trends (plus others detailed in the retail section) have the general tendency of allowing retail activity to grow, change and adapt without consumption of more land, without extensive new development, and with an emphasis on development “makeover” rather than demolish – replace strategies. These changes have significant implications for traditional land use planning.

The historical record – which sees growth in output from retail growing at 4% and the Retailer’s Association analysis which suggest 4.6% on average but with closer to 6% in recent times suggest that Taupo could reasonably expect growth of around 5% in output in the retail sector.

### Model Results

With the sector analysis model set for 5.0% growth per year it is apparent that:

- Growth of around \$4.2m in direct output can be expected with over \$6.0m in total;
- A significant number of new FTE positions are created most of which remain in the district; and,
- The key service industries to see increases in demand are business services, real estate (presumably reflecting leasing and turnover) and wholesaling.

## CONCLUSION

Of all sectors it is perhaps retail which is likely to exhibit the most significant changes in the way land use unfolds and changes because of the fundamental nature of changes in retailing. The sector will be of the utmost importance in the TDC area because of the close association with the tourist industry combined with (and on top of) the already significant place retail plays in any urban economy.

## OTHER SERVICES

Services may be split out into those concerned predominantly with servicing other businesses (business to business) primarily the agricultural, forestry and tourist industries, and those servicing predominantly household based demands (business to household) for example elements of retail, personal and household services and public sector services (education, health, administration).

In each of the analyses for the individual sectors discussed above, many of the impacts fall on service sectors serving both business and household requirements. The most dominant characteristic of these services is their overlapping nature. The retail sector for example serves consumers in tourism, businesses in tourism, households in their daily needs with numerous enterprises serving all these markets and more (for example niche export markets) all at once.

Because of this it is difficult and perhaps meaningless to separate services as a “sector” for numerical analysis in quite the same manner that has been done for the sectors isolated above.

Even given this, it is apparent however that most of the sectors ranking high in terms of impact are those providing intermediate inputs – or business inputs – to a given sector. These are goods and services such as chemical products, road transport, electricity, engineering services, real estate, business services and so on. Together, the sectors analysed and the other sectors they affect account for some 50% of TDC output – which is consistent with the simple count and split data which showed a 48 : 52 split.

This leaves several other significant service activities and services to households to be considered. Assuming that the services not incorporated explicitly in the sectoral analysis grow then, at the rate implied by the rest of the TDC economy, which they can be expected to least match, and considering expected growth throughout the economy of 3.5%, then growth in the order of 4% can be expected.

Modeled on this basis, the service sector can be expected to generate an additional \$17.5 and \$25.0 in total output per annum and that those impacts will be spread across the entire economy since all industries draw some services from households.



## CONCLUSION – SIMPLE THEMES AND SOUND ECONOMIC DEVELOPMENT

The simple message arising from the analysis is that qualitative change rather than quantitative growth is likely to characterise Taupo’s economic future. As that change unfolds it is likely that “per unit value” will increase across a wide range of goods and services. Such change leads to new opportunity and increased value for consumers looking for more than quantity.

An example is that as little as a decade ago it was difficult to run a profitable business selling latte which at the same price as a packet of coffee which makes around 25 cups of instant coffee. Today it is common place. The “coffee experience” has changed.

This is a trivial example but the process is not trivial and is to be found across much of the retail sector and throughout tourism and ancillary services such as cafés, restaurants and accommodation services.

In economic terms the “margins” are changing. Experiential businesses and services tend to operate on a margin rather than a simple “volume and turn” model. The numerical analyses set out in the previous discussion and indeed in almost all orthodox projection and forecasting models do not – on their own – capture these changes.

It is difficult to overstate the significance of this conclusion – drawn as it is from the qualitative analyses presented above. Volumes and numerical growth might remain static, population and household numbers might not increase greatly, even visitor numbers might not move a great deal and there may be little sign of the furious construction rates of the past which seemed to accompany economic progress and development.

If however margins are widening or becoming more sustainable, if value is being added through providing richer consumer experiences and if tourist spend rises as a result of an ability to charge the “same” visitors more for richer experiences then economic value is likely to be added – and that will, eventually, appear in improved GDP output and like measures.

Consequently the summary table below is followed by a conclusion expressed as a set of themes which provide the context for the numerical expectations.

### SUMMARY OF KEY QUANTITATIVE AND QUALITATIVE EXPECTATIONS

SECTOR – AREA OF FOCUS	KEY EXPECTATIONS	POSSIBLE GROWTH RANGE	POTENTIAL RESOURCE MANAGEMENT AND PLANNING ISSUES
<b>Demographic</b>	The standard treatment of likely future population growth (Department of Statistics projections) provides an incomplete picture of likely relevant changes.  Other factors of significance include changing drivers of migration, age	From a low (being the NZ Stats medium projection of 2,400 to a possible high	Significant alterations in factors driving both household formation and the demand for dwellings (occupied and unoccupied).  This is likely to

---

**SUMMARY OF KEY QUANTITATIVE AND QUALITATIVE EXPECTATIONS**


---

structure change leading to household composition change and continued demand for dwellings which may not be 100% occupied.

of 7,500 (high migration assumption)

continue to create demand for land, infrastructure and services in the public sector and construction activity in the private sector.

-1,900 up to +4,800

The TD2050 set of projections for population and dwelling increases has been adopted as best portraying possible outcomes.

Range + or – 5%

Expected changes in age structure in contrast, are quite dramatic with significant growth in the size and relative importance of the 65+ age cohort and a decline in younger cohorts.

Net migration key.

Expected growth in numbers and proportion of elderly indicate likely demand for a suitable built environment.

There are likely to be both public and private sector responses in areas such as building, transport, open space and “walkability” as well as institutional responses.

<b>Forestry</b>	<p>Significant quantities of timber to be produced over significant periods assuming strong markets and benign policy environment.</p> <p>Critical issues are climate change policy and ability to “sell” environmental services such as sequestering of carbon.</p> <p>Viability and returns to the latter unknown.</p> <p>Significant reappraisal of the likely best use for forestry land is taking place with conversion to dairying and sheep and beef likely to figure prominently in the future.</p>	<p>3.0% - 4.0% range for output on the benign policy assumption.</p> <p>Without that or with high transition costs to a new regime, perhaps 0% to 2% for five years then a resumption.</p>	<p>Continued pressure on roading, transport and some storage infrastructure.</p> <p>Continued heavy traffic generation.</p> <p>Sector generates demand for engineering and light manufacturing. Likely to assist in the steady growth of those industries.</p>

---

---

**SUMMARY OF KEY QUANTITATIVE AND QUALITATIVE EXPECTATIONS**


---

<b>Agriculture</b>	<p>Maintainable demand appears relatively strong even in sheep and beef with dairy, while of less significance in TDC area, nonetheless growing.</p> <p>Critical issues are rising costs within the industry but more importantly environmental impacts and requirement to adapt to better management techniques.</p>	<p>Range of 5% - 8% with possibility of some years much higher.</p>	<p>Physical environment sensitivity management issues. High chance standards demanded (e.g. water quality etc) will grow.</p> <p>Similar implications for transport and service sectors as forestry.</p>
<b>Energy</b>	<p>The major “boom” in generation development is over. Two major issues which promote additional growth are security of supply and pressure to grow using non carbon based resource.</p> <p>The latter could see additional use of geothermal.</p> <p>A group of relatively small (national scale) projects which will have significant local impacts is planned over the next five years.</p>	<p>Range of 1.5% - 2.5% output growth.</p>	<p>Sector has significant flow on to business services and service inputs even though it is not a large employer.</p> <p>Continued demand for engineering services.</p> <p>New projects based on geothermal a possibility involving significant effects management.</p>
<b>Tourism</b>	<p>Continued flat to only moderate domestic growth foreseen but significant international visitor number increases.</p> <p>The latter has a higher spend and will continue to offset low per unit domestic demand and flat numbers.</p> <p>Key issues are development of sustainable industry practices, products and services and improving nature of “experiences”.</p>	<p>Range of growth 4.0% - 5.0% dependent on speed of growth of international sector.</p>	<p>Environmental management issues critical as demand for sustainable tourism grows.</p> <p>While large scale demand for further accommodation and tourist infrastructure unlikely, increasingly high standards may demand redevelopment with</p>

---

---

## SUMMARY OF KEY QUANTITATIVE AND QUALITATIVE EXPECTATIONS

---

	<p>Relatively slow growth expected in traditional accommodation markets is likely to be offset by growing informal accommodation markets as households rent time and space in private dwellings via media such as the internet.</p>		orientation to international markets.
<b>Retail</b>	<p>The sector is in the throes of major change through trends such as polarisation of goods (luxury – bargain no mid prices), blurring of offerings, moves to stress experience rather than items.</p> <p>Consumers as simultaneous buyers of luxury and bargain goods leads to simultaneous demand for niche and large format designs.</p> <p>Significant and growing movement of sales to internet reinforces these trends.</p>	Range 4.0% - 6.0%	<p>The sector can grow in terms of output without consuming more land or necessarily growing the built environment.</p> <p>Stress on “experience” not just goods and services places premium on open space planning, CBD design, open space environments, access issues, traffic management.</p>
<b>Services</b>	<p>Relatively strong growth (compared with national expectations) mean steady demand for non business input services.</p> <p>Quite apart from the production and service export industries Taupo has a substantial population which will continue steady growth demanding incremental additions in public sector services.</p> <p>The aging population is likely to place growing demands on infrastructure to support this</p>	Range 3.0% - 4.0%	<p>Resource management issues likely in support for aging populations in respect of access issues, open public space, accommodation, and traffic management. Land use management.</p>

---

A responsive planning approach which supplements and complements the likely economic future will be one which:

1. Is founded on the expected qualitative change – some of which is far reaching – as its point of departure, rather than simply with quantitative change – which is likely to be moderate. The “action” is likely to be in change not raw development and growth;
2. Recognises the increasingly critical part played by experience and process in satisfactory outcomes for individuals and households. Value is likely to be added through improving margins rather than via simply volume growth. These themes dominate in retail (experience not just items purchased), tourism (what we did not just what we saw) and many other businesses; and,
3. Recognises the way in which economically sound means for incorporating improved management of environments, more environmentally efficient means for using resources and more sustainable practices are being incorporated into standard practice as a matter of sound commercial logic. It is the sound commercial logic of following this path and not flying in the face of consumer demand rather than any form of “environmental enlightenment” which makes it critical.

These themes appear to be the economic drivers which will form the context for the moderate growth identified in traditional terms as being likely to characterise the future of the TDC economy.

Annex II – Current Estimate of Energy Sector Expansions 2008 - 2012

Project	Company	Start	Finish	Peak Workforce	When	H1 08	H2 08	H1 09	H2 09	H1 10	H2 10	H1 11	H2 11	H1 12	H2 12	
Rotokawa Expansion	MRP	1/06/2008	1/12/2010	250	Late 09 Early 10		80	160	250	250	80					
Centennial Drive Power Station	Contact	1/12/2008	1/02/2010	150	Later 09		40	80	150	80						
Te Mihi Power Station	Contact	1/02/2009	1/02/2011	250	2010			80	160	250	250	80				
Tauhara Power Station	Contact	1/12/2010	1/12/2012	350	2011/2012						100	200	350	350	100	
<b>Total Workforce</b>						0	120	320	560	580	430	280	350	350	100	
<b>Assumed existing Taupo Workforce</b>						20%	0	24	64	112	116	86	56	70	70	20
<b>Assumed Single Workers</b>						20%	0	24	64	112	116	86	56	70	70	20
<b>Assumed average Family Size</b>						3	0	216	576	1008	1044	774	504	630	630	180
<b>Total Population Increase</b>							0	240	640	1120	1160	860	560	700	700	200

# ROLE AND FUNCTION: DEVELOPING THE FUTURE ECONOMY

## INTRODUCTION

This section of the report deals with a vision for the future of the TDC economy and the communities it supports. It articulates the components of that vision, sets out a focus for the next decade and beyond and spells out the crucial roles of local government and where local government activities fit the process.

In developing these ideas information and analysis is drawn from both the data presented earlier and the assessments of likely futures for the various sectors. The themes developed at the end of Part II (qualitative change, the trend toward experience over material, richness over quantity of change) dominate the thinking since these are seen as being the major economic factors likely to characterise the local economy of the future.

## THE VISION

In spite of their often intangible nature the use of a vision is frequently helpful in providing a focus for the purpose of economic activity. There are several possibilities. Themes which a vision might seek to capture include:

- Developing lifestyle choices,
- Offering multiple opportunities for economic development,
- Offering multiple employment opportunities,
- Any one of several sector based targets such as development centred around tourism,
- Development and growth paths anchored in sustainable environment requirements, or,
- Development within a framework dictated by the need to maintain a sustainable environment.

