

Diversification in Queenstown-Lakes: Context and what others have done



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Key findings

- Economic diversification is a strategy to move an economy towards a more varied structure of domestic production and trade.
- A diversified economy is more resilient to the ups and downs associated with any particular industry because risk is spread more evenly across a number of industries and markets.

Queenstown's diversification context

- Both the Queenstown and Wanaka sides of the district have experienced more significant cyclicity in employment growth than New Zealand.
- Employment across Queenstown-Lakes is primarily orientated towards industries which service demand from the tourism and property sectors. Almost two thirds of all employment in Queenstown-Lakes relies on tourism spending.
- Calculations of employment diversification show that Queenstown-Lakes is less diversified than Otago, Rotorua and New Zealand. Employment diversification improved between 2000 and 2010, but the most recent tourism and property boom has seen employment in Queenstown-Lakes become more concentrated again since 2010.
- Queenstown-Lakes' export mix is less diversified than the rest of New Zealand. Moreover, Queenstown-Lakes' goods and service exports have become less diversified through time.
- Queenstown's key source of external revenue is visitor spending. Spending in Queenstown-Lakes' tourism sector is more heavily concentrated on international markets than New Zealand, Otago and Rotorua.
- With regards to domestic visitor spending, Queenstown-Lakes has a high reliance on the Auckland market.

How others have tried to diversify

- An active attempt to foster economic diversification is a strategy that has been followed by many places to minimise volatility, reduce exposure to external shocks, and increase growth.
- When designing a diversification strategy, the literature highlights the importance of sound policy process, evidence-based decision-making, collaboration and leadership. You need to stocktake what you have before you can identify current and potential opportunities.
- There are no "silver bullet" or "one-size-fits-all" approaches that lead to a more diverse economy. Each place faces different situations that offer unique opportunities. Approaches taken involved a balancing act between good strategic planning, as well as trial and error.
- The types of diversification policies and mechanisms that are commonly implemented include: Workforce skills and capacity, smart specialisations and clusters, supporting and encouraging entrepreneurship, infrastructure investment, recirculating local capital, innovation, new ways of living and doing business, an emphasis on the environment, and embracing diversity and youth.
- No matter what type of diversification strategies are followed, there is consistency in the literature that broad representation is needed as part of policy design and implementation process, as well as monitoring and evaluating progress.
- It's best to take a multi-pronged approach and attempt a range of initiatives, rather than pinning your hopes to the success of one particular strategic intervention to diversify a local economy.
- Case studies show some diversification wins, but also many failures.

What does 'economic diversification' mean?

Economic diversification is a strategy to move an economy towards a more varied structure of domestic production and trade with a view to enhancing economic and social wellbeing.

A diversified economy is more resilient to the ups and downs associated with any particular industry because risk is spread more evenly across a number of industries. In a diversified economy, even if some industries are suffering, there are likely to be other industries that perform better and can offset the blow.

There is no common definition of diversification, nor a standardised way of measuring it. There are many angles from which diversification can be measured, but two of the most common approaches focus on the extent to which jobs or Gross Domestic Product (GDP) are concentrated on certain industries, and the concentration of exports by product type or market. Considering diversification from these two angles allows for a better understanding of domestic and external factors across both supply and demand.

Diversification is regarded by some to act as a form of employment insurance for a local economy, with more diversified economies experiencing lower unemployment during cyclical downturns. It is also argued that the more diversified the economy becomes, the more resilient it will be to external events and developments. The process of diversification, if successful, leads to new job opportunities, frequently in higher value adding roles.

Building resilience via successful diversification will become more relevant in the wake of the fallout from the Covid-19 pandemic and the realisation that the eventual recovery is likely to see long-term structural change in consumer demand, supply chains and business practice.

Measuring diversification in Queenstown-Lakes

Within this study, diversification in Queenstown-Lakes has been considered from two angles: what people do, and what is sold. In practical terms this involved measuring:

- Diversification of employment across all industries
- Diversification of exports (including tourism, goods and other services).

The analysis in this report shows how diversity has changed in Queenstown-Lakes through time, and how diversity compares to the rest of New Zealand, Otago, and one of the country's other premier tourist destinations, Rotorua. Within the Queenstown-Lakes context, more granular guidance has been given into relative differences in diversity between the Queenstown and Wanaka sides of the district.

Diagnostic analysis of diversification is also provided by examining whether industry employment trends have been driven by general national and industry factors, or whether industry performance has been driven by competitive factors where Queenstown has been superior to the national average.

General growth context

Queenstown-Lakes' economy has grown in a faster, albeit more variable way, than the New Zealand economy over the past two decades. Employment growth in Queenstown-Lakes averaged 5.9%pa from 2001 to 2019, compared to 1.9%pa across New Zealand. By comparison, employment growth across Otago averaged 2.1%pa over the same period, while Rotorua employment growth averaged 1.1%pa.

Figure 1 – Employment growth: Queenstown-Lakes and New Zealand, 2001-2019, source: Infometrics



Employment growth in Queenstown went through two pronounced upswings that were both accompanied by boom periods in the tourism and construction sectors. The first upswing occurred before the Global Financial Crisis began in 2008, while the second upswing gained traction about 2013.

The cyclical peak to trough employment growth trends in Queenstown-Lakes are more pronounced than across the rest of New Zealand. In technical terms, this variability can be captured using the standard deviation, which measures the amount of variation around the average. In Queenstown-Lakes, the standard deviation of employment growth since 2001 was 3.5%, while across New Zealand it was 1.4%. The standard deviation of employment growth in Otago Region was 1.7% over the same period, while in Rotorua it was 1.8%

Closer analysis within the Queenstown-Lakes context shows that both the Queenstown and Wanaka sides of the district experienced significant cyclicity in employment growth. This cyclicity was more pronounced in Wanaka than in Queenstown. Analysis later in this report will show that Wanaka's economy is less diversified than Queenstown's. Employment growth in the Queenstown side of the district averaged 5.8%pa from 2001-2019, compared to 6.4%pa in Wanaka. By comparison, the standard deviation (variability) of this growth was 3.2% in Queenstown, compared to 5.6% in Wanaka.

The literature would recommend economic diversification as a strategy for reducing Queenstown-Lakes' employment growth volatility and the risk of exposure to economic disruptions in a single industry or source market.

Figure 2 – Employment growth: Queenstown vs Wanaka, 2001-2019, source: Infometrics



Industrial structure

This section introduces the industry structure of employment in Queenstown and makes comparisons to New Zealand.

Table 1 shows that the industry employment structure of Queenstown-Lakes' economy is primarily orientated towards industries which service demand from the tourism and property sectors. For example, 21.7% of all jobs in Queenstown are within accommodation providers and cafes, bars and restaurants, while other key tourism-characteristic industries such as retail (10.6%) and arts and recreation services (7.3%) also account for high employment shares. More detailed analysis of the aggregate effects of this tourism demand will be given in an upcoming section (Tourism-specific context).

The demands of Queenstown-Lakes' property sector are apparent in construction's 14.3% share of employment and real estate and hiring services' 4.5% share.

Employment within the New Zealand economy has a much broader spread across industries to service demand from a wider range of factors. Particularly apparent at a national level is a higher share of employment in private and public sectors that support people and businesses, such as in health, education, public administration, finance and professional services. There is also a much higher concentration of agricultural, forestry and fishing employment within the national economy, as well as manufacturing of food and non-food items.

Table 1 – Filled jobs: Queenstown-Lakes and New Zealand (ANZSIC level 1 industry, 2019)

Industry	Queenstown-Lakes		New Zealand	
	Level	Share	Level	Share
Accommodation and Food Services	6,502	21.7%	170,215	6.7%
Construction	4,303	14.3%	245,105	9.6%
Retail Trade	3,169	10.6%	227,145	8.9%
Professional, Scientific and Technical Services	2,359	7.9%	241,382	9.5%
Administrative and Support Services	2,197	7.3%	129,750	5.1%
Arts and Recreation Services	2,003	6.7%	47,601	1.9%
Rental, Hiring and Real Estate Services	1,345	4.5%	61,562	2.4%
Transport, Postal and Warehousing	1,258	4.2%	106,582	4.2%
Education and Training	1,119	3.7%	198,888	7.8%
Health Care and Social Assistance	1,087	3.6%	249,620	9.8%
Manufacturing	1,027	3.4%	241,888	9.5%
Other Services	866	2.9%	97,558	3.8%
Wholesale Trade	644	2.1%	125,456	4.9%
Public Administration and Safety	631	2.1%	122,674	4.8%
Agriculture, Forestry and Fishing	628	2.1%	143,835	5.7%
Information Media and Telecommunications	369	1.2%	42,203	1.7%
Financial and Insurance Services	350	1.2%	68,308	2.7%
Electricity, Gas, Water and Waste Services	120	0.4%	17,393	0.7%
Mining	32	0.1%	6,031	0.2%
Total	30,008	100%	2,543,195	100%

2019 employment levels, source: Infometrics Regional Economic Profile, accessed 22/04/20

Analysis of the Queenstown and Wanaka sides of Queenstown-Lakes highlights subtle differences in industry structure. Table 2 shows that both parts of the district have similar employment shares of accommodation and food services, hospitality and retail trade. But Queenstown has a higher share of

employment than Wanaka in transport, postal and warehousing, manufacturing, and some elements of administrative and recreational services. Wanaka, on the other hand, still has a relatively significant share of employment within the agricultural sector, which has fallen to a very low level within Queenstown.

Table 2 – Filled jobs: Queenstown and Wanaka (ANZSIC level 1 industry, 2019)

Industry	Queenstown side		Wanaka side	
	Level	Share	Level	Share
Accommodation and Food Services	5,045	22.0%	1,457	20.6%
Construction	3,158	13.8%	1,145	16.2%
Retail Trade	2,296	10.0%	873	12.4%
Administrative and Support Services	1,971	8.6%	226	3.2%
Professional, Scientific and Technical Services	1,823	8.0%	536	7.6%
Arts and Recreation Services	1,663	7.3%	340	4.8%
Transport, Postal and Warehousing	1,180	5.2%	78	1.1%
Rental, Hiring and Real Estate Services	929	4.1%	416	5.9%
Health Care and Social Assistance	752	3.3%	334	4.7%
Education and Training	726	3.2%	393	5.6%
Manufacturing	709	3.1%	285	4.0%
Other Services	641	2.8%	225	3.2%
Public Administration and Safety	592	2.6%	38	0.5%
Wholesale Trade	556	2.4%	87	1.2%
Agriculture, Forestry and Fishing	277	1.2%	341	4.8%
Financial and Insurance Services	264	1.2%	83	1.2%
Information Media and Telecommunications	258	1.1%	110	1.6%
Mining	28	0.1%	4	0.0%
Electricity, Gas, Water and Waste Services	23	0.1%	90	1.3%
Total	22,893	100%	7,062	100%

2019 employment levels, source: Infometrics Regional Economic Profile, accessed 22/04/20

Location quotient

Another way of comparing Queenstown-Lakes' industry structure to the New Zealand economy is to calculate location quotients. A location quotient is a measure of the extent to which an industry is overrepresented or underrepresented compared to the rest of the country.