Obviously combinations of these elements might also be used in constructing a suitable vision.

## STRATEGIC DIRECTION

The specifics of how the vision might unfold in a wider context (including but going beyond the economic realm) are set out in some detail in the twelve Strategic Directions which drive TD2050. Those directions reflect community aspirations in several areas combined with judgments based on assessment of physical resources, environmental constraints and opportunities and best practice in resource management.

## THE ROLE AND FUNCTION OF THE TAUPO DISTRICT IN THE FUTURE

It is expected that the role of Taupo and the Taupo District economy over the next two decades will be:

The export of goods and services originating in the district from:

- Primary natural resources through the agricultural, forestry, energy and tourist sectors,
- A sophisticated service sector dominated by multiple retail and commercial activity.

Both of these functions will be underpinned by a growing and changing household sector which reflects the demands of work, leisure and community development both in a support role and in its own right.

There is then no simple, single focus for development and instead the future is likely to see growth in a multiplicity of activities, many integrated one with another, many crossing the work / leisure boundary, some existing to service others, some standalone and all subject to widespread and quite rapid change.

#### RELATIONSHIP BETWEEN VISION AND ROLE AND FUNCTION

It can be seen that the role and function are linked. Without development in a sustainable environment it is difficult to see economic growth being maximised in the primary sector. Development of a service sector capable of delivering maximum support to the exporting sectors is likely to spin off the value generated to the household sector thereby enhancing the lifestyle choices available.

### KEY INITIATIVES AND DEVELOPMENT THEMES

The array of policy initiatives open to the TDC is very broad. The number of pressures to provide services, implement regulations, develop various areas and improve existing offerings is immense. Resources being scarce however, choices must be made.

Generally speaking the critical point is to ensure that efforts are concentrated on those activities and issues of the greatest significance in terms of what will make a difference, i.e. the factors which will improve and enrich choices.

The key focus for the next decade should be:

1. The redevelopment of the totality of the CBD environment and its retail and commercial activity through exploiting the opportunities arising from the re routing of SH1; and,
2. Coupled with this, consolidation of and provision for light industrial and commercial service development in existing and new areas taking account of CBD development and re configuration of traffic.

A high standard of achievement in these two areas would underpin vibrant, high quality development of the functions and role of Taupo.

The reconfiguration of the roading system provides an ideal catalyst to drive development and redevelopment in several areas – access to the lake at the CBD, enriching the townscape and retail environment, promoting the distribution hub characteristics of the area, giving tangible expression to demands for richer tourist and retail experiences, ensuring that light industrial goods and services provision is able to grow, integration of open space management with provision for economic activity and reinforcing the outstanding natural landscapes and features of the area with sympathetic development.

The chosen focus does not imply that other forms of development and growth processes (for example residential development and the emergence of retail and commercial centre growth outside Taupo) should be neglected. Rather it is to recognise that many of these activities are proceeding within relatively well developed frameworks already (for example the Operative District Plan provisions) and already have momentum.



## ROLE OF LOCAL GOVERNMENT AND COMMERCIAL AND INDUSTRIAL STRUCTURE PLAN

In developing the Urban Commercial and Industrial Structure Plan it is important that the roles of the TDC are clearly understood.

Effective economic development is likely to be promoted by having the purpose and limits of local government involvement clearly identified and understood with TDC delivering its objectives in the economic realm in an efficient manner.

Local government generally has several roles and a larger number of potential roles. Establishing which roles are likely to prove most effective and relating them to other TDC activity is important if there is to be:

- Effective integration as plans are implemented through the use of policy instruments and TDC initiatives which are capable of achieving outcomes sought; and,
- Efficient use of resource which avoids duplication, makes responsibilities clear, allows effective monitoring, allows sanctions and remedies.

It should also be noted that local government has a wide array of statutory responsibilities which it is obliged to discharge. Several of these impinge directly on economic activity – implementation of the Resource Management Act 2001 being the most obvious example. The meeting of these obligations also needs to be considered in determining the appropriate role for the TDC.

The key roles played by TDC are:

---

### LAND USE AND RESOURCE MANAGEMENT REGULATION

A critical role and indeed the key purpose of the Structure Plan is the regulation of land use and related activity as contemplated and required by the Resource Management Act 1991. The Act is concerned with the sustainable management of resources and provides a means for managing adverse effects of activities, husbanding resources and seeking outcomes which promote sustainable use of resources.

While the Act is frequently the object of criticism it should be recognised that it has the potential to ensure that the full costs of activities are taken into account (for example adverse effects such as water pollution or the nuisance impacts of noise) so that efficient use of resources is promoted.

In a number of cases regulation is likely to be an efficient way of dealing with adverse effects because property rights are frequently not developed to the point where people can contract easily and come to workable arrangements about adverse effects.

Carefully designed regulation may therefore promote economic development providing it is able to be delivered on a timely basis and such that benefits outweigh costs.

It is useful to distinguish two broad instruments which are likely to prove useful:

1. Allocation of land such that land use conflict (for example residential land next to heavy industrial) is minimised. Under the philosophy adopted in TD2050 strategic zoning (broad separation of incompatible uses but with exception possibilities) is favoured as a key means of achieving this objective; and,

2. Development control which seeks to minimise adverse effects through detailed control of range of design, location and use characteristics of various activities. The effects based philosophy of efficient development control (supplemented by Strategic Zoning) is set out in TD2050.

Thus an undisputed and control role of the TDC is the delivery of regulatory instruments through the mechanisms provided by the Resource Management Act 1991 and delivered, as contemplated by the Act, through local government.

---

## NON LAND REGULATORY SERVICES

There are various regulatory services which TDC (and in some cases Regional Government) provides either as a matter of statutory obligation or locally determined policy. These cover a wide range of activity but many are integral to economic development and economic processes. They include:

- Building code compliance, inspection and approval processes;
- Code of urban subdivision style regulation dealing with roading widths, kerb and channel standards, stormwater drainage etc;
- Plumbing and drainage compliance, inspection and approval processes;
- Various health, safety, and related matters; and,
- Bylaw provision and enforcement.

The relevance of these services to economic development and growth typically arise because new development is subject to the regimes under various legislation and cannot proceed without approval, obtaining the services is a cost, obtaining timely service can be an issue, and they have the potential to generate uncertainty.

Most significantly, these effects are cumulative both as regulatory regime approvals in themselves and when combined with resource management regulation.

---

## PUBLIC SECTOR SERVICE PROVIDER – PAID SERVICES

The TDC also plays a crucial role in the provision of infrastructure (and some other services) through either undertaking certain works itself or project managing and contracting out such works. Certain of this provision is required by statute (Reserves and like legislation) while some provision, and especially the form of provision (whether in house, contracted out etc) is a matter of choice.

Provision may be grouped as including:

### ESSENTIAL INFRASTRUCTURE

- Provision and maintenance of roads and access ways under TDC control;
- Provision of car parking;
- Provision of subdivision services such as kerbing and channelling and utility access;
- Provision of water and wastewater treatment services;
- Provision of stormwater management infrastructure; and,
- Provision of solid waste recycling and disposal services.

### OPEN SPACE AND RECREATIONAL AMENITIES

- Formal parks, playgrounds and gardens;
- Provision of formal sports and certain entertainment assets;

- Informal open space;
- Walkways and networks; and,
- Other open space recreational assets.

#### COMMUNITY ASSETS AND SERVICES

- Community halls and meeting facilities;
- Library and information assets and services; and,
- Museums, art galleries and cultural facilities.

In providing these services and assets, along with their maintenance, the TDC creates an essential platform upon which development and subsequent operation of economic activity can take place. It should be noted that some assets which are apparently not primarily concerned with economic activities (for example community halls) in fact form part of the service support sector of the economy which enables the household sector to develop and provide support for activity in other sectors.

Matching and synchronising the demand for development and economic activity with supply by TDC is a major challenge. The Structure Plan plays a pivotal role in signalling these infrastructural requirements.

---

#### PUBLIC SECTOR ACTIVE COMMERCIAL DEVELOPER

It should be noted that the TDC is a land owner of considerable significance in the district. There may be circumstances when the TDC wishes to enter the commercial property market as either a passive investor (holding property assets) and / or an active investor (property developer). Whereas private investors enter the market to make a return on property assets and their development, the purpose of TDC involvement would be to:

- Achieve community mandated land use outcomes which cannot be delivered satisfactorily through public policy instruments such as development control or orthodox land use planning; or
- Seek to influence the timing of development such that the portfolio of community land assets meets pre specified and mandated outcomes. Timing may be important for a number of reasons such as to lessen adverse environmental impacts where other public policy instruments are unable to achieve this effectively.

It is understood that TDC will operate in this area on a strictly commercial basis to a specified set of objectives. This is particularly because of the risks involved and the additional responsibilities which come with the public nature of the funds which are being invested.

Where this form of involvement is adopted it is highly desirable from several points of view that governance arrangements imposing an accountability regime at least as strict as that operated for State Owned Enterprises are in place for the protection of the community, its resources and its local government entity the TDC.

It is expected that in exercising its role as an investor, TDC will operate on a purely commercial basis – thus it will seek returns to investment within the framework set out, as a separate matter, by the planning process. Maintaining a clear separation offers the community the greatest hope of achieving the objectives of both its environmental management policies and the commercial endeavours undertaken by TDC on its behalf.

---

#### OTHER LOCAL GOVERNMENT ROLES AFFECTING ECONOMIC ACTIVITY

Local government including the TDC has a number of other roles – some conferred by statute others which are taken up voluntarily – which have impacts on economic activity. These include:

- Advocacy in national and regional public policy development;
- District promotion both generally and in sectors (for example tourism);
- Provider of process (for example democratic processes and community input); and,
- Perhaps more arguably, leadership by example (for example in its own building design, development and use).

While the Structure Plan is not specifically concerned with such obligations and initiatives it is important that it is broadly consistent with the outcomes such activity seeks. TD2050 explains the philosophy behind these activities.

An area which might be considered is a more active role in education and communication of the economic strategy behind the Structure Plan and the way it fits with other TDC initiatives.

## PLANNING AND MANAGEMENT PROCESS

It is clear from the previous discussion that several sometimes overlapping processes are involved in developing, monitoring, reviewing and implementing the several policy instruments which together make up the TDC involvement in economic activity and development.

In TD2050 it is pointed out that the requirements of these processes, especially where they involve public input and recourse to the Courts, make heavy calls on time and resources.

Consequently a review and development cycle is advocated in TD2050 which seeks to spread the workload over time. This is a logical approach and it highlights the fact that:

- Policies, once in place are difficult and costly to reverse or modify. Interventions of any kind which produce unintended consequences, undue inflexibility, or generate complex processes can thus generate costs over long periods of time;
- The capacity for process to generate uncertainty is therefore very significant. Uncertainty, quite simply, is the enemy of investment and therefore to be avoided wherever possible.

This places a premium on simplicity and transparency. It also means that “do nothing” options should always be considered and that simple solutions are likely to trump complex in promoting economic development.

## SUMMARY – ROLE OF TDC

The TDC has multiple roles:

- Regulation of land use and development;
- Regulation service provider for construction, works and land development;
- Provider and maintainer of public open space and community assets; and,
- Periodic property investor and developer.

The challenge is to co ordinate, offered on consistent and economically viable terms and conditions relative to ratepayers interests and the market for such services and delivered in an efficient and timely manner which exhibits both best practice and competitive provision.

## FUTURE OF THE RETAIL SECTOR

### INTRODUCTION

Sections of the previous analyses (both part one and two) show that the retail sector has traditionally been strong in Taupo and that recent years have seen continued growth and that at rates appreciably ahead of other sectors. The point has also been made that retail forms an integral part of tourism – another sector which is growing strongly in spend and value add if not necessarily in raw numbers.

Three important conclusions may be drawn:

1. A strong future economy in the district is both dependent upon and can be stimulated by a strong retail sector. In short the retail sector offers both risk and reward – a weak sector will be threatening to the economy a strong performance will underpin expansion and growth;
2. The tourist sector is both vulnerable to and able to benefit from the retail sector. This is a classic co dependent relationship in which growth in one is likely to boost the other. Strong performance by both is likely to be especially beneficial; and,
3. A supportive service sector is a critical component in the success of the retail sector. This implies modern infrastructure with the capacity to expand as demand grows and without blockages on the supply side. Policies supporting a robust service sector therefore have the capacity to provide support to the core area of the TDC economy.

In this section the key trends in retail are discussed so as to provide a framework within which supply side and provision policies can be developed in a manner and to the extent to support growth and innovation in the retail sector. As is apparent below from a consideration of trends in retail it should also be noted that desirable characteristics in retail sector development driven by commercial considerations, also require attention to sustainability – one of the themes suggested elsewhere in the report as being central to strong development.

### UNDERSTANDING THE CURRENT DRIVERS IN THE DOUBLE SEGMENT RETAIL SECTOR

The dominant trend in the retail sector as revealed in the conceptual and empirical literature and in the Retailer Surveys of N.Z. trends is one which sees three movements:

- The growth of small, intensive niche retailing catering to high end spend (but not necessarily income).
- The growth of low cost (but not necessarily income), wide choice, space extensive large format retailing.
- The disappearance of the middle range offering market and consequently that business model.

This two pronged trend has significant implications, including land use and development implications, for the future of the TDC economy and its close link the tourist industry.

It should be stressed that a viable economy depends upon there being an adequate and preferably growing number of commercially sound opportunities which are sustainable. Policies should therefore reflect the commercial realities of business survival. Fortunately, business survival depends, in the end, on providing what a majority of people want over the longer haul in the quantity and quality they want, on acceptable terms and conditions taking into account the widest possible set of considerations.

The key risks in planning for the retailing landscape of the future lie in underestimating the breadth of the factors consumers take into account (whether consciously or unconsciously), over estimating ability to control, manage or influence consumer behaviour, failing to provide sufficiently flexible processes to cope with the breadth of change which is occurring and underestimating the speed of adaptation of the sector to altering market conditions with much of the change driven by forces originating beyond regional and national boundaries.

## DRIVERS OF NEW TRENDS

Obviously there are numerous factors driving the changes being seen. Some factors stand out however. Those worth noting include:

- LFR is in part a response to the very large volumes required to generate acceptable returns on very narrow margins. Responses to low margins have included improving in store shopping environments, opening up wider ranges and driving prices lower still,
- The process “feeds on itself” in the sense that obtaining lower prices favours volume buying and purchasing power. World growth and open markets mean that the size required to generate significant purchasing power is now large – it may be necessary to aggregate orders across Australasia (versus two decades ago aggregating for say the lower North Island only). This in turn implies a large volume of sales,
- Crossover shopping (see below) which brings customers from across the total wealth and income spectrum means that where a “low cost model” supermarket might have once only accessed 40% of the market, it now draws from the total market meaning larger volumes to sell to,
- Heavy brand investment and vertical integration (development of in store brands for example and producer partnerships , for example in dairy) have also been deployed to improve the image of low cost bulk purchase shops and shopping.
- Each of these factors (plus others of a more minor nature) has led to the development a powerful model which has (despite frequent comment to the contrary) at its core, higher levels of consumer satisfaction. Turnover and customer behaviour evidence the success of the model and its several variants.

Meanwhile equally strong but different economic forces have been generating change in the small , intensive CBD oriented markets.

- Exposure to world markets through freer trade, a wider range of importing traders, growth in the diversity of cultures living, importing and selling in N.Z. have broadened the market and demand for niche goods and services immeasurably in the last 15 years;
- Increased availability of goods and varieties of goods as part of the increased exposure and global interaction process, growth in technology both in respect of final products offered to consumers (variety in electronic goods, clothing, and imported homewares for example) have led to a more sophisticated quality of demand;
- Trends toward a much greater value added component in services, notably in travel (where levels of integration between travel, accommodation, visitor experience and even administrative services have grown significantly), dining, cafe and restaurant services where increased choices, better

consumption environments, lower prices (in real and comparative terms) have led to greater and more sophisticated demand;

- Non price competition through increased and more convenient opening hours, and the emergence of seven day a week retailing over longer hours pitched at customer rather than (the traditional format) retailer convenience,
- Strong branding, emphasis on differentiation, rapid product cycles, rapid and sophisticated logistics support, ability to provide support via internet services, investment in customer follow up systems and monitoring all focussed on “mass customisation” of experience have altered unrecognisably the traditional offerings of a decade or more ago.

Coupled with these trends and the opportunities they offer has been an unsurprising but intense growth in competition in all niches of this market segment in terms of price and non price competition alike. The general result has been an improvement and raising of the standard of all offerings. Almost all outlets for example are now open at convenient hours. Pressure on retailers to remain price competitive in these niches is constant and unrelenting so that the incentive to improve and innovate is high.

It is critical to see that these two trends should be seen together and as running in parallel. This is difficult because it involves a departure from conventional experience. Examples include:

- The fact that LFR does not necessarily cannibalise Intense niche for instance because one is not a direct substitute for the other. Customers may happily shop in one or the other or both and switch regularly between them;
- Consequently orthodox pedestrian counts as proxies for market share, and expectations of simple substitution of pedestrian traffic (or vehicular traffic) from one location to another may no longer be relevant;
- Traditional measures such as floor area ratios linking shoppers to floor space have little meaning in newly emerging CBD niches and are not easily generalisable; and,
- “New” development might not involve consumption of additional space at all. Evidence of this exists already in Taupo where there have been numerous refits, “make overs” and development of existing retail infrastructure but little if any spatial expansion of the town centre.

The principle characteristics of the trends are shown in the following table.

INTENSIVE CDB ORIENTED SEGMENT	LOW COST, LFR SEGMENT
<p><b>Significant move toward experiential retailing</b></p>	<p><b>Significant move toward lower cost provision and high convenience</b></p>
<p>Retailing as an “experience” rather than simply the purchase of material items involves:</p> <ul style="list-style-type: none"> <li>▪ Small scale intensive rather than medium or large formats.</li> <li>▪ Booth, mobile, stall, wall counter style formats are popular.</li> <li>▪ Outdoor and indoor / outdoor formats are popular for both goods and services.</li> <li>▪ Sale of experience as well as goods, for example cookery courses with books and appliances.</li> <li>▪ Branded mass product sold with “concierge level” service in small outlets.</li> </ul>	<p>Margins in LFR ranges continue to be razor thin (see previous tables). Cost cutting and innovation is common:</p> <ul style="list-style-type: none"> <li>▪ Self serve check out facilities.</li> <li>▪ Own packing or no packing.</li> <li>▪ Real time in store spot discount pricing.</li> <li>▪ Loyalty card tie ins.</li> <li>▪ Stress on speed and ease of consumer buying.</li> <li>▪ Wide range of hours across 24/7 general format.</li> </ul>
<p><b>The segment is populated by customers from both the top and the bottom of the income ranges.</b></p>	<p><b>Top end consumers increasingly source products from low cost LFR providers notably in DIY, electronics , furniture and Whiteware areas.</b></p>
<p>Goods and services once seen as niche areas are commonly within the reach of niche spending from medium to low income brackets. McCafe services in addition to bulk takeaway are an example. Ice cream and confection offerings in Starbucks retail are another.</p>	<p>It is increasingly common for high income earners and those who once populated mainly or only niche or specialty providers to make extensive use of LFR retailing as a standard component of shopping behaviour.</p>
<p><b>Product and service crossover is common and popular</b></p>	<p><b>Wide range of goods outside traditional offerings is both popular and growing</b></p>
<ul style="list-style-type: none"> <li>▪ This involves the sale of apparently unrelated items. Coffee with books and music, travel and like services with coffee,</li> <li>▪ Wrap and send services, provision of financing options, follow up and loyalty</li> </ul>	<ul style="list-style-type: none"> <li>▪ Electronic goods – DVD players, radios, MP3 players at supermarkets.</li> <li>▪ Whiteware, small appliances, furniture items, outdoor appliances at supermarkets.</li> <li>▪ All grades of wine, cheese and delicatessen</li> </ul>



programmes.	offerings (rather than simple, crude bulk offerings of say boxed wine).
<ul style="list-style-type: none"> <li>▪ Offerings of art and sculpture as both product offering and decor.</li> <li>▪ Sale of events tickets and promotion of music releases through coffee outlets or outlets formerly having nothing to do with the event.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Books, videos, “compilation markets” (especially music)</li> </ul>

Provision of richer environments for experiential retailing.	Provision of easy access for car based traffic, ease of bulk cart away loading for customers.
<p>CBD retail increasingly looks to improved environments, more nuanced settings:</p> <ul style="list-style-type: none"> <li>▪ Emphasis on carless environments and strong “walkability”,</li> <li>▪ Weather proofing and heating of outdoor areas, provision of indoor outdoor flooring, disabled access improvements.</li> <li>▪ Provision of in store Wi Fi and internet services for customers.</li> <li>▪ Provision of “lounge” atmosphere areas and furniture, high quality in store fixtures and fittings.</li> <li>▪ Al fresco dining and relaxing and the combining of recreational with retailing experiences and activities.</li> </ul>	<p>There is strong recognition of the infrastructure required to support LFR:</p> <ul style="list-style-type: none"> <li>▪ Large areas of car park</li> <li>▪ Multiple entrance and exit routes</li> <li>▪ Better design in car parks to improve pedestrian safety</li> <li>▪ Independent or at least specialised car park management</li> <li>▪ Increasingly provision of security services for car parking areas and customer security</li> </ul>

The main area which is disappearing with the emergence of these trends is the entire notion of the “middle market” – just as some have claimed the “middle class” as understood in conventional terms may be disappearing. Offerings formerly seen as “mid range” are more likely to be seen, given recent trends, as “neither one thing nor the other”. Such offerings are seen as not having the virtue of low cost nor the benefits of high quality and thus occupying a space which customers do not have to populate since they can “niche spend” at the top and bottom fish for every day requirements.

Clearly these trends have a number of implications – some of which are already well in play in the TDC economy.

## LOCATION ISSUES

Prime characteristics of the two segments are that one is vehicle intensive while the other stresses quite the reverse. The growth in cross over retailing also suggests that significant distance separation of niche shopping

areas and LFR retailing is undesirable and that complementary location is likely to be the most promising objective.

This suggests that location on, around or adjacent to the existing town centre and CBD perimeter is likely to be logical.

---

## LFR REQUIREMENTS

As noted in other work (notably TD2050) satisfactory development of the retail sector will be impeded without LFR in one or another form. Simple prohibition is neither desirable nor feasible. Provision for and creation of suitable opportunities thus becomes the challenge.

A separate section on the economic processes driving the expansion of LFR has prepared and forms Annex I to the report. The conclusions of that work are that:

- LFR seems almost inevitably to be part of future retail economic development in the TDC area,
- It is likely to deliver significant net benefits, i.e. benefits having considered the costs it may impose,
- Those benefits are likely to accrue throughout the community but with some emphasis on low and fixed income earners,
- The extent of net benefits may not be as dramatic as is reported in other areas because some may already be being enjoyed through existing development,
- The costs of LFR in terms of potential environmental impacts and changes likely to be brought to traditional patterns of retailing will generate a demand for change and change management,
- A significant requirement is an integrated retail strategy and from the perspective of local government a clear identification, delineation and coordination of the delivery in its areas of responsibility, and,
- The cost of seeking to heavily regulate or otherwise thwart the development of LFR as opposed to developing a clear framework within which it can develop would be high.

It is clear that successful provision for LFR requires:

- Extensive space for buildings, carparking and support infrastructure
- Reasonably sophisticated traffic access from multiple points coupled with traffic management
- Independent vehicle access and related parking service access

It is likely that standard effects based regulation of impacts would be feasible. A number of impacts seem likely to be minimal given the types of location suggested above.

There may be several options for consolidating existing car parking (currently under utilised at least to some extent), existing vacant or partially used land and other facilities.

---

## ACCESS AND ENVIRONMENT ISSUES – TOWN CENTRE

Given that the CBD or town centre area is the obvious location and indeed the existing location for intense niche retail, the opportunity to improve the environment through careful development of public space is significant. The diversion of SH1 will provide opportunities to:

- Break down barriers to the water

- Offer the chance to develop a unique water / retail / urban interface
- Extend the amount of accessible space in a number of directions

There are other opportunities to intensify the use and the development of public open space throughout the CBD area. Factors to consider might include:

- Exclusion of vehicular traffic (and possible need for service lane adaptation etc),
- Public space environmental enhancement such as theming, art, sculpture, outdoor activity,
- Planting and softening.

The key to successful public development complementing of private development will be integration of a total concept rather than ad hoc compliance based growth. This need not involve rigid blue print imposition but instead should draw on modern public private development concepts.

From an economic and commercial perspective the point of such development is that it offers the prospect of maximising retail opportunities within a sustainable environmental context which promotes both commercial and community aspirations.