A high concentration of employment on an industry can indicate an area having a 'comparative advantage' in producing that good or service. The degree to which an industry has a comparative advantage is measured using 'location quotients', which give the ratio of Queenstown-Lakes' employment share in the industry to that industry's share of national employment. A location quotient greater than one suggests an industry enjoys a comparative advantage. Industries with a location quotient greater than 1.0 are often exporting sectors, as their higher share means part of their output is available for export. Sectors with a location quotient less than 1.0 typically need part of their local demand to be met by imports.

As expected, most of the tourism and property-related industries, including arts and recreation services, accommodation and food services, rental and real estate, construction, administrative support services, and retail in Queenstown-Lakes had a location quotient greater than 1.0, prior to the Covid-19 pandemic. By comparison, both Otago Region and Rotorua had less prominent location quotients in these industries, and higher location quotients in the primary sector and support services like education and health.

Table 3 – Comparing location quotients across Queenstown-Lakes, Otago and Rotorua

Industry	Location quotient		
	Queenstown-Lakes	Otago Region	Rotorua District
Arts and Recreation Services	3.6	1.7	1.9
Accommodation and Food Services	3.2	1.6	1.6
Rental, Hiring and Real Estate Services	1.9	1.1	0.9
Construction	1.5	1.1	0.8
Administrative and Support Services	1.4	0.9	0.5
Retail Trade	1.2	1.1	1.0
Transport, Postal and Warehousing	1.0	0.9	1.1
Professional, Scientific and Technical Services	0.8	0.7	0.6
Other Services	0.8	0.9	1.1
Information Media and Telecommunications	0.7	0.9	0.4
Electricity, Gas, Water and Waste Services	0.6	1.2	0.9
Education and Training	0.5	1.2	1.2
Mining	0.4	2.4	0.4
Public Administration and Safety	0.4	0.8	1.1
Wholesale Trade	0.4	0.6	0.7
Financial and Insurance Services	0.4	0.5	0.4
Agriculture, Forestry and Fishing	0.4	1.3	1.3
Health Care and Social Assistance	0.4	1.0	1.2
Manufacturing	0.4	0.7	1.0

A location quotient is the area's 2019 employment share relative to NZ employment share.

Source: Author calculations and Infometrics Regional Economic Profile, accessed 22/04/20

An analysis of location quotients within the Queenstown and Wanaka sides of Queenstown-Lakes in Table 4 shows that Queenstown has location quotients greater than 1.0 across similar industries to the district as a whole. But a notable inclusion in Queenstown's list is a higher focus on transport, postal and warehousing, which is understandable given the airport, vehicle hiring, and warehousing infrastructure on the Frankton Flats.

Wanaka's industries with location quotients greater than 1.0 all also generally align with the district as a whole. The exception is a higher location quotient in electricity, gas, water and waste services. The higher location quotient in this category should be thought of more generally as infrastructure-related resources, as over the years there seems to have been a to-and-fro flow of resources between mining (which includes aggregates and quarrying) and electricity, gas, water and waste services.

Table 4 - Comparing location quotients for Queenstown, Wanaka and Queenstown-Lakes as a whole

Industry	Location quotient		
	Queenstown	Wanaka	Queenstown-Lakes
Arts and Recreation Services	3.9	2.6	3.6
Accommodation and Food Services	3.3	3.1	3.2
Administrative and Support Services	1.7	0.6	1.4
Rental, Hiring and Real Estate Services	1.7	2.4	1.9
Construction	1.4	1.7	1.5
Transport, Postal and Warehousing	1.2	0.3	1.0
Retail Trade	1.1	1.4	1.2
Professional, Scientific and Technical Services	0.8	0.8	0.8
Other Services	0.7	0.8	0.8
Information Media and Telecommunications	0.7	0.9	0.7
Public Administration and Safety	0.5	0.1	0.4
Mining	0.5	0.2	0.4
Wholesale Trade	0.5	0.2	0.4
Financial and Insurance Services	0.4	0.4	0.4
Education and Training	0.4	0.7	0.5
Health Care and Social Assistance	0.3	0.5	0.4
Manufacturing	0.3	0.4	0.4
Agriculture, Forestry and Fishing	0.2	0.9	0.4
Electricity, Gas, Water and Waste Services	0.1	1.9	0.6

A location quotient is the area's 2019 employment share relative to NZ employment share.

Source: Author calculations and Infometrics Regional Economic Profile, accessed 22/04/20

Tourism-specific context

The usual way of examining the structure of an economy is to consider employment on an industry-by-industry basis as was done in the previous sections. But forming a comprehensive understanding of the tourism sector is a little different because tourism employment does not sit discretely within one industry. Instead, visitor spending filters into a range of industries as visitors to Queenstown travel around the district, stay, shop, eat and do activities. Given the importance of the tourism sector to Queenstown-Lakes' economy, it is necessary to consider tourism more specifically.

By taking a step back, it is possible to look at the proportion of each industry's employment that relies on servicing visitor demand. When this approach is taken across the entire economy, you can calculate the total share of Queenstown-Lakes' economy that is attributable to the tourism sector. Table 5 shows that almost two thirds of all employment in Queenstown-Lakes relies on tourism spending, and tourism employment has been growing at a much faster rate than the national average (5.2%pa vs 2.2%pa). The share of employment attributable to tourism in Queenstown-Lakes is also higher than Otago Region (22.6%) and Rotorua (22.7%) and has been growing at a faster rate than these two areas (4.0%pa and 2.2%pa respectively).

Table 5 – Tourism employment in Queenstown-Lakes and New Zealand

	Queenstown-Lakes		New Zealand	
	Level	Growth	Level	Growth
Tourism employment (2019)	19,064	5.2%	229,566	2.2%
Tourism employment as % of total jobs	63.5%		9.0%	

Growth rates calculated over 2000-2019, Source: Infometrics Regional Economic Profile, accessed 22/04/20

More refined geographical analysis of Queenstown-Lakes District into the Queenstown and Wanaka sides of the district highlights that Queenstown has both a higher concentration (67.0% vs 52.9%) and faster growth rate (5.3%pa vs 3.1%pa) of tourism employment than Wanaka.

Table 6 – Tourism employment in Queenstown and Wanaka

	Queenstown side		Wanaka side	
	Level	Growth	Level	Growth
Tourism employment (2019)	15,327	5.3%	3,737	3.1%
Tourism employment as % of total jobs	67.0%		52.9%	

Growth rates calculated over 2009-2019, Source: Author calculations using MBIE visitor spending estimates and Infometrics Regional Economic Profile, accessed 22/04/20

The large share of employment across Queenstown-Lakes that is supported by tourism spending highlights that any formalised quantification of diversification can't just focus on the industrial structure of employment along the supply chain. Instead, supply side analysis of diversification must be supplemented by analysis of diversification regarding where demand is coming from. An approach to doing this is to consider diversification of exports, across all export types, including both tourism products, as well as goods and other services.

Measures of economic diversification

In this section of the report, industry employment data has been used to compute indexes of economic diversity in Queenstown-Lakes. To see changes in diversification patterns over time for Queenstown-Lakes, the indexes were computed for each year between 2000 and 2019, and compared to New Zealand as a whole, as well as Otago Region and Rotorua. Where possible, diversification was also calculated for the Queenstown and Wanaka sides of the district.

Diversification in Queenstown-Lakes has been considered from two angles: what people do, and what is sold. In practical terms this involves measuring:

- Diversification of employment across all industries
- Diversification of exports (including tourism, goods and other services).

The primary tool used in this report to measure diversity is the Herfindahl-Hirschman index (HHI). The HHI measures the extent to which an economy is dominated by a few sectors. The index originates from industrial organisation theory, but can be applied in macroeconomic contexts for measuring economic diversity¹. A place with a more diversified economy has a lower value of the index, while a higher value of the index indicates an economy has more concentration or greater specialisation.

Employment diversification

The results from the HHI measures of economic diversity for employment in Queenstown-Lakes are shown in Figure 3, Figure 4, and Figure 5 below. For ease of interpretation, the HHI has been rebased so that it sits relative to a value of 100 for New Zealand in 2019. If the index value for any given area sits above another area, then that area is less diversified than the other, and vice versa. A downward trend in

¹ The HHI is calculated by summing the squared shares of activity in each sector in the economy. These index shares can be calculated in both an employment share and export share context so the index is flexible in its application. Typically the index scale ranges between 0 (perfectly diversified) and 10,000 (exclusively specialises in one industry), but index values have been rebased to simplify interpretations in the current context, with New Zealand taking on a value of 100 in 2019 and then other areas sitting relative to that base.

an area's HHI suggests that employment has become more diversified across industries through time, while any increase to the index would suggest employment has become more concentrated.

As can be seen from Figure 3 below, the value of the HHI for Queenstown-Lakes sits higher than New Zealand. This observation indicates that employment in Queenstown-Lakes is less diversified than the rest of New Zealand. Such a phenomenon is to be expected, as smaller regional economies do not typically have a large enough local market to cover all needs locally. For that reason, regional economies become specialised in industries where they have a comparative advantage in order to generate an income that can help pay for goods and services that need to be bought in from elsewhere.

Nevertheless, Figure 3 does show that employment in Queenstown-Lakes became more diversified across industries from 2000 to 2019, as evident by the downward slope of the line. But this diversification occurred between 2000 and 2010, with the most recent tourism and property boom having seen employment in Queenstown-Lakes become slightly more concentrated again since 2010. This trend is consistent with the New Zealand experience of diversification.