## LAND SUPPLY REQUIREMENTS FOR RETAIL

A striking feature of retail development in Taupo has been the fact that while it has experienced growth in excess of 4.5% annually for over a decade, there remains a significant level of land supply in the town centre with scope for consolidation. The reasons for this have been:

- The fact that increasing output has not necessarily come from the expansion of premises so much as improvements in productivity, marketing, greater rates of spend (and therefore volume) and associated non spatial variables. That has meant a high rate of re development and “make over” activity but not consumption of land,
- The scope for re configuring existing and traditional development through re design, consolidation and re working of work process has been (and remains) considerable. Trends in retail, as discussed (for example moves to experiential rather than product domination) do not make space extensive demands, and,
- Previous land use planning policies which have sought to contain sporadic and fragmented development and have instead stressed focussed development. These have been complemented by provision of service lanes and like infrastructure in concentrated areas.

It should be noted that the trends identified above mean that traditional floorspace requirements for retailing have effectively “shrunk”. Obviously other trends in retail – for example the growth of internet retail – involve similar processes in which retail economic output grows but floor space requirements shrink.

The result is that there is sufficient land for the expected 5% annual increase suggested by the sector modelling – at least insofar as the town centre is concerned.

In respect of other possible demands the key source would be possible demand for land for LFR development. At present (and in terms of the discussion in this report) there has not been a great deal of stress placed on expansion of separate LFR as a considered strategic policy.

It is expected that resolution of LFR development issues – insofar as location is concerned – will continue to be debated and will likely form part of the continuing policy development process. There does not however appear to be any likely land supply constraint on the (several) options which might be adopted in respect of long run development in this segment of the retail market.

## TDC INVOLVEMENT

The foregoing analysis suggests that the development of the retail sector is likely to take place in a number of dimensions each having greater and lesser implications for TDC. TDC finds itself in a fortunate position in “triggering” such new development initiatives as might be deemed appropriate because of the large scale changes likely to be wrought through the diversion of SH1 and consequent changes to internal traffic management in the existing town centre.

A strong case can therefore be made for ensuring that the two issues are not separated and that a coordinated and integrated approach to their management is adopted.

It is likely that a combination of instruments available to TDC – ownership of land suited to commercial development, ownership of public land and statutory powers under various legislation – most notably the RMA – will be required to achieve the communities objectives.

# COMMERCIAL AND INDUSTRIAL CONSIDERATIONS

## INTRODUCTION

This section of the report deals with the commercial and industrial sectors and the likely demands of those sectors over the planning period. The logic of treating the two together is that while the activities involved are quite different, there are two important similarities:

1. Their predominant role in the Taupo economy is that of providing a service to other sector (versus creating final consumption products or “exporting” from the district); and,
2. By comparison with N.Z. wide averages these activities are currently “under represented” meaning that there is significant district “importing”.

The latter means that the next two decades may see some expansion should local servicing prove to be competitive with importing or purchasing services elsewhere in N.Z.

At a broader level it is also important to note the likely demands on infrastructure particularly in the area of transport, storage and communications.

## THE KEY SECTOR DRIVERS

Given that, as noted above, the predominant role of commercial and industrial activity is the support of output from other sectors in the Taupo economy it is unsurprising that it is the growth in these sectors which is the underlying driver of demand for commercial and industrial services and supply factors. This process is what is reflected in the performance and expected performance in the commercial and industrial sectors.

Summarising from previous sections, key drivers and expected annual rates of growth are:

Agriculture	6.5%
Forestry	3.5%
Energy	2.0%
Tourism	4.0%
Retail	5.0%

It can be expected that the greatest demand for business services and therefore commercial development will arise through the tourism and retail activity while industrial, especially light industrial demand is likely to be driven by primary sector activity.

The significant “importing” of inputs into primary sector activity should be recognised too since it tends to dilute local demand especially for land for light industrial activity. This factor is of both benefit and cost to the District. It is beneficial in the sense that it reduces potential environmental and infrastructure costs at the local level and makes growth more readily manageable. On the cost side some local investment and employment opportunities are lost.

Summarising the location quotient analysis (based on estimated GDP output) set out previously it should be noted that:

- In the industrial and light industrial sectors the TDC economy produces around 50% of what other regions produce for these sectors.
- 
- In the transport and storage sectors the TDC economy produces slightly more than what other regions do for these sectors
- 
- In the finance and business service sectors the TDC economy produces around 50% of what other regions produce for these sectors.
- 
- In the wholesale sector the TDC economy produces around 50% of what other regions produce for these sectors

Where there are shortfalls, district import takes place. The effect is to mute demand for land and infrastructure support. Translating these effects into a range of expectations for the future it might reasonably be expected that with expected national economic growth of some 3.0% - 3.5% per annum and expected growth in the “driver sectors” in Taupo of some 4.0%, growth in demand for commercial and industrial supply and in particular land would be in the region of 2.0% - 2.5%.

## SUPPLY ISSUES

It should be noted that land is likely to be of less relative importance as a supply factor in commercial and industrial activity than has previously been the case. The reason for this is simply that other inputs to commercial and industrial activity have grown (and seem likely to continue to grow). Examples include:

- Significantly high value human capital. Increasingly the need for highly qualified and trained personnel grows in these sectors. There is likely to be a continued premium placed on attracting and retaining a highly skilled workforce as well as attracting and retaining management level staff. Achieving this objective is likely to be intimately tied to lifestyle choice offerings and differentiation of Taupo District relative to competing centres such as the major metropolitan areas.
- Communications technology and infrastructure support. The continuing orientation of communications toward digitally based rather than physically based interaction, the increase in IT based business processing and the demands for real time data transfer in a global context place premium on infrastructure such as broadband services. Provision of a fibre optic network for the town centre / commercial office periphery for example might be of greater significance than traditional infrastructure demands.

The importance of these trends is that simple supply of raw land – while critical – may be amongst the more simple objectives to achieve.

The following table shows the amount of building floor area currently developed with only very minimal land supply available for future development. It should be noted that this does not necessarily impede any current development since (a) there is land available and (b) there is a variety of methods for obtaining additional land via RMA and District Plan processes – in short high rates of utilisation do not indicate a shortfall.

An inherent problem with forecasting future land requirements is that it is difficult to pin down supply at any point in time. Some land may be set aside for a particular use but yet to be zoned and is thus not immediately available, some land may be zoned but not yet serviced and may only be serviced once subdivision applications are approved, and there may (relatively rarely) be zoned, fully serviced blocks of “vacant” land. Most industrial and commercial land “banks” comprise all three categories of land and the mix amongst those changes over time.

Industrial Commercial	Description, category and notes	Current Location	Current Supply (approx)
			Floor area (Sq m)
	Light industrial commercial	Totara Park	17,000
Industrial	Light industrial	Miro Matai	174,989
	Heavy industrial	Rakanui	62,273
TOTAL			254,262

Note: the estimate of the total is more reliable than the sum of the categories because of possible recording and definition difficulties in valuation records which are likely to include over and under estimates.

## ESTIMATING FUTURE REQUIREMENTS

Even given modest land demands for the reasons set out above there will nonetheless be a requirement to provide further land. Those requirements have been estimated using several scenarios designed to take account of the following factors:

- Level of take up, especially on an annual basis is unknown. History provides some indication but changes in consumption of land as a factor input into light industrial and commercial activity is changing and will continue to change over time,
- Views will vary over what is an adequate “safety margin” in respect of land “banked” ahead for future development. Simple zoning does not equate to immediate availability with numerous other factors – roading, infrastructure and service availability being critical determinants of both timing and quantum of land available, and,
- Unforeseen macro factors external to the Taupo District economy have critical effects on land demand. Examples of relevance to the Taupo District include dairy product prices, interest and exchange rates, national environmental policies, and national level micro policy for tax and industry.

### Method

Two types of forecast have been produced. The first involves estimates of land required while the second focuses on floor space. The conceptual framework sees estimates derived for three scenarios which capture the views that:

- The current levels of provision incorporating such “margin” for future supply as they do are satisfactory – i.e. the ratio of GDP output (and thus development) to land supply is satisfactory,

- That the current levels of provision are too low – by a factor of around 10% and that some “catch up” is required to produce greater levels of comfort; and,
- That current levels are overly generous and may be precluding other more valuable activities from being undertaken in some areas and thus slower rates of provision are appropriate.

In the case of each of these scenarios a medium, high and a low estimate has been produced. Thus the “scenarios” provide sensitivities for the estimate considered as an entire “picture” while the medium, high and low estimates within each provide indications of variation for each scenario.

This provides policy makers with choices about the path Council wishes to follow – that path perhaps being affected by other factors such as funding for infrastructure or preferred sequence of development. Whatever path is chosen the estimated trajectories indicate the level of progress which needs to be maintained given the assumed rates of growth.

#### GROWTH RATE ESTIMATE

For both floor space and land supply estimates weighted average expected GDP growth for each of the relevant sectors has been used to estimate total growth thus linking floor space and land supply requirements directly to expected economic growth (rather than the indirect population projection methods frequently employed).

Based on the estimates of expected growth set out above the relevant weighted average growth rate for the different types of land have been adopted. The estimates reflect expectations for Taupo and are in line with the growth estimates used in other areas of the report.

#### INTERPRETATIONS

In practical terms land is not “supplied” either in raw or serviced form on an annual basis in equal increments. Thus the estimates provide a series of targets for the longer run, a measure of approximately how much land should be on hand at any given time and an indication of what provision might need to be made in the future from the perspective of any given year.

The same type of interpretation applies to the scenarios which consider over or under provision. In each case a trajectory is provided on the basis of a view that the present supply is either under providing or over providing along with the “one off lump” adjustment which would be needed to adjust from the present to the preferred scenario. That adjustment might be made in one “hit” or spread over a number of years.

It should also be noted that topography (gullies, streams etc which are not usable) may preclude the use of some land for commercial and industrial purposes. The parameters used to develop estimates take this account and thus provide a “gross figure” requirement.

### LAND SUPPLY – ESTIMATED REQUIREMENTS

Estimates have been made for both industrial and commercial land outside the CBD or town centre.

#### Industrial and Light Industrial

The estimates of land refer to land expected to be required for heavy, light and mixed industrial land which, under the current composition of land, accounts for some 78% of total existing commercial and industrial land (excluding commercial land in the CBD).



TD2050 estimated that In 2006 there was some 286 ha of industrial and light industrial land, that land being, developed, partially developed and otherwise set aside for development. Thus for every million dollars of GDP output there was some 1.5179 hectares of land.

Estimates of land supply required are based on expected GDP output growth over two decades and modelled for each of the above scenarios.

The “most likely” scenario, i.e. the trajectory of future needs, smoothed to an annual basis, adjusted to reflect most recent consumption and assuming the current mix is deemed to be satisfactory, with total shown at the foot of the table is as follows:

Hectares	Rates		
	Expected	High	Low
2006	286	286	286
2008	319	290	290
2009	323	294	293
2010	328	298	297
2011	333	302	301
2012	337	307	304
2013	342	311	308
2014	347	315	312
2015	352	320	316
2016	357	324	320
2017	362	329	324
2018	367	333	328
2019	372	338	332
2020	377	343	337
2021	382	347	341
2022	388	352	345
2023	393	357	349
2024	398	362	354
2025	404	367	358
2026	410	372	363
Total increase	124	167	80

It should be noted that precision in respect of point estimates in projections such as those commonly used for land requirements is inappropriate and thus standard practice is to produce a range with an expected value falling at a mid point. It should further be noted that this approach allows a certain amount of flexibility to be adopted in policy formation. We therefore shown three scenarios.

It is also helpful to unbundle the aggregate estimates so as to allow land use allocation policies to be derived.

#### ANALYTICAL FRAMEWORK

The analytical framework is simple enough when considered in the abstract and may be expressed in the following terms.

Factors which drive the likely split of land consumption, addressed in specific terms may be thought of as comprising:

1. Expected mix of activity (light versus heavy and their sub components)  
Multiplied by
2. Expected growth in each of the components (light versus heavy and their sub components)  
Multiplied by
3. Land consumption per unit of the components

In short, what the mix is expected to be, how that mix will grow and how much land the expected mix growing at the expected rate will consume.

Lending empirical expression to these principles and drawing conclusions about the likely consumption is more difficult – largely because of the strong interaction between activities and the many ways in which a multiplicity of activities fall within even quite tight specifications of activity.

#### DEFINING THE CONSUMPTION

Land use has been broken into three strands of economic activity:

- Heavy industrial,
- Light industrial; and,
- Logistics.

Clearly there is likely to be overlap between these categories – most manufacturing operations involve some storage for example. Logistics too is a category involving storage. As dedicated activities these forms of enterprise are expected (based on the main projections developed on previous reports, see Wheeler 2008) to experience different rates of growth.

This is to be expected and does not detract from the usefulness of the concept or the exercise. To estimate the likely split of land consumption, these categories have been melded with the economic activity growth rates and mix expected to account for total consumption.

The procedure used was as follows:

1. Categories to “match” the land split developed by the TDC team, were derived by taking the nine manufacturing categories used by the Department of Statistics GDP series and classifying them into “light” and “heavy” according to a subjective evaluation of the industrial processes typifying activity found in each category<sup>1</sup>,
2. The rates of growth for the past five years were then calculated for subcategories of the newly derived light and heavy categories using GDP data for 2002 – 2007 adjusted for inflation,

---

<sup>1</sup> In the Economic Assessment Reports all nine categories are treated as manufacturing in line with the Department of Statistics aggregated tables (18 categories across the economy).

3. The proportional mix of the sub categories making up “light” and “heavy” was then used to produce an expected, annual, real, weighted growth rate for the newly derived light and heavy manufacturing categories.

Using this method it was then possible to derive an expected mix of activities which match those developed by the TDC team.

This split was then be assigned to the land consumption aggregate growth number.

As noted above precision in respect of point estimates in projections such as those commonly used for land requirements is inappropriate.

We therefore have a mix made up as follows and growing at the rates shown.

Sector	Growth Rate	Share of Consumption	Low	Medium (expected)	High
Heavy Manufacture	1.29%	46%	37	57	77
Light Manugacture	1.04%	37%	30	46	62
Logistics	0.46%	17%	14	21	28
Weighted Average	2.81%	100%	81	124	167

As with the aggregate projections, estimates, these shares and rates are averages, estimated over the long run.

---

## Commercial Land

### TOWN CENTRE AREA

In respect of central commercial land (and mixed use small scale light industrial) it is considered that with the consumption rates expected for new land and the:

- Scope for consolidation in the inner areas,
- The stress on re utilisation of existing poor configured or inefficiently utilised land;
- The amount of undeveloped land within zoned areas; and,
- The level of growth which can be achieved without additional land consumption,

current provision is likely to be adequate.

Since the time of the LFR Study the key change in retail development has been the emphasis on intensive (less space expansive) development. While this effect is most readily seen in town centres (where as noted elsewhere there has been significant change but not necessarily high pressure for new land take up) it affects most retail development. The effect is generate more modest demand for simple “raw” space and thus land.

### INTERPRETING ESTIMATES

Considerable care is needed in interpreting these estimates. The commercial sector is subject to rapid and significant change at present. Many changes affect the need or otherwise for land. The trend has been toward

lower consumption per unit of output and even with the relatively low growth expected it could be that the estimates are found to be overly high.

The size of difference in the scenario estimates reflects the length of the estimation period and the compounding effect where different optima are assumed as a start point. It is also somewhat exaggerated because it assumes that no “corrective action” can be taken in response to experience through the planning period. It is likely that the TDC will review land consumption and subsequent supply decisions on a regular basis.

#### COMBINED ESTIMATES

It should also be noted that there are dangers in simply combining the categories of commercial (non town centre) and light / heavy industrial land to produce an overall figure. Although each estimate stands in its own right there are likely to be significant overlaps in uses. Commercial uses are generally more land intensive for a given unit of output than industrial uses and consequently consume less land per unit of output. Where commercial or mixed uses are located in industrial areas they are likely to use less land than pure industrial uses but that overlap is not necessarily captured in the estimates.

The effect of that is that the individual estimates, when combined, overestimate total requirements. The extent of overestimate is difficult to gauge. It could easily be in the region of 15% - 20% of the raw combined total however. TD2050 for example suggested that coverage of land in the town centre was some 53%. Typical residential site coverage controls are often set at some 35%. Thus extensive industrial uses may involve even lower coverage.

It would seem prudent then to treat the combined estimates as likely to be on the high side and the lower estimates might be an appropriate benchmark which, over time, monitoring can be used to confirm.

### FLOOR SPACE ESTIMATES – RETAIL AND COMMERCIAL

While it has been noted elsewhere that some consolidation of the town centre is likely to be desirable in terms of attracting sustained pedestrian flows, offering strong tourist retail infrastructure and driving strength into the town centre economy, this does not necessarily mean that no further land need be supplied.

Two factors seem likely to generate a need for provision of further space:

1. The likely development (and re development) of large format retail outlets at some point during the planning period. If the general strategy is to provide for such development on the fringes of the present town centre than some additional provision is likely called for.
2. Natural growth in domestic and tourist visitor populations seem likely to generate additional demand which, while to a great extent will be able to be catered for through more intensive development, is also likely to require additional land.

At the time of the 2004 LFR Study, the town centre consisted of some 32 hectares of land of which 8 hectares were vacant and the remaining area developed, being covered by some 12.6 hectares of floor space. Four years on much of the development which has taken place has involved more intensive use of that space but a reasonable starting point – given strong retail growth since then be 26 hectares reflecting an estimated 50% of new growth taking up new space.

Given that starting point the “most likely” scenario for the period is as follows:

Town centre expected land requirement				
Hectares	Rates		2.00%	
	Expected	High	Low	
Current	26.1	26.1	26.1	
2008	26.5	29.1	26.4	
2009	26.8	29.5	26.8	
2010	27.2	29.9	27.2	
2011	27.6	30.4	27.5	
2012	28.0	30.8	27.9	
2013	28.4	31.2	28.3	
2014	28.8	31.6	28.6	
2015	29.2	32.1	29.0	
2016	29.6	32.5	29.4	
2017	30.0	33.0	29.8	
2018	30.4	33.5	30.2	
2019	30.8	33.9	30.6	
2020	31.3	34.4	31.0	
2021	31.7	34.9	31.4	
2022	32.2	35.4	31.8	
2023	32.6	35.9	32.2	
2024	33.1	36.4	32.7	
2025	33.5	36.9	33.1	
2026	34.0	37.4	33.5	
Total increase	7.9	11.3	7.4	

It should be noted that the coverage of land by floor space is in the region of 53% (reflecting the need for service lanes, car parks, footpaths, roads and public space). This equates to approximately 40,000sqm of retail and commercial floor space until 2026 assuming coverage rates remain broadly the same as they have been. It should also be noted that the suite of development controls chosen to implement any given retail strategy (e.g. height controls, recession planes, yard requirements and so on) has a significant impact on rate of land consumption, scope for subsequent re development and land prices which affect outcomes.

These factors mean that there is considerable flexibility associated with the projection and significant scope to implement desired strategies while providing for likely market demand.

---

## CONCLUSION

Land supply	heavy / light industrial land	86 hectares
Floorspace	Retail and commercial	8 hectares (land) or 40,000sqm of gross floor area

## STRATEGIC REQUIREMENTS - INFRASTRUCTURE

While the simple “raw land” requirements seem likely to be well catered for it is worth noting that:

- The significant level of District importing, notably of goods places a premium on the provision of a highly efficient transport network; and,

- That in particular road access to Taupo is critical. The area does not have rail access nor port access and such facilities are located far from Taupo placing even more stress on the economic importance of the roading network

As in several other areas of the economy's likely development, the present focus on arterial routes to and from Taupo is significant. Some factors which are likely to be important to Taupo are:

- Continued maintenance of quality road access to the Hawkes Bay region, and the quality of road / weather management systems to the south,
- Strong simple access points to Taupo on and off arterials linked easily to storage and Taupo based transport infrastructure,
- Integration of the internal Taupo transport network with the "by pass" road(s) stressing the mix of tourist and commercial vehicles involved.

Two other key areas in terms of providing commercial and industrial support will be:

1. The need for consistent pressure on private and public sector players in the provision of state of the art IT infrastructure and the need to incorporate upgrading, maintenance and expansion requirements into town centre design and industrial "node development" in areas of land zoned for commercial and industrial development, and,
2. The need for maintaining and improving air services into the district at competitive prices. Provincial routes provide high margin returns to air operators and lack of competitive pressure can result in suboptimal services unless countervailing power can be brought to bear.

## CONCLUSION -BEYOND LAND USE

It is clear from the foregoing that the requirements to support the commercial and industrial growth of the TDC economy stretch well beyond the provision of land, outside the requirements and guidance of the Resource Management Act and into other areas of economic development. Some of these fall within the traditional role of local government, others less so.

There may well be gains to be had through public private alliances and partnerships for example in providing superior IT infrastructure or air transport services. It is also clear that several apparently quite different areas of activity (for example international tourism and industrial storage) have convergent interests in areas such as the roading network, IT infrastructure and provision of public space.

A challenge for the Taupo District Council will be to integrate these demands so that a superior foundation can be provided for the expected growth in other areas of the economy.

## DEVELOPING: THE SIZE AND SHAPE OF THE FUTURE

This section of the report deals with the possible future economic experiences which will characterise Taupo.

### STRENGTHS WEAKNESSES OPPORTUNITIES THREATS

Sector / Issue	Strength	Weakness	Opportunity	Threat
Primary	<p>Strong natural resource advantages</p> <p>Significant comparative advantage in climate and grass growing conditions coupled with incentivised ownership structures.</p> <p>Significant input of commercial and scientific expertise into production. Relatively low cost production base.</p> <p>In Taupo well supported by long established service sector.</p>	<p>Part of an already undiversified economy.</p> <p>Part of the relatively undiversified N.Z. economy. Subject to swings and fortunes of commodity prices.</p> <p>Co op ownership structures in parts of industry weakens capital base, makes exit problematic and creates dependence on legislative protection.</p> <p>Nitrogen inputs into the Lake.</p> <p>Poor pumice soils and climate may make alternative land uses</p>	<p>Exposure to very large and growing markets</p> <p>Given better management of impacts, ability to sell “green” imaged produce.</p> <p>Orientation to fastest growing markets in the world where incomes are rising.</p> <p>Large untapped markets even for commodity product. Scope for selling into high end of value chain and value added processing units.</p> <p>Contact and MRP power both new</p>	<p>Environmental impacts of all phases of production.</p> <p>Environmentally harmful discharges to water in all catchments. Need to overcome environmental impacts.</p> <p>Heavily dependent on market prices. Price takers in global industry.</p> <p>Dependent on macro economic variables (interest rates, exchange rates). Significant policy exposures.</p> <p>The regulatory environment stifling creativity. High</p>

Sector / Issue	Strength	Weakness	Opportunity	Threat
	<p>Large scale water users in energy sector face strong incentives to get collaborate in building better abstraction and discharge regimes. While Crown owned there is also some expectation of leadership from these SOEs.</p> <p>Presence of energy sector and other industrial users creates opportunities for value producing relationships.</p>	<p>difficult.</p> <p>Lack of property rights in abstraction and discharge. Lack of water right trading mechanisms.</p> <p>Large degree of (needless) fear about these economic instruments.</p> <p>Poor conceptual development of how to manage water allocation – e.g. idea that HEP “borrows” water, concepts of charging for use etc not properly developed yet.</p> <p>Minimal use to date of organic fertiliser and nutrient regimes. Poor links between commercial fertiliser industry and local / regional authorities.</p>	<p>generation opportunities and application of new technologies.</p> <p>Scope for further dairy conversions subject to water allocation regime</p> <p>Forestry or other innovative use of the lake catchment land subject to stronger management regimes.</p> <p>Build on early signals in EW Regional Plan of moving to water markets.</p> <p>Opportunity to lead in superior management of impacts. While this is the primary responsibility of EW, scope for TDC economy to gain in socio economic terms through collaboration and pressure for better regimes is great.</p> <p>Prospect of interrelationships</p>	<p>compliance costs and uncertainty threatening both commercial and non commercial uses as well as environment.</p> <p>Just as has happened in Australia, some region or district sooner or later will adopt water markets and trading and the superior results in water conservation and allocation (again as seen in Australia) could be a competitive threat.</p>