Figure 3 – Employment diversification for Queenstown-Lakes and New Zealand, Author calculations

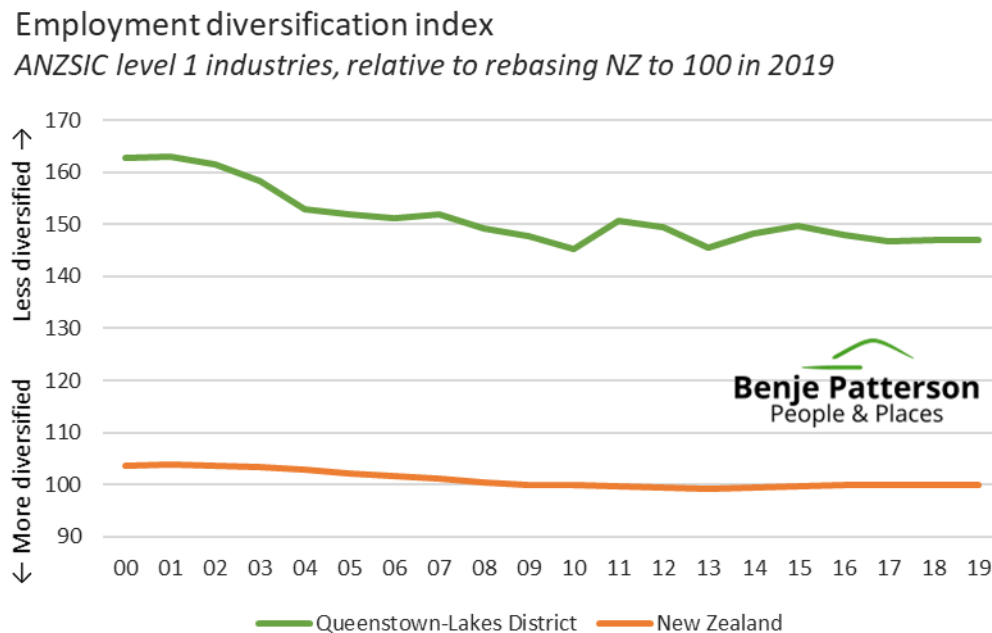
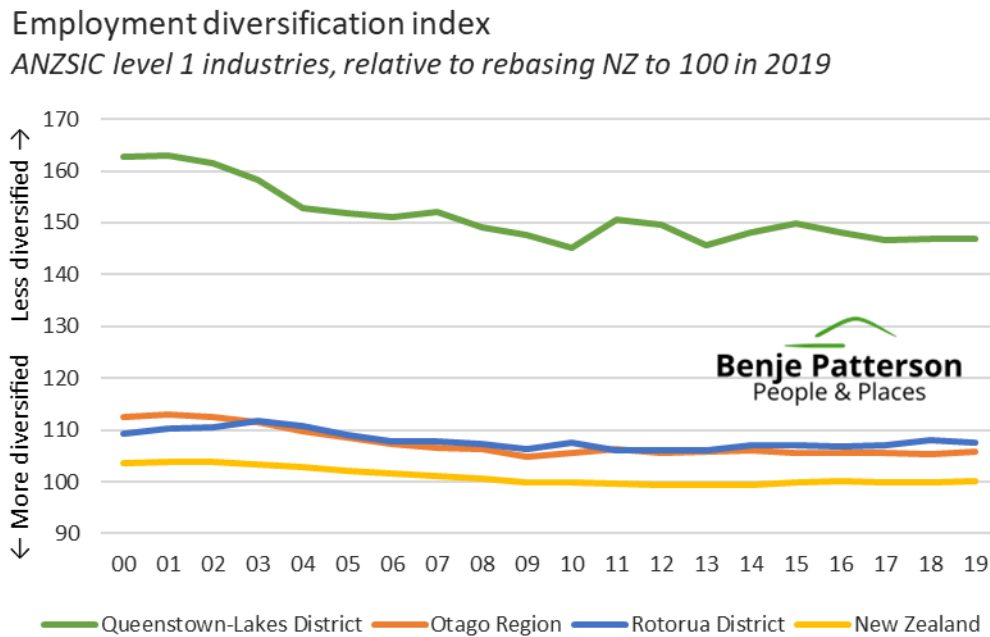


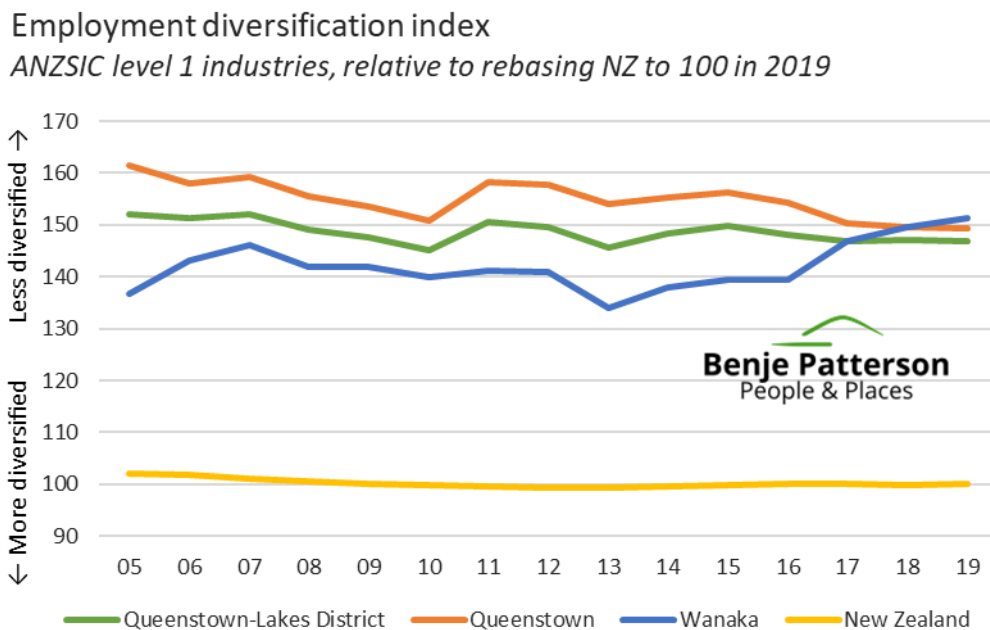
Figure 4 shows that Queenstown-Lakes is less diversified than both Otago Region and Rotorua. Queenstown-Lakes has experienced relatively similar trends to these two peers between 2000 and 2019, although its experience of diversification between 2000 and 2010 was more pronounced.

Figure 4 - Diversification for Queenstown-Lakes, Otago, Rotorua and New Zealand, Author calculations



Closer analysis of employment diversification trends across the Queenstown and Wanaka sides of Queenstown-Lakes gives interesting insights. Figure 5 shows that in 2005, employment in Wanaka was more diversified than Queenstown. However, over the years to 2019, employment in Wanaka trended towards eventually becoming more concentrated than Queenstown. In contrast, employment in Queenstown has become more diversified through time, including in the period after 2010².

Figure 5 - Diversification within Queenstown-Lakes compared to New Zealand, Author calculations



² This analysis uses a slightly shorter time series of 2005 to 2019 because sub-district business employment statistics from Statistics New Zealand before 2005 are less reliable with regards to industry categorisations.

Export diversification

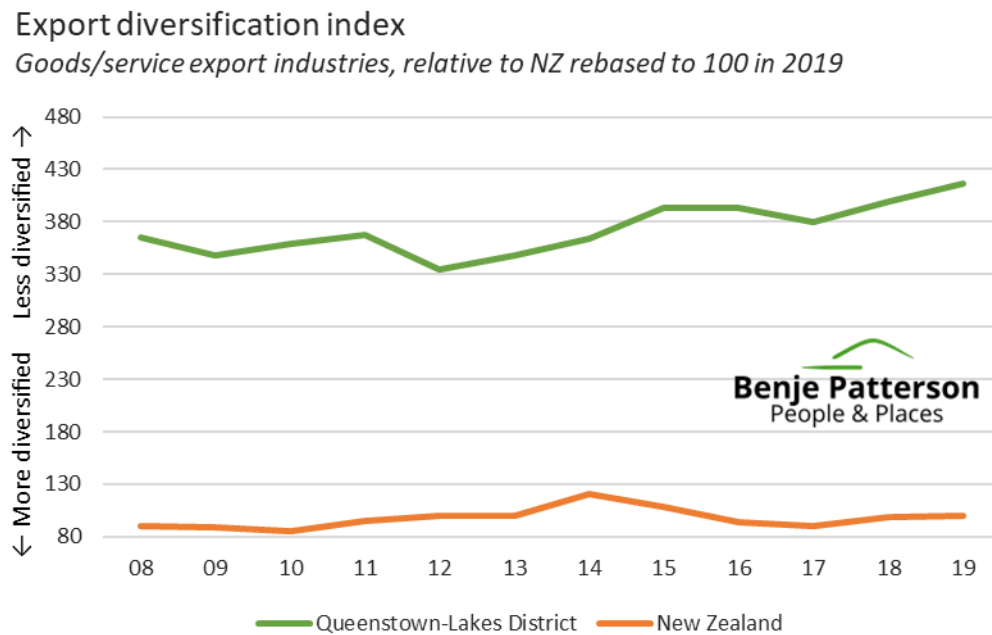
The diversification analysis above focussed on using industry employment shares, which are derived from the supply side of the economy. But in the case of Queenstown-Lakes, which has a large tourism sector, it also makes sense to consider diversification across the demand side of the economy. That is because even though tourism spending is ultimately met by supply from a range of industries, the reality is that tourism is a concentrated source of demand from the sale of a 'single product' (tourism).

A consistent approach to considering diversification on the demand side of the economy is to calculate the HHI using export data across all goods and services, including tourism product.

The results from the HHI measures of economic diversity for exports in Queenstown-Lakes are shown in Figure 6 and Figure 7 below³. As before, the HHI has been rebased so that it sits relative to a value of 100 for New Zealand in 2019. Interpretations of the index are the same as when it was employment-based, with a higher index value indicating more concentration of exports, while a lower index value indicates more diversified exports.

As can be seen from Figure 6 below, Queenstown-Lakes' export mix is less diversified than the rest of New Zealand. Moreover, Queenstown-Lakes' goods and service exports have become increasingly concentrated through time. In comparison, New Zealand's export mix became more concentrated between 2008 and 2014, but since 2014 has shown signs of diversification.