Sector / Issue	Strength	Weakness	Opportunity	Threat
Secondary	<p>Strong local market</p> <p>Depends on and can sell to local primary producers as inputs and has advantages over importers in this.</p> <p>Reasonably niche based structure not dependent on traditional manufactured export lines. Bulk of tariff re structuring completed.</p>	<p>High cost structure relative to competition</p> <p>Shares the generally high cost structures of N.Z. manufacturing and thus competition from imports.</p> <p>Difficult to generate large economies of scale or gear up to high levels because overall markets are relatively small.</p>	<p>Supporting local industry through input manufactures</p> <p>There is some (distance based) advantage to providing local inputs to industry which imports cannot compete with easily.</p> <p>Growth of sectors such as tourism and retail can generate some local opportunity for input manufacturing.</p> <p>Support of the dairy and construction sectors.</p>	<p>Low cost import substitutes competing against local costs</p> <p>Ever present threat of high labour costs and low cost import substitutes. Micro regulation of industry exacerbates the problem. Where costs such as ACC and compliance and other labour market costs are high, this creates incentives for employers to substitute capital for labour or simply not to employ and growth becomes difficult.</p>
Tourism				

Sector / Issue	Strength	Weakness	Opportunity	Threat
	<p>Outstanding natural features.</p> <p>Long history and reputation stretching back to and before earliest European settlement.</p> <p>Appeals to domestic and international visitors with an emerging international brand.</p> <p>Significant tourist assets and infrastructure. The existing levels of accommodation through a wide variety of classes are difficult to match elsewhere in the North Island.</p> <p>Proximity to other tourism assets in N.Z., notably the “thermal tourism belt” including Rotorua. This provides scope for collaboration.</p> <p>Well positioned to exploit the “adventure tourism” market</p>	<p>Vulnerability to travel costs and security of travel considerations given distance.</p> <p>Exposure to exchange rate negatives affecting travel purchase and in country spending power.</p> <p>Declining domestic spend relative to past history means slowed growth in this segment.</p> <p>Ability to exploit winter season not fully developed to date – creates opportunity.</p> <p>Local authorities notorious for inability to consistently collaborate in ways which are commercially realistic.</p>	<p>Growing environmental awareness placing increasing premium on physical environment.</p> <p>Rise in popularity of active tourism and adventure based tourism as a global trend which TDC can readily exploit.</p> <p>Ability to provide very wide range of tourist experience in one compact area. Package opportunities.</p> <p>Development of Rotorua International Airport May provide scope for collaboration in getting visitor numbers higher in both centres.</p> <p>Big opportunity to lead through collaborative efforts amongst local authorities. In areas such as flight (more generally</p>	<p>Inability to manage impacts on physical environment especially discharges to catchments.</p> <p>Ability to capture and retain top class managerial ability and human capital more generally. Constant raising of standards of service and infrastructure expectations amongst visitors.</p> <p>Extreme popularity of tourism as a regional growth engine in N.Z. means competition for resources and visitors is high.</p> <p>An international airport in Rotorua could threaten visitor nights and length of stay in Taupo or lead to bypass.</p>

Sector / Issue	Strength	Weakness	Opportunity	Threat
Retail	<p>given the natural environment and in particular its variety.</p>		<p>transport) time tabling.</p> <p>Green tourism branding. Scope for international promotion of the district in these terms.</p> <p>Increased accommodation (temporary and permanent) within the town centre.</p>	
	<p>Combined base of domestic and household economy coupled with visitor and itinerant populations creates a market larger than local population could otherwise support.</p> <p>Lake side location offers strong setting to build on.</p> <p>Well developed servicing for retail (service lanes, access, parking) offering retail sector</p>	<p>Rather fragmented and sparsely occupied layout which makes pedestrian concentration difficult and tends to generate car dependent use patterns.</p> <p>Somewhat awkward mix of cars and pedestrians at present. May be frustrating for both through this mix which has evolved in a natural fashion but may no longer be optimal.</p> <p>LFR offering at present weak.</p>	<p>Arterial diversion will soon allow exploitation of water's edge and chance to combine access to water with retail in an outdoors, pedestrianised environment.</p> <p>Scope for development of public spaces, modernised precinct to complement local and tourist demand both domestic and international.</p> <p>Scope for attracting regional</p>	<p>Seasonality (sharp business income boosts October to March followed by decline in spending) makes niche operations difficult to manage in some segments – notably those exposed to tourist markets.</p> <p>The retail business environment is extremely competitive with narrow margins. Any increase in costs has generally to be absorbed by the retailer with</p>

Sector / Issue	Strength	Weakness	Opportunity	Threat
	<p>numerous development options. Infrastructure is typically generous in service offered.</p> <p>Strong levels of competition force change and innovation. National level change brings local level change and external input.</p>	<p>Strategy yet to be completely developed.</p> <p>High levels of sunk capital in older style retail businesses. In any urban area, changes in consumer markets outstrip changes in built infrastructure leaving invested owners with large amounts of sunk capital they must earn a return on. Ability to change and adapt without losing capital is critical.</p>	<p>visitors and shoppers especially when niche retailing is complemented by LFR.</p> <p>Making change and adaptation of buildings and spaces as easy and low cost as is possible. Minimising regulatory input, maximising speed of turnaround.</p>	<p>scope for passing on costs very limited.</p> <p>A low cost environment is therefore important.</p> <p>Inability to capture and maintain high caliber retail management and staffing resources.</p> <p>Vulnerability to incumbents with vociferous community “voice” versus new comers, new starts and fresh ideas with little voice or influence.</p>
Factor Markets Human Capital				
	<p>Lifestyle choices, if combined with strong prospects should enable high achieving human resources to be attracted and retained.</p> <p>In spite of location Taupo remains within ready reach of</p>	<p>Distance from major career pursuit markets to some extent will always be a drawback to be faced and addressed with offsetting benefits.</p> <p>Retention of young cohorts of workforce likely to prove</p>	<p>Building on opportunities particularly for middle management “posting” opportunities notably in tourism.</p> <p>Increasing use of electronic business processes means</p>	<p>Higher wages and remuneration more generally in larger urban areas.</p> <p>Any loss of quality or frequency of air travel services. Services do not necessarily have to be high in frequency but loss of service or</p>

Sector / Issue	Strength	Weakness	Opportunity	Threat
	<p>both major metropolitan areas of the country by air and road.</p> <p>The area is large enough to attract senior positions. Some industries require on site location (notably tourism) of management.</p>	<p>difficult. Turnover likely to be naturally high.</p>	<p>distance is less and less of a problem up to and including top positions.</p> <p>Current under servicing of business support should provide scope for local expansion.</p> <p>Further and stronger development of niche and boutique shopping. Two tier shopping strategies which see the trend in “same customer in both high end and low end markets simultaneously” being capitalised on – provision might be made for this in land use policy</p>	<p>uncertainty of continuity is a threat to be mitigated and defended against.</p>
Factor Markets				
Land costs	<p>Land and development opportunities are generally expensive in metropolitan</p>	<p>Standard difficulties of distance to markets and other services, size with resulting challenges in</p>	<p>Relatively low land costs and current under supply of business services may create</p>	<p>Relative ease of “bypass” where there are not compelling reason for locating some or all of an</p>

Sector / Issue	Strength	Weakness	Opportunity	Threat
	<p>areas by comparison with Taupo District.</p> <p>Infrastructure, communication facilities (broadband, mobile broadband etc) all work to make distance less of an issue without the costs associated with large urban locations.</p> <p>Land for commercial, light and heavy industrial uses along with distribution uses less expensive than other urban areas.</p> <p>Strong road links to other areas including Eastern regions and Hawkes Bay.</p>	<p>networking and conducting face to face business.</p> <p>Dependence on road and air for physical transport at present.</p>	<p>strong opportunities for consolidation of space and development of commercial services businesses.</p> <p>There may be scope for exploiting relatively low cost land and land servicing costs to the benefit of logistics and distribution industries.</p> <p>Moves for provision of TDC provided services which are sheeted home to users rather than imposed on the entire community through AUC or rates help keep land and land development costs lower and more equitable.</p>	<p>operation in Taupo.</p> <p>Any advantage in land costs and land servicing costs depends critically on costs remaining low – rating and compliance costs are key in this area.</p>

## SUMMARY OF CRITICAL OPPORTUNITIES AND POLICY DIRECTIONS

While a number of detailed issues have been considered in the SWOT analysis, the following table concentrates and integrates the most important of these to provide a clear focus.

Sector / Activity	Most Pressing Needs and Opportunity	Indicative Policy Direction
<p><b>PRIMARY</b> Sector (links strongly to activity outside pastoral land uses because of the natural resource element).</p>	<p>Improved management of environment impacts is both critical and a large scale opportunity.</p> <p>All users of primary sector environments in primary sector activities – passive and active – generate and significant wealth for the community and the area offers growth provided management of impacts can be improved.</p>	<p>Development and deployment of economic instruments:</p> <ul style="list-style-type: none"> <li>▪ Discharge fees</li> <li>▪ Tradable discharge permits</li> <li>▪ Abstraction rights</li> </ul> <p>Measurement and monitoring tools to allow these instruments to operate effectively.</p> <p>Difficult as this challenge is, and abhorrent to some, the benefits to both economic participants and stakeholders in sustainable environments are significant.</p>
<p><b>TOURISM</b> (links strongly to the primary sector because of the natural resource element)</p>	<p>Safeguarding the long term future of the industry rests upon success in the areas identified above.</p> <p>Outside the natural environment, developing and pursuing themes promoting sustainable built environments are critical too. These include:</p> <p>Identification and preservation of views,</p> <p>Management of car based activity,</p> <p>Active management of open space and the development of the retail core bearing these factors in mind.</p>	<p>Development of theme based provision (for example controls recognising views as a central element in some areas) of land and development control.</p> <p>Rather than stifling blue prints a dynamic approach which stresses themes might be encouraged. This would include:</p> <p>Active engagement of waterfront and town centre,</p> <p>Traffic, parking and route planning which encourages this,</p> <p>Active promotion of communications through air and road schedules, provision of infrastructure and information</p>

<p>Retail (links strongly to the other areas because both natural resource and tourism demands integrate with retail</p>	<p>Refurbishment and modernization of the town centre as an integrated whole. The scope for revitalization, creation of distinct urban design and strong differentiation is significant.</p> <p>Resolution of LFR issues especially if an LFR belt around a revitalized centre can be established offers significant increases in efficiency and equity for the community while at the same time serving sustainability objectives in respect of transport.</p>	<p>provision.</p> <p>Policies to be considered might include:</p> <ul style="list-style-type: none"> <li>▪ Consolidation of wide open and under utilised spaces</li> <li>▪ Concentration of pedestrian traffic</li> <li>▪ Integration and interaction with water front</li> <li>▪ Integration with open and community spaces with improved links</li> </ul>
<p><b>INTEGRATED TDC POLICY</b></p>	<p>The linking of all policy initiatives (within the constraints of good governance practice and the law) has much to offer.</p> <p>Areas of major significance are:</p> <ul style="list-style-type: none"> <li>▪ Development control and land use management</li> <li>▪ Traffic management and related route and parking</li> <li>▪ Open space creation and management</li> <li>▪ Commercial property holding and development</li> </ul>	<p>TDC is in a prime position to facilitate economic development without being overly dictatorial or inappropriately intrusive.</p> <p>Policy initiatives which suggest themselves include:</p> <ul style="list-style-type: none"> <li>▪ Continued stress on high quality well researched policy development;</li> <li>▪ Careful deployment – especially as to timing – of land assets owned by the Council</li> <li>▪ Structured use of open space initiatives which have clear objectives.</li> </ul>



## LARGE FORMAT RETAIL IN THE FUTURE DEVELOPMENT OF THE RETAIL SECTOR IN TAUPO

Like numerous of the smaller cities in New Zealand, Taupo has become a likely focus for the deployment of large format retail (LFR) developments. Like other cities in New Zealand, there is considerable apprehension about the likely impact of such developments both in general and more specifically on the existing retail sector and the existing format of this sector. This section examines the phenomena and its likely implications for the TDC area in the future.

### DEFINITION

Precise definition of what is meant in a physical sense by LFR is difficult and not necessarily meaningful outside some general characteristics. Those typically though not exclusively involve large size (in the vicinity of more than 20,000 square metres or more), single story though usually with very high stud and often but again not exclusively sited in clusters close to reasonably high density traffic routes.

The caveats (not all LFR in N.Z. is “on the edge of town”, necessarily extremely large or even necessarily purpose built) are significant in the case of Taupo where a modified physical form of the format may exist already and might, perhaps for reasons of the retail catchment size, be appropriate.

In considering LFR in a N.Z. context, especially in smaller cities, it is likely to be more appropriate to consider the economics of the LFR model as the principal driver of this form of development. Probably the only two universal characteristics of LFR from a site specific perspective are the car dependent (and therefore car parking extensive) nature of the model and relatively low density land use character of this form of retailing.