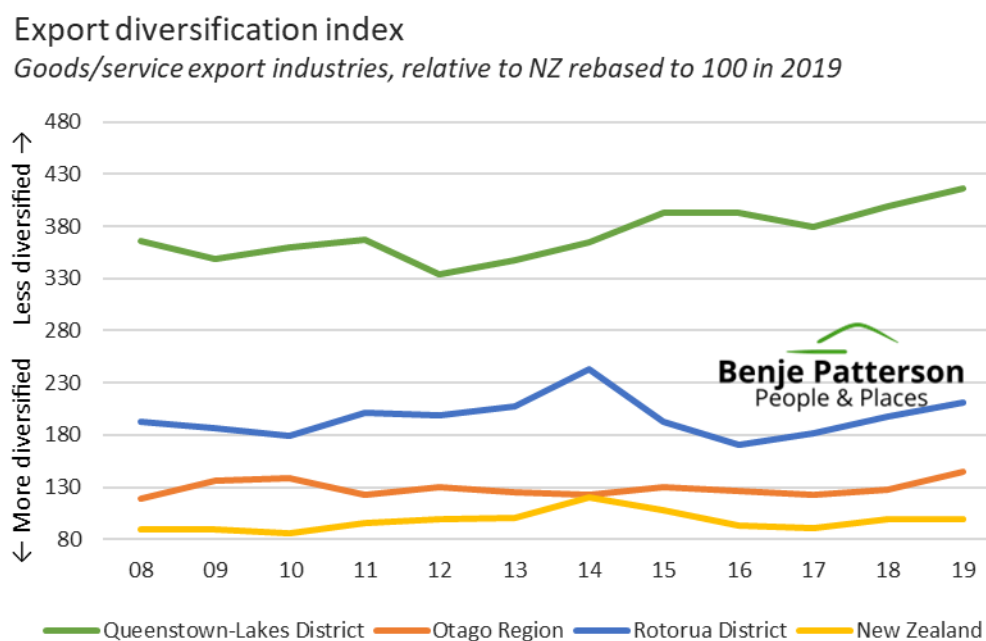
Figure 6 - Export diversification for Queenstown-Lakes and New Zealand, Author calculations



Queenstown-Lakes' exports are also less diversified than Otago Region and Rotorua District. It is no surprise that Queenstown's export mix is less diversified than these two areas as both, in addition to tourism, also have a significantly larger export-focused primary sector. In the case of Otago, there are also a broader range of manufactured goods, education and technological exports from Dunedin.

³ Calculations utilise a time horizon stretching from 2008 to 2019 due to availability of base regional export estimates from Infometrics Regional Economic Profile. Further breakdowns of export data into the Queenstown and Wanaka sides of Queenstown-Lakes District are not available.

Figure 7 – Diversification for Queenstown-Lakes, Otago, Rotorua and New Zealand, Author calculations



The export diversification calculations in this report utilise regional export data from Infometrics Regional Economic Profile. This regional export data makes the assumption that industries in the region have the same export orientation as the national average. Regional exports of industries are thus driven by the economic performance of the industry in the region coupled with the export-output ratio of the industry at the national level. This simplifying assumption by Infometrics is likely to mean that diversification calculations for Queenstown-Lakes are an underestimate of export concentration because the dominance of international tourism in Queenstown-Lakes is likely to mean some tourism-orientated industries have a higher propensity to sell tourism products to internationals (exporting) than the national average.

Taking this point into consideration, it is also worthwhile performing a simple analysis of where visitor spending within Queenstown-Lakes' tourism sector comes from. Table 7 below takes visitor spending statistics for Queenstown-Lakes from the Ministry of Business, Innovation, and Employment (MBIE), across the March 2019 year, and breaks them into international and domestic markets.

Table 7 – Origin of visitor spend, March 2019 year

Spend origin	Queenstown-Lakes	New Zealand	Otago Region	Rotorua
Domestic	36.9%	59.5%	46.2%	56.9%
International	63.1%	40.5%	53.8%	43.1%
Total	100%	100%	100%	100%

Source: MBIE Monthly Regional Tourism Estimates, March 2019 year

The data shows that spending in Queenstown-Lakes' tourism sector is more heavily concentrated on international markets than New Zealand, Otago and Rotorua. Although not displayed in Table 7, analysis of sub-district visitor spending statistics within Queenstown-Lakes shows that the Queenstown side of the district has a higher concentration of international visitor spending (64% share), compared to the Wanaka side of the district (60% share).

Further analysis of the origin of this international and domestic visitor spending shows that Queenstown-Lakes is more heavily reliant than its peers on Australian and United States visitors for its international visitor spend. This finding is derived from Table 8 below.

Table 8 – Detailed origin shares of international visitor spending, March 2019 year

Spend origin	Queenstown-Lakes	New Zealand	Otago Region	Rotorua
Australia	31.1%	23.6%	30.2%	20.3%
USA	16.3%	13.4%	16.3%	14.7%
China	13.4%	14.7%	13.0%	12.3%
Rest of Asia	11.5%	9.8%	11.0%	10.3%
Rest of Europe	7.8%	9.7%	8.2%	13.7%
UK	7.6%	9.4%	7.9%	9.6%
Germany	3.8%	5.7%	4.3%	6.9%
Japan	2.4%	2.4%	2.4%	2.3%
Korea, Republic of	2.3%	2.6%	2.2%	3.9%
Canada	1.5%	2.1%	1.7%	2.6%
Rest of Americas	1.1%	1.3%	1.1%	1.4%
Africa and Middle East	0.9%	1.6%	1.0%	1.3%
Rest of Oceania	0.3%	3.7%	0.6%	0.7%
Total international	100%	100%	100%	100%

Source: MBIE Monthly Regional Tourism Estimates, March 2019 year

With regards to domestic visitor spending, Queenstown-Lakes also has a higher reliance than others on the Auckland market. These findings are derived from Table 9 below.

Table 9 – Detailed origin shares of domestic visitor spending, March 2019 year

Spend origin	Queenstown-Lakes	New Zealand	Otago Region	Rotorua
Auckland	32.5%	19.9%	24.3%	30.2%
Bay of Plenty	4.0%	7.4%	19.0%	3.0%
Canterbury	16.8%	13.5%	19.8%	1.3%
Gisborne	0.3%	1.2%	6.9%	6.6%
Hawke's Bay	1.2%	3.5%	9.7%	0.4%
Manawatu-Whanganu	2.1%	6.2%	4.7%	19.8%
Marlborough	0.7%	1.4%	3.5%	19.3%
Nelson	0.8%	1.1%	2.7%	2.7%
Northland	1.9%	5.9%	2.0%	5.1%
Otago	12.8%	6.3%	1.7%	2.5%
Southland	7.7%	3.0%	1.2%	3.1%
Taranaki	1.1%	2.8%	1.0%	2.5%
Tasman	0.9%	1.4%	0.9%	0.4%
Undefined	2.9%	3.6%	0.8%	0.3%
Waikato	5.6%	11.7%	0.7%	0.2%
Wellington	7.9%	9.9%	0.7%	0.3%
West Coast	0.6%	1.3%	0.3%	2.2%
Total domestic	100%	100%	100%	100%

Source: MBIE Monthly Regional Tourism Estimates, March 2019 year

Shift-share analysis

The analysis of industry structure and diversity trends to date has focussed on what has happened, but this section focusses on understanding what has driven changes in Queenstown-Lakes' industry employment structure. Utilising a technique called shift-share analysis, industry employment changes in Queenstown over the past decade have been split into three components:

- **National growth effect** - the amount of change in Queenstown Lakes' total employment due to nationwide factors. This represents the change that would have occurred if all industries in Queenstown-Lakes grew at the same rate as New Zealand's headline employment growth rate.
- **Industry growth effect** - the employment change that Queenstown-Lakes would have seen if each industry grew at its respective national industry growth rate, less the national growth effect.
- **Competitive share effect** - the difference between the actual change in employment in an industry and the employment change to be expected if the industry had grown at the New Zealand rate for that industry. A positive competitive share effect implies Queenstown-Lakes' performance in that industry has been superior to the national average.

The findings of the shift-share analysis across Queenstown-Lakes between 2009 and 2019 have been summarised in Table 10 below.

Table 10 – Queenstown-Lakes employment shift-share analysis (ANZSIC level 1 industry, 2009-2019)

	Total change (2009-2019)	National growth effect	Industry growth effect	Competitive share effect
Accommodation and Food Services	2,561	616	460	1,485
Construction	1,507	437	481	589
Administrative and Support Services	1,147	164	77	906
Professional, Scientific and Technical Services	1,055	204	101	750
Retail Trade	991	341	-213	864
Arts and Recreation Services	654	211	18	425
Health Care and Social Assistance	576	80	49	447
Education and Training	513	95	14	404
Transport, Postal and Warehousing	484	121	-35	398
Rental, Hiring and Real Estate Services	480	135	-4	349
Manufacturing	445	91	-98	452
Other Services	394	74	13	308
Public Administration and Safety	292	53	25	214
Wholesale Trade	280	57	-33	256
Agriculture, Forestry and Fishing	74	87	-68	55
Electricity, Gas, Water and Waste Services	41	12	15	14
Mining	21	2	-1	20
Information Media and Telecommunications	11	56	-81	36
Financial and Insurance Services	-29	59	-2	-86
Total	11,497	2,895	715	7,887

2009-19 employment levels, source: Author calculations & Infometrics Regional Economic Profile, accessed 22/04/20

The table shows that most employment growth in Queenstown-Lakes (7,887 jobs) over the past decade was due to competitive effects. If Queenstown-Lakes had only created jobs at the national growth rate

then it would have only added 2,895 jobs, while industry growth effects would have only contributed 715 jobs.

Comparing these competitive share employment growth effects in Table 10 with the location quotient analysis performed earlier, shows that competitive share effects were generally strongest in industries that Queenstown-Lakes has a competitive advantage in (see Table 11). A competitive advantage was defined in earlier analysis as an industry that has a location quotient greater than 1.0 – which occurs because that industry in Queenstown-Lakes has a higher employment share than the national average for that industry.

The exception to the above statement were support industries, such as professional services, health and education. Queenstown does not have a direct competitive advantage in these sectors, but they have still experienced rapid competitive share growth in employment. This growth has been due to the indirect effects of having to keep up with the additional demand from new businesses and workers that have arrived because of growth in the industries where Queenstown does have a competitive advantage.

Table 11 – Comparing Queenstown-Lakes competitive shares employment growth to location quotients

	Competitive share effect	Location quotient
Accommodation and Food Services	1,485	3.2
Construction	589	1.5
Administrative and Support Services	906	1.4
Professional, Scientific and Technical Services	750	0.8
Retail Trade	864	1.2
Arts and Recreation Services	425	3.6
Health Care and Social Assistance	447	0.4
Education and Training	404	0.5
Transport, Postal and Warehousing	398	1.0
Rental, Hiring and Real Estate Services	349	1.9
Manufacturing	452	0.4
Other Services	308	0.8
Public Administration and Safety	214	0.4
Wholesale Trade	256	0.4
Agriculture, Forestry and Fishing	55	0.4
Electricity, Gas, Water and Waste Services	14	0.6
Mining	20	0.4
Information Media and Telecommunications	36	0.7
Financial and Insurance Services	-86	0.4
Total	7,887	

2009-19 data for competitive share effect, 2019 data for location quotient calculations

Source: Author calculations & Infometrics Regional Economic Profile, accessed 22/04/20

The evidence from Table 11 further highlights that competitive market dynamics are compounding Queenstown Lakes' lack of diversification. When taken alongside Queenstown-Lakes' higher levels of employment growth volatility, this observation supports the policy rationale for strategic interventions to assist in diversifying the local economy. In the next part of this report, we will analyse what types of strategic interventions have been followed overseas to support diversification of a local economy.