### NOTE ON METHODS

Perhaps because of its controversial nature the LFR (or big box retail as it is frequently termed in the U.S.) and its impact has been studied quite extensively and from several perspectives. That is helpful in the sense that there is a reasonable amount of research to draw upon. On the other hand the emotive nature of reactions to LFR and in particular Walmart, from all perspectives means that the research is not always reliable.

This issue is crystallised in the numerous reports and discussions in both formal and informal literature which ask “How can a company which generates so much antagonism be so successful?” and the numerous characterisations of Walmart and consumers having a “love – hate” relationship.

There is little to suggest that this is not the case in N.Z. with a woman (Judith Bell) changing her name to that of Warehouse founder Stephen Tindal and writing a book “Seeing Red” which denounces the business and its model on the one hand while at the same time the business has been remarkably successful in penetrating almost every segment of the retail sector, throughout N.Z. and in a very short time.

BWL consider this “schizoid” view to be an intrinsic part of the LFR “story” rather than a “debate” which can be resolved through argument. Consequently in this section I have drawn from a wide literature in examining costs and benefits so as to isolate factors of significance for policy decisions. the following analysis.

Amongst reliable rigorous research that of Irwin and Clark “The Local Costs and Benefits of Walmart”, Ohio University, 2006 is especially useful because it draws together a wide array of studies in a balanced fashion. The findings are able to be applied in N.Z. The work of Deborah Curran and Company, Smart Growth British Columbia (2006) should also be noted because it draws attention to some land use planning issues.

## THE ECONOMICS OF LFR IN BRIEF

In considering the future of the retail sector and public policy, It is helpful to understand the basic economic drivers of LFR. Much of this comes from an understanding of trends in retail which have given rise to the format and its global success and popularity as evidenced in revealed preferences, i.e. how people actually behave (as opposed to what is reported about how they behave or what they say).

The apparently vocal opposition to LFR for example is not consistent with shopping behaviour of consumers – quite the reverse is the case. In line with sound theory – behaviour rather than spoken assertion is the more reliable indicator of preferences.

Four key trends which are crucial in leading to the emergence of LFR are:

---

### SUPPLY CHAIN INNOVATION AND LOGISTIC EFFICIENCY

Much of the “set up” for the phenomenal growth of LFR can be traced to changes in the way retailers and their agents (including logistics intermediaries such as freight companies and the logistics management industry) have innovated in the way the supply chain is managed. The great majority of this change was pioneered by Walmart, now the world’s largest business, and changes and improvements have included:

- Driving down the amount of inventory held “on site” through use of just in time (JIT) delivery systems which are capable of responding to finely tuned alterations in type and volume of demand,
- Increased efficiency in data gathering beginning many years ago with bar coding, and then with the development of better analysis tools, evolving the ability to track and trace consumer demand in increasingly sophisticated ways,
- Precisely the same technologies and data suites enable inventory management to be improved in terms of efficiency, reducing double handling, delivering stock in appropriate mix and volume and offering suppliers high quality outlets for their goods,
- Driving the information which such analysis provides back “up” the supply chain to allow JIT systems to operate and to send more precise signals to suppliers cutting down supply lead times by several orders of magnitude.

The net result is a wider range of goods able to be delivered to consumers wanting those goods at significantly lower prices on a more timely basis and at less cost to the businesses. In short the ability of retailers in this segment to deliver what consumers want at lower prices than in the past was able to be increased significantly. In the case of Walmart, average price decreases achieved across all store types for a “first in town” store were consistently and over a long period of time some 14%.

In N.Z. equivalent operations such as the Warehouse similar results emerged.

---

### GLOBAL PURCHASING

The last fifteen years have seen staggering increases in global purchasing by retailers. The reasons for that are numerous (starting with better supply chain management discussed separately above) but the most important include:

- Removal of tariffs and non tariff barriers to trade allowing significant savings for consumers, significant increases in the range of goods available and significant increases in volumes sold because of lower prices;
- Improved economic performance by emerging market economies notably China and India but especially the former. The movement of emerging market economies toward market oriented capitalist process has generated significant increases in production just as trade barrier removal has created incentives for importing in the (relatively) moneyed western economies;
- Emerging markets have been characterised by low costs of production, labour, distribution, raw material sourcing and thus total manufacturing costs. Moreover the difference between manufactured goods in emerging economies and OECD economies has been dramatic (and for the moment at least continues to be). The major caveat (especially from a New Zealand perspective, is the need to buy at volume),
- Retailing tends to be a low margin business. The after tax retail margin over the last 5 years (years of strong economic growth) in N.Z. was 4.13% (excluding pharmaceuticals which enjoy subsidised support in various forms and average twice this). It is therefore a “volume game” in many senses and driving up volumes requires (because of the law of demand) the lowering of prices. This can be achieved through global purchasing.
- Global purchasing at scale is especially important. Thus where twenty years ago retailers might have banded together throughout the lower North Island to generate purchasing power, currently they will form purchasing alliances throughout Australasia so as to secure discounts through bulk.

The result of the combined effects of these trends is a need to attract volume and to sell goods in high volume, with the lowest possible overheads to the widest possible population. LFR provides an ideal means for doing that.

---

#### DISAPPEARANCE OF THE “MID PRICED” RETAIL OFFERING

Recent decades have seen the gradual disappearance of “mid priced offerings” (see for example NZ Retailers Assn reports 2007, 2008). Reasons for this vary and include the argument that the conventional middle class is disappearing as a significant demographic as baby boom cohorts display increasing wealth and age while segments of younger cohorts – especially migrant communities – become relatively poorer.

Other reasons include an alteration in tastes whereby consumers purchase at the top and the bottom of the quality range – frequently the same consumers – while eschewing middle of the road offerings.

As a consequence the mid priced format – so common in mid sized cities and smaller towns – does not provide a viable business model for nearly as many businesses as it once did. Indeed some would argue it has no particular future.

---

#### THE RISE OF NICHES

Niche retail has enjoyed a boom in recent years. Underlying drivers have been the disappearance of mid price offerings, the fact that LFR and bulk sellers do not compete or even seek to compete with the niche end of retailing, growth in per capita income which has created improved purchasing power, relative shifts in budgets which low prices generated via LFR have delivered purchasing power for niche formats and external factors such as growth in tourist consumers.

The combined effect of much higher availability of imported goods and much broader knowledge amongst consumers of niche market products (that awareness having grown through increased travel abroad and media such as the internet) has generated a larger volume of sophisticated consumers seeking niche level purchases in the luxury end of the retail market.

Perhaps paradoxically, the rise of LFR has also assisted niche segments. This has happened as LFR lines become more generic and mass market oriented and thus offer "plain" selections geared to average buyers (for example censoring certain music lyrics and excluding highly specialised low volume lines or skews within lines), so that various gaps and voids are left for niche higher margin lower volume operators to exploit.

## BENEFITS OF LFR OPERATIONS

While there have clearly been significant gains to shareholders and other investors in LFR the major beneficiaries have undoubtedly been consumers. In the case of shareholders the success of LFR has tended to allow investors to "keep up" with the competition and to continue to earn a return on capital rather than generating increases in margins. Where absolute earnings have been increased this has tended to be the result of expansion and growth via a volume based model rather than through margin improvement.

For consumers however, the significant savings in prices paid, variety of goods offered at those prices and (latterly) increased quality of goods at such prices, on a sustained basis, have meant significant increases in welfare.

Effects can be broadly divided in two as follows:

### DIRECT BENEFIT

Direct benefits have arisen through the simple drop in prices for items purchased. In informal terms "these shops are cheap". Moreover cheap prices characterise a wide and increasing range of goods.

While estimates and measures vary, the following are common:

- In the U.S. where extensive studies have been undertaken, entry by LFR into a new community where there has been no LFR tends to produce average savings across the full range of goods of 20% - 25% rising over a five or year period.
- In New Zealand it is difficult to make direct comparisons because many of the items now commonly sold via LFR were simply not available prior to removal reductions in tariff and non tariff barriers. Examination of price reports in newspapers and consumer reports undertaken for this report suggest savings of a similar order of magnitude.
- Where there are existing LFR developments or forms of like competition savings are less (since they have been "banked" already by consumers) thus new entry typically saves consumers 10% - 14%. Since this is an increment on savings made already the effect remains a strong one.

### INDIRECT

As well as direct savings in the LFR stores themselves research has established significant and enduring savings through the competitive impacts on other retail outlets. Evaluating the many studies in this area shows a sustainable saving in the order of 5% through this competition.

More difficult to evaluate are the impacts on non price competition which results in:

- Improved range of goods and services,
- Improved terms and conditions of trade (the Warehouse returns policies for example have led to significant changes in returns policies in most stores), and,
- Improved inventory management and thus availability of stock for customers.

---

## NET EFFECTS

It is both difficult and unnecessary to seek absolute precision in respect of savings from LFR. What is clear is that double digit price savings (at a minimum) arise through the lower prices for items and the lower prices other retail outlets are able to charge as a result of LFR development.

## SIGNIFICANT ECONOMIC EFFECTS

The significant economic effects are:

### EFFICIENCY EFFECTS

1. Increase in welfare through releasing disposable income. The effect is much the same as a wage rise. Estimates of the enduring size of this efficiency gain are in the region of 20% for individual consumers.
2. The availability of similar increases in welfare through other means are extremely limited, less likely to endure and are unlikely to be of a similar order of magnitude.
3. Significant if difficult to quantify gains through improved range of choice overall (while some choices may be narrowed within lines through fewer skews offered, overall range increases).

### EQUITY EFFECTS

1. The value of effective increases in disposable income and improved choices is greater for those on low and fixed incomes than for those on middle and upper incomes.
2. The U.S. estimates show that a saving of 20% on average is "worth" some 30% to those in the bottom earning quartiles. In populist terms, the "poor" gain more than the "better off".
3. Similar conclusions hold in respect of choice since lower prices bring a wider range of goods within the budget of lower earning populations.

### EMPLOYMENT EFFECTS

It is difficult to untangle the varying employment effects of LFR since the matter is less simple than proponents and opponents of LFR would suggest. Key factors to consider are:

- The several studies which show that wages under LFR tend to be lower since a lower skill mix is generally used in operating stores. This appears to be less an industrial relations issue than a function of skills required (and thus wages commanded) in LFR outlets,
- Increase in job offerings for poorly trained, handicapped and difficult to employ

- At the same time there is good evidence that a number of those employed in LFR outlets would be unemployed or under employed but for the job opportunities created by LFR,
- There are undoubtedly some displacement effects where other businesses are affected. It is not clear that all such displacement results in a net loss however since this depends on the ability of the economy to absorb such labour, the ability of those displaced to move to alternatives and a range of other factors.

Judgments about the desirability of positive equity effects under LFR hiring policies versus displacement costs, different labour market structures and employment gains are obviously difficult to make particularly where the relative magnitude of costs and benefits is not clear.

## COSTS OF LFR OPERATIONS

Perhaps the most difficult factor to bear constantly in mind in examining the costs of LFR is that assessment of costs involves comparing the impacts of LFR with “what would otherwise happen” and decidedly not with “a clean slate” or some other hypothetical but non-existent situation. All retail formats have impacts of one kind or another – all offer benefits and all impose cost of one or another type.

What is critical is how those of LFR compare with other forms and with the benefits of LFR.

### SIMPLE COMMERCIAL EFFECTS

It is generally the case that the lower prices offered by LFR come at the expense of specialised service and staff knowledge in assisting consumers.

Another noted effect is that lines offered under LFR may be narrower reflecting a desire to “meet the preferences of the average” purchaser (the opposite of the long tail effects seen in micro niche marketing through the internet), to meet supplier discounts available for volumes unavailable in specialty lines, to avoid “controversial” offerings (for example extreme rap lyrics in music or controversial DVD offerings).

Such effects are matters which are resolved through market processes. Their significance in this report is that the effect creates opportunities and strategic opportunities for other forms of retail.

### INFRASTRUCTURE IMPACTS

The majority of LFR development involves low density space extensive use of land. Moreover locations on the fringes of cities and towns are often favoured (notably but unsurprisingly by existing CBD operators). These characteristics can affect both capital and operating costs of infrastructure (water, sewage, electricity, communication, transport services).

A potentially related cost is that to the extent that existing infrastructure – notably water, sewage service and stormwater assets become under utilised (say in inner town centre areas) part of their value becomes a sunk cost when new facilities are required elsewhere. In addition to lack of full capacity utilisation there may be costs associated with liabilities created where older infrastructure has to be maintained or contamination risks etc have to be born.

## TRANSPORT ISSUES

LFR is a car dependent format. Without large car parking facilities and easy automobile access the concept cannot be operated satisfactorily. This implies provision of transport infrastructure and significant road access for consumers as well as (to a lesser extent but important at the margin) service traffic.

Closely allied to potential costs in this area are issues related to emissions, pollution and the energy / transport interface with sustainability. Dependence on cars may not be an ideal characteristic should concerns continue to grow in this.

Finally provision of access and mobility infrastructure which rivals alternatives (such as more extensive delivery services) may also increase costs.

It should be noted in considering these costs however that many other retail formats involve costs as well. Home delivery options for example drive up costs. All retail to some extent involves dealing with the “three waters” (storm water, waste water, potable water), and most retail involves at least some automobile transport.

## HABITAT AND PHYSICAL ENVIRONMENT

Development of the extensive sites associated with LFR typically call for extensive land works resulting in large scale paving and modification of the physical environment. Virtually by definition habitat disturbance is involved at some level or other.

Such effects are likely to have impacts on site (through creating impervious surfaces for example) and off site (through concentrating run off for example). There are also interactions with the concentrated use of sites (for example potential for leachates derived from chemical emissions from cars).

Other possible impacts exist as well. One notable possibility is where significant cultural assets might be subject to adverse effects (e.g. run off into fresh water or use of sacred land either directly for sites or through transport requirements). Similar remarks apply in respect of historic sites or more generally, heritage assets.

It is possible, indeed it may be very likely that the costs imposed in these areas are small, minor in their effects and readily manageable. Their potential should however be noted. That potential is to be contrasted with what might otherwise happen – under scenarios which see more intense development of existing sites for example, or the redevelopment of other areas.

The purpose of economic analysis identifying these impacts is not so as to advocate any particular policy (public or private) but instead to identify the totality of potential costs.

## IMPACTS ON OTHER BUSINESS AND RETAIL OPERATIONS

Unsurprisingly the most vociferous expressions regarding LFR have tended to emerge, worldwide, from existing retail operators. An objective analysis suggests that extravagant claims have frequently been made by the several parties – those in favour and those opposed to LFR development - to the issues of concern and that much of the so called analysis has not been helpful.

What does appear to be the case is that:

- LFR development forms part of a powerful development trend which continues to exhibit significant growth. It is highly questionable whether it would be possible or desirable to “stop” or significantly inhibit its progress by any means which is legally and constitutionally sound,
- LFR does have an impact on the existing retail activity. Because of the intense price and range competition LFR displaces a certain amount of that activity. The overall effect on the community from LFR is likely to be beneficial but some businesses are displaced
- There are strategies which displaced businesses or businesses which are likely to be displaced can and do employ to counter this threat.

---

## INDIRECT COMPETITION AND OWN NICHE RETAIL

Least affected not surprisingly are retail businesses which are not in direct competition with LFR either because:

- They occupy and entirely different market segments to those pursued by LFR or do not compete on any material level with LFR offerings, or,
- They have specialised approaches, offer unique skews or occupy niches which LFR does not compete in. Ironically, the presence of LFR sometimes creates such niches through its targetting of average purchase patterns.

In spite of a lack of direct competition there is still impact from LFR on other retail business. That impact generally takes the form of increased competition – especially non price competition in respect of factors such as:

- Convenience
- “generic” products for example small scale spontaneous food and drink items
- Opening hours
- Terms and conditions of trade

Changes in these factors may result in the displacement of some retail businesses. Fears of wholesale closures of town centre areas are likely to be exaggerated.

Impact in other sectors e.g. wholesale

---

## DIRECT AND CLOSE TO DIRECT COMPETITION

Significant effects can be expected where there is direct competition between LFR and existing retail in broadly the same markets. Key factors affecting the size and nature of the impacts are:

- Retailing of any form of protected, subsidised or favoured line is likely to be severely hit by LFR. This is a natural consequence of sourcing from genuinely competitive markets which outperform protected industries,
- Direct competitors operating orthodox logistics management models and seeking to compete using volume based retail models generally find it difficult to compete with LFR for the reasons discussed above.



The extent to which these effects are felt also depends upon the state of existing retail structure at the time of the arrival of LFR.

In the case of Taupo this is likely to be significant because there are already forms of LFR style business model being operated albeit at lower physical scale than full service LFR. The existence of these forms of development mean that to some extent at least, significant change has already taken place.

---

## OTHER EFFECTS

Two other impacts should be noted. These are:

### IMPACT ON SECTORS OUTSIDE RETAIL

Because of completely different sourcing patterns associated with the logistics and supply chain management used by LFR there are likely to be impacts on sectors such as wholesaling, storage and distribution. JIT operations mean that to a significant extent LFR operations are likely to seek to source from outside the district thus reducing demands for space (relative to retail turnover – not necessarily in absolute terms).

### IMPACT ON OUTLYING SETTLEMENTS

It is also likely that with LFR catchments sweeping up populations well beyond the immediate city vicinity, development of independent village style retail is likely to be slower. Moreover its development may reflect the need to compete with LFR – geographical proximity to more isolated communities being the key advantage. Benefits arising for consumers under such conditions are that price, range and convenience must be of a high enough standard as to ensure custom is not lost to city based LFR.

## CONCLUSION: NET BENEFIT

The several costs of LFR have been discussed along with benefits in some detail. Some of these are able to be quantified while some are not. The point of focus for TDC is the net benefit to the community, i.e. what benefits flow having considered the costs.

Conclusions drawn from the U.S. literature<sup>2</sup> show that a minimum of 3.75% net benefit flows from LFR developments. The term “net” here is crucial. Other economic policies such as tax cuts or changes in fiscal policy are typically unable to deliver improvements anywhere near this magnitude once costs are taken into account.

There is no reason to expect that the N.Z. experience would be any different and such reports as can be examined suggest that indeed that is the case. While the “love hate relationship” is apparent the overall conclusion appears to be that the developments are net beneficial.

---

<sup>2</sup> Notably Hausman, J. And Leibtag, E. “Estimating the Benefits of Walmart”, MIT 2006.

## CAN TAUPO AVOID LFR?

Given the absence, at this point, of LFR development of the type seen in major metropolitan areas a reasonable question concerns whether or not LFR development is desirable, necessary or likely in the TDC area over the structure plan timeframe.

### ATTRACTION OF LFR FORMAT IN TAUPO

A first point in considering this question is that the issue is not as “clean” as it might appear for various reasons:

- LFR involves a business model and several business process technologies (vertically integrated supply chain management for example) and a significant number of those models and their associated technologies have already been introduced (notably in grocery and supermarket “versions” of the model) already without land use change and associated impacts; and,
- There are a number of LFR models being deployed in developments which are modified or “small scale” versions of the physical infrastructure in Taupo already. While these formats are not as large in physical scale as metropolitan greenfields LFR they nonetheless are likely to be delivering benefits already.

These factors notwithstanding, the forecasts for retail growth nonetheless assume that the sector in Taupo will evolve and adapt to changing market needs in much the same way that such change will take place elsewhere. From a commercial perspective – for both investors in retail and consumers of retail – the business case to expand LFR throughout the country remains compelling. This is especially the case in the TDC area.

The reasons are straightforward enough:

- With the majority of the country covered (in population terms) consumer markets of 20,000 and upwards showing promise of increase are, and will continue to remain, attractive,
- The price of land in the area is attractive relative to alternatives (such as expanding, say, Sylvia Park or Albany or expanding in any metropolitan area,
- Servicing costs too are likely to be competitive if not distinctly advantageous (rates for example are not necessarily lower on various “per unit” measures but are competitive),
- Growth prospects given exposure to tourism coupled with the trend in “cross segment shopping” (luxury goods shoppers also shopping in low cost outlets) are attractive, and,
- Manageable distribution costs in spite of distance from competing catchments. While there are costs in distributing to Taupo which are greater than in, say Auckland, the distances need not generate prohibitively expensive costs.

In short then, it will continue to be relatively simple to construct a robust commercial case for developing LFR outlets in cities such as Taupo. Equally it will be difficult for traditional outlets to compete even if LFR was not to establish directly in Taupo because LFR pricing takes place for numerous items on a nationwide basis with prices reflecting cost of delivery to consumers under an LFR format. Thus the price of a given item of hardware

is likely to set having regard to its cost of delivery via an LFR outlet in metropolitan Auckland – not Taupo – and thus setting benchmarks which consumers will respond to.

#### COSTS OF ATTEMPTS TO THWART LFR

It is clear from the discussion of benefits that successful attempts to thwart or significantly choke LFR development are likely to have deleterious effects. In terms of net benefit to the extent that restrictive policies were able to prevent establishment of LFR they would cut into the 3.75% net growth which might otherwise be experienced.

The extent to which such costs were felt by the community would depend upon several factors including how much if any development was prevented, how many LFR related benefits are already being felt relative to additional benefits, and the extent to which the sector might be able to adapt, circumvent and otherwise avoid costs imposed by attempts to control this form of development.

The impact of costs imposed by thwarting development would be likely to fall unevenly with those on low and fixed incomes bearing the greatest share of the burden. While all the community might benefit from savings through the provision of lower levels of infrastructure (for example in rates), since these savings are passed on in a proportional manner (in the case of rates via proportions struck on value of properties), the benefits would not favour fixed and low income sectors of the community.

#### CONCLUSION

Having regard for both the benefits and the costs of LFR it is difficult to justify attempts to inhibit or prevent the development of LFR. Assuming successful policy could be developed (which may well be doubtful) there are likely to be significant detrimental efficiency and welfare effects and the those effects would fall disproportionately on the lesser well off members of the community.

Moreover, to the extent that savings and gains might be made, those are not likely to be shared equitably throughout the community.

This conclusion suggests that a focus on management of the framework within which LFR develops is likely to be the more prudent course.

#### STRATEGY CHOICES AND CRITERIA

Awareness of both the costs and benefits of LFR has led to a reasonable amount of research being undertaken into management strategies and responses to potential costs. A viable approach appears to be one in which the concept is embraced as a generic matter with particular attention focussed on the specifics of particular developments.

While this report is not concerned with developing specific policy, it is worth noting the critical factors in developing such policy. These appear to be:

- The development of a coherent vision and accompanying vision and strategy for the totality which is the retail sector. Such a strategy can help underpin the provision and timing of provision of support infrastructure for both LFR and the other segments of the retail industry affected by LFR,
- Attention to the development role of public authorities as part of a coherent strategy. Thus the execution of public space development and management strategies, transport and access strategies,

parking provision plans and infrastructure provision can play an important part in ameliorating potential costs,

- Infrastructure capital and operating pricing policy is likely to be important. Pricing and related mechanisms (selling and or charging for abstraction and discharge rights for example) mechanisms are the most important means available to the community to deal with infrastructure costs,
- Transport network development both in respect of internal circulation patterns and links to external arterial routes, and,
- Integration of the management disciplines within public authorities so as to link capital requirements, operating costs, land use development control and open space planning.

Within the retail sector education and awareness appears to be important – both the Hausman et al and the Irwin and Clark work suggests for instance, that orthodox retail outlet formats which keep prices within 10% - 15% of the lowest LFR offerings have a greater chance of competitive survival. Various other commercial strategies are also available.

In addition there are various specific policy areas concerned with adverse effects. Examples are cited in Curran's work applicable in North American contexts. Areas to address in the New Zealand context might include:

- Attention to site and building design and guidelines such that whatever agreed urban form principles have been adopted,
- On going moves toward "green" and "intelligent" site and building design – an area which has become an increasing focus of the design industries, and,
- Use of pervious surfaces and like innovations in site design to lessen physical impacts or improve their management.

Finally an area for careful consideration is the favouring of grey fields versus green fields development. LFR may provide opportunities for re development of older areas, consolidation of land uses (for example poorly patronised parking areas and transport links), upgrading of water and waste water services and improvement in other services (telecommunications for example).

## CONCLUSIONS

The analysis suggest the following:

- LFR seems almost inevitably to be part of future retail economic development in the TDC area,
- It is likely to deliver significant net benefits, i.e. benefits having considered the costs it may impose,
- Those benefits are likely to accrue throughout the community but with some emphasis on low and fixed income earners,
- The extent of net benefits may not be as dramatic as is reported in other areas because some may already be being enjoyed through existing development,
- The costs of LFR in terms of potential environmental impacts and changes likely to be brought to traditional patterns of retailing will generate a demand for change and change management,

- A significant requirement is an integrated retail strategy and from the perspective of local government a clear identification, delineation and coordination of the delivery in its areas of responsibility, and,
- The cost of seeking to heavily regulate or otherwise thwart the development of LFR as opposed to developing a clear framework within which it can develop would be high.