Strategic interventions by others

This section looks at other countries and regions around the world that have taken a strategic approach to diversify their economy. It considers what they did and how successful they were in their interventions.

An active attempt to foster economic diversification is a strategy that has been followed by many places to minimise volatility, reduce exposure to external shocks, and increase growth. The literature highlights that there are few quick wins and many failures. The upshot is that economic diversification is multi-faceted, highly complex and challenging.

Diversification strategies may target industries that sell completely different types of goods or services, but can also involve existing industries breaking into new markets or improving the quality of what is already done. A strong product focus can also be complemented by looking locally at the composition of industries that feed into supply chains, and the extent to which procurement practices and consumer behaviour is supportive of local businesses across a range of industries.

In order to understand these issues in an applied manner that is helpful to Queenstown, a review of economic diversification and best practice literature has been undertaken. The review considered approaches to forming diversification strategies, mechanisms to achieve change, potential partners, as well as benefits and other learnings from interventions.

The remainder of this section summarises the findings by this literature review⁴, while the subsequent section pairs that against more detailed synopses from a range of case studies.

Five case studies were selected to highlight strategic interventions to foster diversification taken in different parts of the world. The case studies that were chosen have certain elements in common with Queenstown that provide useful learnings. The case studies chosen are not necessarily all examples of best practices; some were successful in diversifying, while others still have a long way to go. The ultimate goal is to use case studies that spoke to a wide range of diversity-related issues.

The case studies chosen include:

- 1) Jämtland Region, Sweden
- 2) Detroit, United States
- 3) Aspen, United States
- 4) Chile
- 5) Upper Hunter Valley, Australia

⁴ Examples of diversification literature examined in this section include: Appalachian Regional Commission (2014), Asheim et al (2016), International Economic Development Council (2015), Mount Allison University (2007), OECD & WTO (2019), Ontario Ministry of Municipal Affairs and Housing (2011), and United States Environmental Protection Agency (2015).

Steps for creating and planning diversification strategies

A crisis such as Covid-19 presents an opportunity for change. Amidst the chaos, there is a lot of uncertainty and immediate crisis management responses during the triaging phase of the crisis tend to be more reactive and short-term focussed. But it is important to not lose sight of the long-term. A well-thought strategy to diversify the local economy can feed into a recovery plan and a long-term vision of economic and social sustainability and resilience.

When designing a diversification strategy, the literature highlights the importance of sound policy process, evidence-based decision-making, collaboration and leadership. Broadly speaking, the following components are identified as key ingredients of best practice economic diversification policy process and implementation following a crisis:

- Understand the crisis phases
- A solid foundation of data-driven research
- Stocktake and critically evaluate what you have
- Put a regional hat on, alongside a local one
- A long-term strategic commitment to diversification that remains nimble
- Planning and implementation systems must be collaborative
- Strong Leadership and a firm understanding of roles.

Each of these components are outlined in more detail below.

Understand the crisis phases

There will be various stages of the Covid-19 pandemic, as we move from crisis management to supporting recovery, and ultimately to a 'new normal'. Getting your perspectives right and understanding what you are triaging, how you want to recover and ultimately where you will end up is important. Things might look a little different in future: Demand might have a different structure, while supply chains and business practice will be permanently affected. Diversification efforts must balance different timelines and be clear on how actions relate to each crisis phase. There are often two competing priorities: do we build back in a way that minimises the risk of future loss or do we build back quickly to hasten the recovery? Depending on the stage of recovery and resources available for economic development, an area may explore options for a complete economic transformation, or in the face of limited resources might work with existing systems to make incremental change in diversification.

A solid foundation of data-driven research

Strategies will be more likely to succeed if they are based on a foundation of data-driven research. Baseline analysis is an important component in undertaking an honest appraisal of what businesses look like and where they are heading. Qualitative and quantitative techniques to understanding diversification (or concentrations) should be pursued. Many places lack this research capacity internally, but economic development practitioners can also access these capabilities by looking beyond their organisations and partnering with other local, regional and national organisations that can perform this research.

Stocktake and critically evaluate what you have

Perform a SWOT (strengths, weaknesses, opportunities and threats) analysis of assets and unique attributes that you have and determine how best to use them to your advantage to support your diversification efforts. These can range from human, geographic, natural, financial or physical resources within your area. An area's asset base can often be at the core of its competitiveness. How your community leverages off these resources can help set it apart from other places. In the end, it is up to

each community to decide what assets it has and to use them to create a new and diverse economy. Understand who your biggest employers are, what your employment trends are currently and likely to be, get to know your workforce, supply chains and key markets. Comprehensive analytical underpinnings minimise the risks associated with picking target industries to focus on, calculated risks must be taken, but there must also be balance in approaches.

Put a regional hat on, alongside a local one

Successful diversification strategies need to maximise available assets. Many places may not have significant assets from which to build, but they can leverage assets located in nearby neighbouring areas (for example, major employment/population clusters, education providers, complementary parts of supply chains). A more regional approach to inventorying assets can allow communities to better access additional resources, expertise and market demand. As many diversification strategies seek to grow existing specialisations and to attract new ones through cluster development, it is crucial to recognise that these clusters may benefit from using assets located in other places to create economic value locally. Conversely, counterproductive competition for limited resources across a region can undermine a local area's attempt to generate durable economic growth. Remember that economies don't operate strictly based on local jurisdictional divisions.

A strategic commitment that focusses long-term but remains nimble

The process should culminate in a formal strategic diversification strategy, that gives long-term commitment, while also remaining nimble enough to deal with short-term uncertainty and change. An effective strategic planning process is continuous, customisable, and dynamic so that it remains relevant regardless of what stage of the diversification process you are in. You will not diversify your local economy overnight. Diversification of an economy is a long-term process – recalibrating the plan according to changing circumstances is critical to ensure a community stays on track and remains committed to its vision.

Planning and implementation systems must be collaborative

As with any other economic development goal, strong relationships across stakeholders and other interested parties are necessary to advance an economic diversification strategy. Building these relationships is a process that requires the time and energy of local leaders. Promoting an environment that values collaboration and planning not only allows for intentional action and accountability, but can also put a place in a better position to take advantage of opportunities as they arise. Collaboration ensures plans continuously reflect the community's desires, needs, and goals and generates public support that can maintain momentum for implementing changes.

Strong Leadership and a firm understanding of roles

Many different kinds of strategic actions must be undertaken to achieve a goal of economic diversification. But none of these actions will make a difference if they are not effectively implemented. Success requires putting the right leaders and staff in place to understand the challenges ahead and determine the most appropriate risks to take in addressing those challenges. Leaders must be local champions who see economic diversification as a priority, while staff must have formulated a clear understanding of their role in the process. It is valuable to stocktake existing economic development programs and consult broadly with stakeholders in order to determine the most effective roles for staff to take on. This process also creates efficiency and effective management of resources when implementing a diversification strategy.

Common mechanisms in diversification strategies

Research revealed that there are no “silver bullet” or “one-size-fits-all” approaches that lead to a more diverse economy. Each place faces different situations that offer unique opportunities. Approaches taken involved a balancing act between good strategic planning, as well as trial and error.

Before determining the mechanisms and target sectors for diversification, the literature reemphasises the importance of baseline research to understand your area’s current and potential sources of competitive advantage. It also highlights the need to be open-minded to regional perspectives in your economic diversification actions because economies don’t operate strictly based on local jurisdictional divisions. Another overarching viewpoint is that it’s best to take a multi-pronged approach and attempt a range of initiatives, rather than pinning your hopes to the success of one particular strategic intervention.

With that background in place, the literature makes several suggestions regarding the types of diversification policies and mechanisms that should be implemented. These include:

- Enhance the skills and capacity of your area’s workforce
- Foster smart specialisations and clusters
- Encourage entrepreneurship and support small business
- Invest in infrastructure and take advantage of outside funding
- Recirculate local capital
- Innovate and adapt to new ways of doing things
- Support a clean and healthy environment
- Embrace diversity and youth

Each of these mechanisms are discussed in more detail below.

Enhance the skills and capacity of your area’s workforce

Diversifying an economy will place different demands on the workforce – helping workers transition through this process should not be underestimated. To ensure that the workforce has sufficient skills and capacity, a local area needs to focus on broadening and upgrading its skill base. Strategies for diversifying the skill base often involve investing in education and training, facilitating communication between educational institutions and employers, and promoting opportunities to talent that may not already live in your local area. Workforce development includes education as well as job training, and involves basic skills such as literacy and math, hard skills such as welding and operating machinery, and soft skills such as work ethic and attitude. Any workforce development policies should be developed with a consideration of workforce, industry, and market realities to best support diversification.

Foster smart specialisations and clusters

Smart specialisation is a holistic type of cluster strategy that focusses on inter-industry crossovers, combining knowledge bases and bringing together people and businesses with different backgrounds. A community should identify ‘domains’ of existing and/or potential competitive advantage, where there are opportunities to specialise in a different way compared to what others do. Target sectors should be based on data and analysis – clusters cannot be created artificially out of nothing. Cluster strategies aim to maximise innovation within an area. Firms in well-functioning clusters benefit from agglomeration effects, through pooled labour markets, forward and backward linkages along supply chains and knowledge spillovers. Clusters may be encouraged with specialised infrastructure, research facilities, improved access to venture capital and collaboration with similar industries in neighbouring regions.

Encourage entrepreneurship and support small business

Investing in entrepreneurship increases the likelihood that new companies will emerge in the region to replace those that die. Encouraging small businesses and entrepreneurship, as well as innovation, is a way to diversify the local economy from within. Common strategies include nourishing a startup ecosystem to support entrepreneurs, as well as increased involvement in small business support programmes. Such strategies can involve promoting entrepreneurial opportunities, providing technical assistance, training, connecting businesses with financing opportunities, and facilitating research and development grants. At times this support can lead to investment in spaces for new businesses to grow in a supportive environment, such as a business incubator for new ideas or shared workspace.

Invest in infrastructure and take advantage of outside funding

Supporting a more diverse and productive range of businesses may require different or improved infrastructure. Infrastructure investment can take various shapes, but may involve things such as improving services in business parks so businesses can expand their output, rejuvenating urban amenities, enhancing transport connections and increasing regional broadband capacity to meet the needs of small and medium-sized businesses. Take advantage of outside funding wherever possible and provide incentives for other parties to invest. Even a small amount of funding from outside the local area or your own funding pool is welcomed. Alongside the obvious benefits of introducing external capital, outside funding can help increase local interest and commitment in the area, as well as spur private investment and matched funding contributions from other public and community organisations.

Recirculate local capital

Encourage local reinvestment of wealth wherever possible. You want local businesses and investors to have skin in the game to become champions of their own backyard. Focus on ways of helping minimise the costs of doing business and reducing barriers to entry in targeted sectors. Reducing leakages along supply chains and from household consumption patterns can also help keep money local and support demand in emerging sectors. Public institutions and major businesses can be encouraged to support local providers in their procurement policies where practical.

Innovate and adapt to new ways of doing things

For places to successfully diversify in the highly competitive global economy, they must be innovative, flexible and adapt quickly to change. Innovation can lead to new industry and opportunities, such as what we have seen with the green economy boom in some places. Communities that are flexible enough to think of new processes and ideas can also make successful transitions. Many new jobs will have a digital component to them which no longer require people residing in the same physical location as their employer. The encouragement of remote workers to an area can be a relatively fast way of importing a diversified and higher paying workforce, whose skills can be harnessed for an area's long-term benefits. Successful attraction strategies for remote workers require ensuring the area maintains a high quality of life. The allure of moving to an area for lifestyle reasons may be enhanced as a byproduct of any crisis-induced improvements to housing and commercial property affordability.

Support a clean and healthy environment

Conserving and restoring natural resources can help build a stronger, more diverse economy. Communities that invest in their natural assets and quality of life by protecting their environment can better attract and retain residents, tourists, and businesses who value clean air and water and natural

landscapes. Many of these people capitalise on their location by starting businesses or positively contribute their skills to existing businesses.

Embrace diversity and youth

Often the strength of a community can be equal to its ability to embrace diversity. Get to know the demographics of your area and make sure that what you do meets a range of needs. Knowing who your citizens are is critical to successfully transition a community. Diversity breeds innovation, change and new ideas – these factors are crucial for successful economic diversification. Youth are the future leaders of our communities. If they feel valued and listened to, they will be more willing to remain in the local area.

Which partners should be involved?

Applied literature on economic diversification suggests that a diverse range of partners should be involved in both the design and implementation phases. Successful diversification of an economy takes an extremely long time. Therefore, enduring support and buy-in from businesses and the community for diversification efforts must be grounded in collaboration.

At times, the lead for facilitating and supporting the diversification strategy is provided by an existing economic development agency, while some communities may find it advantageous to create a new entity to lead diversification efforts. The latter approach is typically favoured to allow for greater strategic independence – although care must be taken when designing such an organisation and setting its terms of reference.

In any case, no matter what approach is taken to leading the facilitation of the strategy, there is consistency in the literature that broad representation is needed as part of policy design and implementation, as well as monitoring and evaluating progress. Capacity and capability of individuals and organisations in part dictate the ultimate scope of representation. Potential partners should span public and private sector interests, and may include:

- Economic development agencies
- Local, regional, and central government
- Education
- Health providers
- Business leaders
- Industry associations
- Chambers of commerce
- Youth and migrant communities
- Non-profit and community development organisations
- Iwi
- Other relevant leaders and groups.

The important characteristics of a successful collaboration between the ultimate partners includes:

- Have a clearly defined mission with consensus regarding how to implement the mission
- Long-term commitment from key partners to provide adequate cash funding and in-kind support to achieve goals
- A system to help filter, short-list and prioritise suggestions that come from partners and the broader community
- A monitoring and evaluation plan that will help justify continued support and inform any future pivoting of strategic approaches.

What benefits can be realised/lessons learnt?

There are a number of theoretical benefits of successful diversification, but the challenge of realising them after a crisis is not to be underestimated. Successful diversification following a crisis relies on a pragmatic, yet evidence-driven approach.

A crisis environment may limit the extent to which places can be intentional about how they pursue their diversification objectives. The crisis itself may force leaders to adopt a “beggars can’t be choosers” mindset as they simultaneously try to balance the immediate welfare effects of the crisis with designing a pathway to a diversified and more resilient future state. As a result, some opportunities pursued might be those that are best given the circumstances, rather than those that would have been followed had diversification efforts not been accelerated by such a catastrophic shock.

That being said, economic diversification has an array of benefits to a local economy.

In successful examples, a diverse economy can improve cross-industry spillovers, increase productivity, and lead to higher wages. Economic diversity also increases regional resiliency and stability. A diverse region is more able to withstand a shock, such as an economic downturn or natural disaster. This resilience is known as a portfolio effect where the shock will affect certain industries more than others, but in a diverse region, the affected industry will make up a smaller portion of the local economy. As a result, diversification spreads the risk more evenly through the economy.

The consequences of this increased resilience, can manifest in improvements to indicators such as:

- Employment levels and unemployment
- Social wellbeing and need for social assistance
- Migration, particularly among youth and young families
- Confidence to invest
- Wealth resilience during cyclical ebbs, particularly when wealth is concentrated in property.

Case studies

This section provides summaries of five case studies of places that have economic diversification journeys which can provide lessons to Queenstown-Lakes.

A quick environmental scan shows vast numbers of countries, regions and single industry towns that have tried to diversify. But many of these places had widely different economic, institutional, and developmental contexts, so the challenge was to narrow down the list into a set of places that have relevance to Queenstown-Lakes.

The subsequent selection took into consideration the following factors:

- Whether the area had a large concentration on tourism or another industry that relied heavily on externally-driven demand factors
- Whether diversification occurred under duress following an unexpected event or crisis
- Whether the area actively attempted to diversify instead of leaving things to market mechanisms
- Whether the diversification efforts were successful or have relevant lessons for Queenstown.

Case studies were selected by considering these factors, alongside more practical considerations, such as the availability of strategic documentation and existing evidence-based research. These practicalities were necessary to efficiently maintain the quality of the current report, which is a rapid desktop-based analysis, rather than the result of field work and compiling of anecdotes.

The case studies chosen were:

- 1) Jämtland Region, Sweden
- 2) Detroit, United States
- 3) Aspen, United States
- 4) Chile
- 5) Upper Hunter Valley, Australia.

The case studies chosen are not necessarily all examples of best practices; some were successful in diversifying, while others still have a long way to go. The ultimate goal was to use case studies that spoke to a wide range of diversity-related issues.

For each case study, the analysis includes the following:

- 1) What was the context for diversification and what was the focus of the strategic planning process?
- 2) Which mechanisms were used to diversify?
- 3) Who were the partners that were involved?
- 4) How successful was the approach, what lessons were learnt?

The remainder of this section gives a summary of each case study according to those four questions.

Jämtland Region, Sweden

A smart specialisation cluster approach has been taken to diversification across the Jämtland Region in Sweden. The cluster is known as Peak Innovation. At the heart of this smart specialisation cluster within Jämtland Region is the tourism town of Åre which has similarities with Queenstown as it is a tourism destination with a strong focus on skiing and other activities.

The Peak Innovation cluster is in line with a broader European Union and Swedish Government approach to smart specialisations in regional economies. The cluster has been operational since 2009 and aims to leverage off research and business innovation from competitive advantages in tourism, sports and outdoors. Jämtland has a history of many successful outdoor companies. Jämtland's strategy is a proactive, rather than crisis-induced approach. Early indications from the cluster are positive.

Which mechanisms were used to diversify?

The vision for Peak Innovation is that the region of Jämtland is a leading international location for research and business development in tourism, sports and the outdoors. Three main areas have been identified: Sport and outdoor activities, health and training tourism, and event and sports arena development.

Peak Innovation is a partner for researchers, business developers and companies that wish to conduct development activities in these three sectors. The services offered by Peak Innovation include:

- free office space for startups in the target sectors for six months
- research support for product development
- reduced cost for prototype development
- access to test panels for beta products
- general business advice
- wide ranging professional networks.

Who were the partners that were involved?

The Peak Innovation smart specialisation cluster is supported by VINNOVA, the Swedish central governmental agency for innovation systems, which sits under the Department of Trade and Industry. Alongside this central government support, other partners in the cluster include:

- a range of innovative local outdoor companies and brands
- regional and local government
- local economic development partners
- Mid Sweden University.

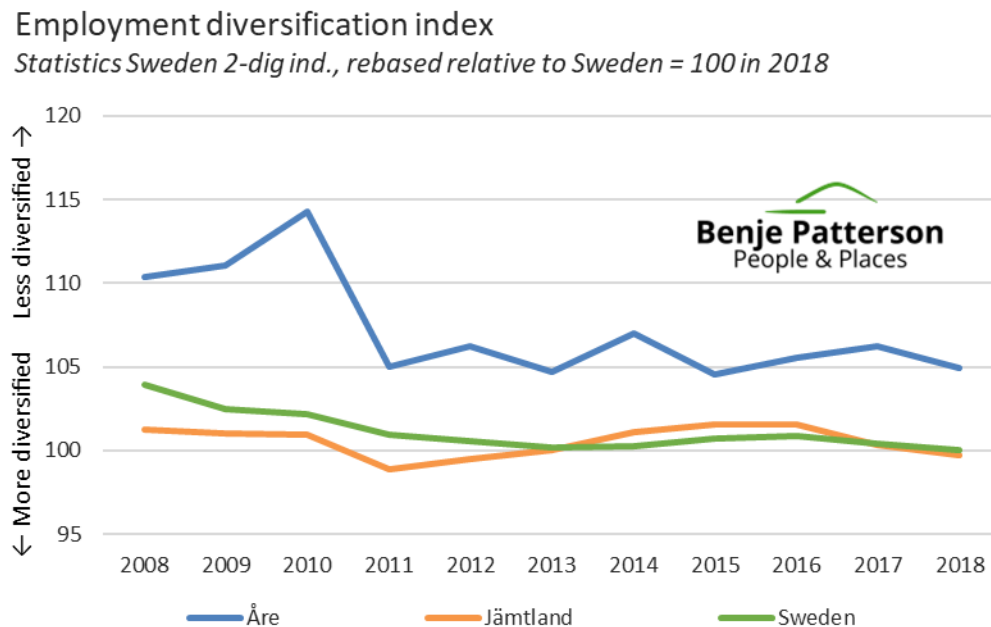
Results/lessons

The early signs from the Peak Innovation cluster have been positive.

Documentation from Peak Innovation has highlighted increases to entrepreneurship in the region, particularly for women. Analysis undertaken for this report using industry employment data from Statistics Sweden also highlights that diversification in Jämtland has improved over the past decade. Although no causal relationship between Peak Innovation and this diversification can be drawn, many of the key industries for employment growth have been in the industries which the cluster has targeted.

Figure 8 shows calculations for HHI measures of economic diversity for employment in the Jämtland Region, Åre, and Sweden using industry employment data sourced from Statistics Sweden⁵. The index shows that although Åre is less diversified than the Swedish and Jämtland averages, Åre's level of diversification has improved significantly since 2010.

Figure 8 - Employment diversification for Jämtland Region, Åre, and Sweden, Author calculations



Closer analysis of industry employment levels shows that employment growth over the past decade in Åre has been fastest in industries related to those targeted within the cluster. Over the 10 years to 2018, Åre's employment level grew by an average of 1.6%pa, with professional and scientific services (3.4%pa), recreation and other service companies (2.6%pa), and trade companies (2.5%pa) all growing at faster rates. By comparison, more traditional tourism driven industries such as hotels and restaurants (0.5%pa) and transport (-0.2%pa) all underperformed Åre's overall growth rate.

Relevant lessons for Queenstown

Peak Innovation provides an example of a successful long-term commitment to smart specialisation by an area with a strong focus on tourism and outdoor pursuits. Jämtland Region and, in particular, Åre are showing success in diversifying their economy, by proactively leveraging off existing comparative advantages, with a collaborative strategy supported by central government, research, and industry.

⁵ Precise levels of HHI measures of employment diversity between places in Sweden cannot be directly compared to calculations in the US or New Zealand context because the US Census Bureau, Statistics Sweden, and Statistics NZ use different definitions for categorising and segmenting industry employment. Nevertheless, comparisons of trends can be made.

Detroit, United States

Detroit was severely impacted by the Global Financial Crisis, but has since rebounded. Detroit's woes stemmed from the collapse of the car industry and 17% of people across the region were unemployed in 2009. By 2014, the City of Detroit was forced to declare bankruptcy.

Detroit's large exposure to the car industry left it particularly vulnerable during a financial crisis, where demand for assets such as cars plummeted. The experience highlighted the downside for an area having a high concentration of very large businesses clustering together and focussing on one particular type of capital intensive and expensive product.

Which mechanisms were used to diversify?

The City of Detroit developed a strategic plan in 2012 (Detroit Future City). The plan aimed to align Detroit's assets with opportunity by mapping a framework that focused on attracting people and businesses based on Detroit's land-rich environment without displacement. This framework explores how to best use Detroit's abundance of land (particularly publicly owned land), create job growth and economic prosperity, ensure vibrant neighbourhoods, build an infrastructure that serves citizens at a reasonable cost, and maintain a high level of community engagement that is integral to success. The idea was that a large amount of vacant property was a competitive advantage that could be used to rebuild, diversify and increase Detroit's resilience by attracting a range of businesses and people.

Alongside the plan, a sharp correction in both commercial and residential property prices was also a catalyst that was supporting the appeal of Detroit from a price perspective and raising the prospect that other industries could flourish out the other side of the crisis.

Who were the partners that were involved?

The development of the plan was led by Detroit's economic growth corporation and local government.

The strategic plan was the result of extensive community consultation, including: hundreds of meetings, 30,000 conversations, connecting with people over 163,000 times, and over 70,000 survey responses and comments from participants. This consultation was supported by a steering group that had representation from residents, government, non-profits, business, institutional, civic, philanthropic, and faith-based organisations.

The plan recommended the creation of a formal organisation that could champion its implementation, evolve it as a living document, act as a service provider for anyone who wants to understand and access the plan, and coordinate targeted projects and the partnerships needed to make them happen.

Results/lessons

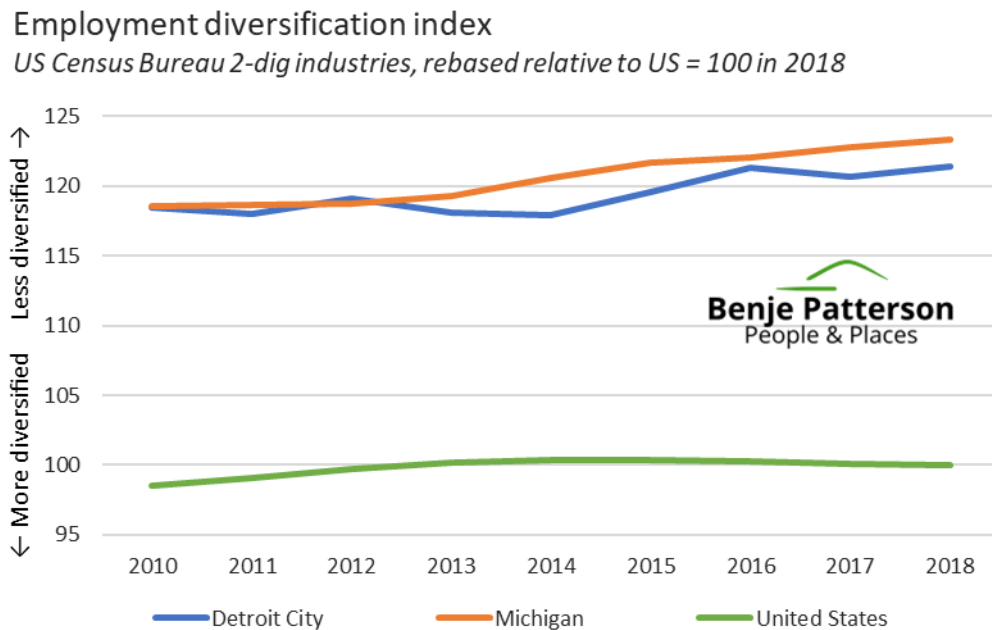
On one hand Detroit has been relatively successful in its recovery since the Global Financial Crisis, but on the other, Detroit has not become more resilient to future shocks as there are few signs of diversification.

A sharp decline in commercial and residential property prices and rents attracted a wave of new residents and businesses. Economic data showed in 2018 that unemployment had fallen to 5.0%, while Detroit's job numbers and GDP were growing at close to the US average. At the same time, commercial vacancy rates had fallen, and residential construction was rising.

But despite headline claims of a rising wave of economy diversity, analysis of industry employment statistics still paints a different picture. Figure 9 shows HHI measures of economic diversity for

employment in Detroit using industry employment data from the US Census Bureau⁶. The data highlights that Detroit's level of economic diversification has continued to deteriorate over recent years, despite tentative improvements in 2013 and 2014. Detroit's diversification was undermined by declining unemployment across the US, which led to a sharp increase in car demand, and a resurgence of employment within Detroit's dominant car industry. These external market dynamics were much more persuasive than the strategic attempts by policymakers to encourage a more resilient and sustainable form of growth in the city.

Figure 9 - Employment diversification for Detroit, Michigan and the US, Author calculations



Relevant lessons for Queenstown

Detroit highlights the downside of having an economy that concentrates on a single industry (car manufacturing). Following a crisis, Detroit followed a best practice approach to create a strategic plan for a more resilient future. Growth returned, partly as a result of a rebalancing within the real estate market attracting new residents and businesses, but also because resurging US demand for cars led to a recovery of the vehicle industry. The external market dynamics of a recovery in Detroit's car industry offset policy efforts for a more resilient and sustainable economy.

⁶ Precise levels of HHI measures of employment diversity between Detroit, Michigan, and the US cannot be directly compared to calculations in the Swedish or New Zealand context because the US Census Bureau, Statistics Sweden, and Statistics NZ use different definitions for categorising and segmenting industry employment. Nevertheless, comparisons of trends can be made.

Aspen, United States

Aspen, like Queenstown, has a very tourism and property development focussed economy that is highly exposed to cyclical trends in these two industries. Aspen also grapples with similar social challenges to Queenstown, particularly with regards to housing affordability, equality and wellbeing. In dealing with social issues, Aspen's approach has been a step or two ahead of Queenstown's, but with regards to economic diversification, Aspen is arguably at a similar point in the journey.

Aspen has only made tentative policy steps in the diversification space to date, with diversification terminology beginning to creep into some economic development documents and individual initiatives. However, diversification in Aspen has not yet been comprehensively addressed as a strategic response to build a more resilient and sustainable local economy. There are pre-existing civic connections between Queenstown and Aspen, that can be leveraged off so that each resort can learn from one another regarding strategic responses to diversification following the Covid-19 pandemic.

Which mechanisms were used to diversify?

The City of Aspen publishes an annual sustainability report, that encompasses environmental, economic and social domains. Within Aspen's economic domain is a strategic outcome related to business diversity and sustainability, and underneath that outcome is a monitoring process that follows a range of indicators, including the mix of business types by industry. Regular monitoring reports⁷ are published to highlight progress.

Alongside attempts to measure this progress, the City of Aspen has also identified nine goals to target diversification and sustainability. The goals are high level visions that cover a range of areas of interest, but do not yet appear to be supported by a targeted action plan, with an obvious data-driven evidence base. One of the key goals includes analysis of opportunities to retain and attract small, local, and unique businesses to provide a balanced, diverse, and vital use mix supporting the community.

Who were the partners that were involved?

Much of the early work to date in Aspen appears to have been led by the City of Aspen council. But reports highlight collaboration with representatives from organisations including:

- Aspen Chamber Resort Association
- other business leaders
- regional/county government
- various state departments
- health
- education
- transport
- research institutes
- non-profits and community groups (particularly housing related).

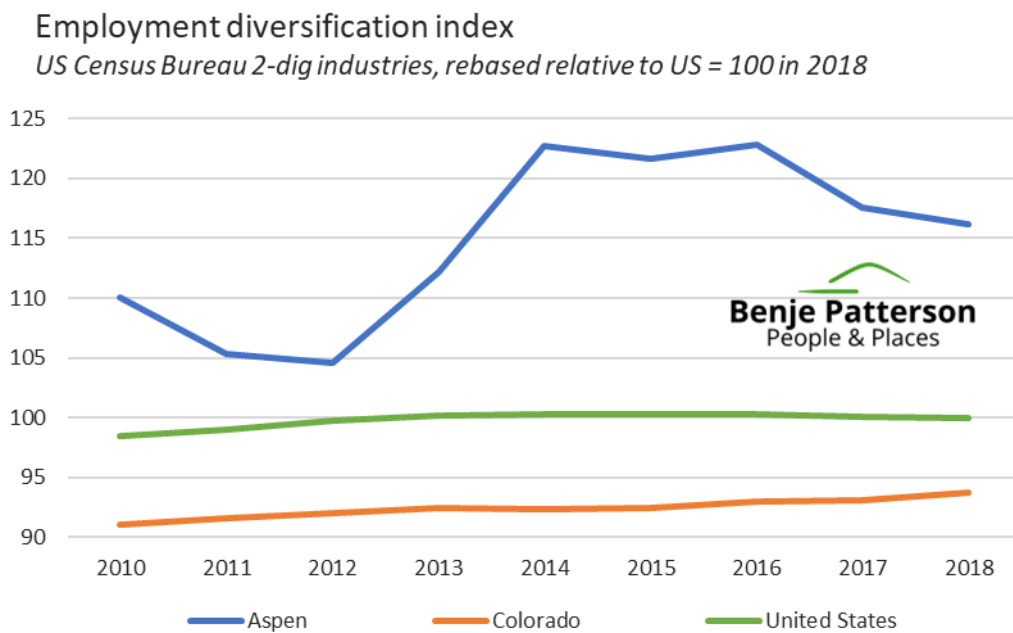
⁷ For example, see here: <https://www.cityofaspen.com/DocumentCenter/View/698/Business-Diversity--Sustainability>

Results/lessons

The City of Aspen's business diversity reports give high level snapshots of retail sales activity by industry type. However, Aspen's reports do not allow for a detailed understanding of the evolution of diversity in industry employment within Aspen and how the resort compares to others.

Figure 10 shows calculations of economic diversity in Aspen using industry employment data from the US Census Bureau⁸. The index highlights that employment in Aspen remains less diversified than its state and country. Employment in Aspen became increasingly concentrated between 2012 and 2014, but in 2017 and 2018 has diversified slightly. Nevertheless, employment in Aspen remains less diversified than it was back in 2012 as a result of a sharp increase in accommodation, food service and real estate employment.

Figure 10 - Employment diversification for Aspen, Colorado and the US, Author calculations



Relevant lessons for Queenstown

Aspen is a tourism and property development focussed resort town that faces similar diversification challenges. Market forces have not led to increased diversification in Aspen. Local government authorities have made tentative steps to put diversification on the agenda, but a more structured strategic policy is needed.

Pre-existing civic connections between Queenstown-Lakes and Aspen can be leveraged off to learn from each other's situation and response.

⁸ Precise levels of HHI measures of employment diversity between Aspen, Colorado, and the US cannot be directly compared to calculations in the Swedish or New Zealand context because the US Census Bureau, Statistics Sweden, and Statistics NZ use different definitions for categorising and segmenting industry employment. Nevertheless, comparisons of trends can be made.

Chile

Back in 1960, Chile had an economy whose exports were extremely concentrated on copper mining, but since then Chile has managed to significantly diversify into other sectors and acquire new competitive advantages. Several lessons on the role of policy interventions for export diversification can be drawn from this analysis of Chile's diversification.

Conventional wisdom has proclaimed Chile's recent economic development a 'free market miracle'. However, closer analysis of the dynamics of the emergence of the salmon, fruit, forestry and wine sectors in Chile's export basket since the 1960s, sheds light on the crucial role of policy in the process of capability accumulation that shapes new industries.

Which mechanisms were used to diversify?

Using funds from copper extraction royalties, Chile invested in both diversification within industry (increasing value add by improving quality, processes and support services for copper) as well as across new industries (salmon, wine, fruit, forestry). The country also invested heavily in training in advanced skills, and financing and mentoring start-up firms.

Chile highlights that government-led policy interventions can have a key role to play as a catalyst of:

- human capital accumulation – eg. via training schemes and university scholarships
- supporting innovation
- as a venture capitalist and attractor of foreign investment
- in trade promotion
- in ensuring 'national' sector reputation through a strong regulatory and quality control role.

Who were the partners that were involved?

Although the Chilean government was a key catalyst for many of the policy interventions, they also established a number of subsidiaries, including those involved in branding and trade, and sector-specific institutions, particularly those focussed on research. One of these included Fundación Chile, a public-private initiative. Alongside this work, the state also focused on collaboration with:

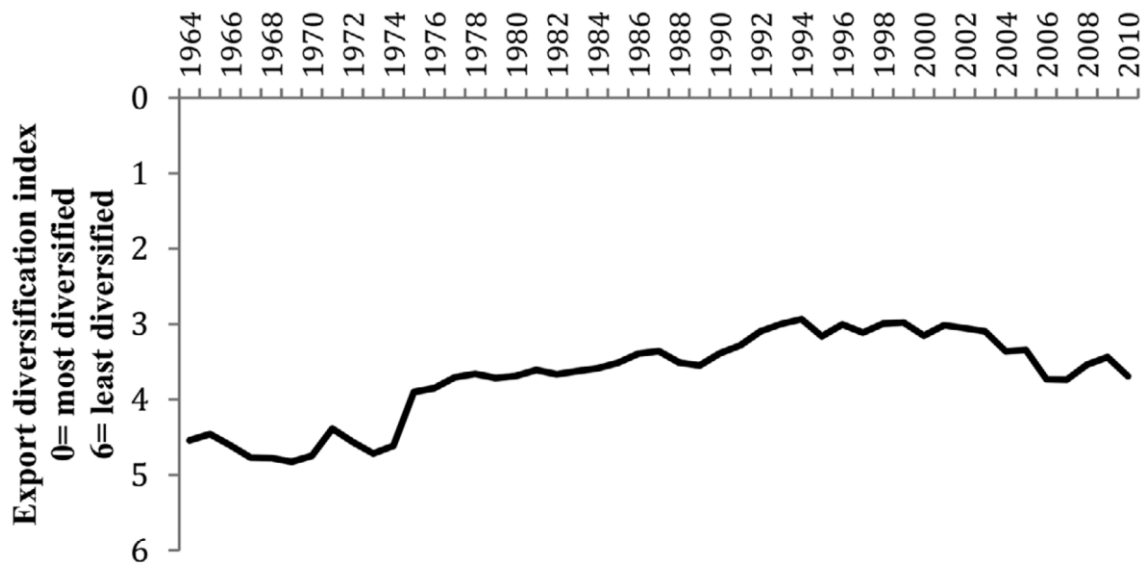
- supplier cooperatives
- universities
- foreign investors
- foreign businesses and regions with expertise in target sectors.

Results/lessons

Chile has managed to diversify its exports significantly since the 1960s. Salmon, fruit, forestry, wine and other exports now make up approximately half of all Chile's exports. Analysis in Figure 11 from Lebdioui (2019) highlights the diversification of Chile's export basket, particularly through the 1970s, 80s and 90s.

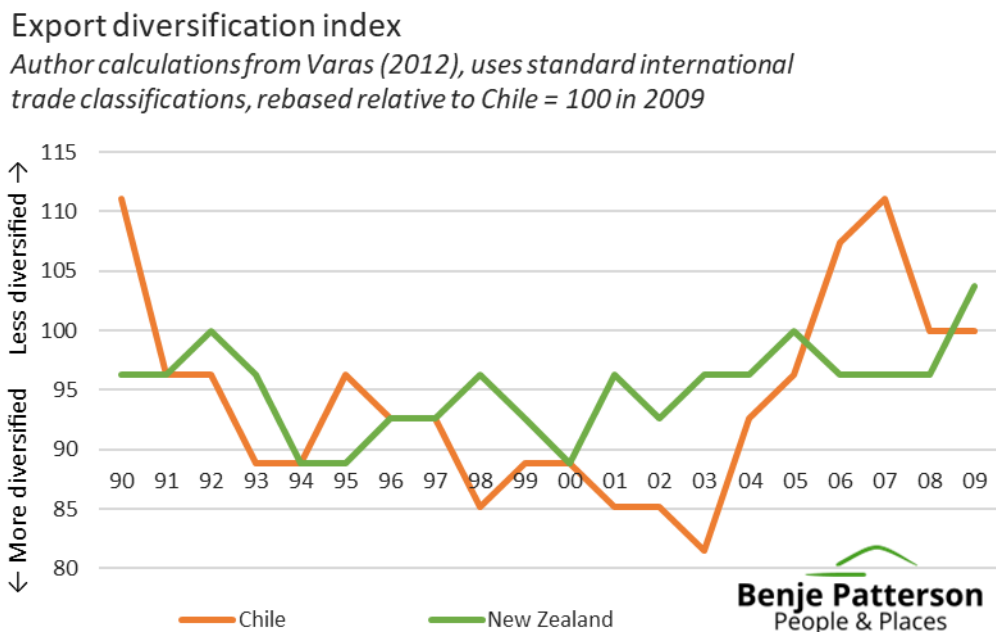
Looking at a shorter time horizon reveals some deterioration to Chile's diversification since 2004. This trend could be at least partly explained by surging copper prices between 2003 and 2011 as a result of China's economic boom. Chile's drop in diversification eventually translated into slower economic growth after 1998 and especially after 2014, following a decrease in copper prices, which shows that even strictly adhered to and successful diversification strategies cannot protect in all situations.

Figure 11 – Evolution of export diversification in Chile, 1964-2010 – source: Lebdioui (2019)



Varas (2012) estimated export diversification in Chile and New Zealand from 1990 to 2009 using data from UN Comtrade. The UN data uses standardised industries so the two can be compared. Figure 12 shows Chile’s export bundle was less diversified than New Zealand’s in 1990, but diversified rapidly until 2003. As highlighted above, the upward spike in copper prices from 2003 until the Global Financial Crisis hit in 2008 undid a lot of Chile’s hard work.

Figure 12 – Export diversification trends in Chile compared to New Zealand



Relevant lessons for Queenstown

Although this case study is based on a country, it highlights the long-term benefits policy interventions can have on diversification. It shows you can diversify within natural areas of comparative advantage and interventions can also be a catalyst for creating new areas of comparative advantage.

Upper Hunter Valley, Australia

The Upper Hunter Valley in New South Wales is an area that has previously relied heavily on coal mining. In 2012 almost 60% of economic output in the Upper Hunter Valley was estimated to have come from mining.

However, over more recent times there has been a decline in mining employment as a result of mines reaching the end of their useful life and global energy market restructuring. There has been increasing concern that the Upper Hunter Valley's reliance on mining has left the local economy with low levels of diversification and resilience to external shocks.

Which mechanisms were used to diversify?

The NSW Government recently partnered with local government and industry to examine the future of the Upper Hunter region over the next 20-25 years.

A bottom-up approach was followed, in collaboration with stakeholders, to assess the Upper Hunter's potential sources of comparative advantage that could position the area strongly for long-term growth. This analysis culminated in the 2018 release of an Upper Hunter Economic Diversification Action Plan.

The plan identified that the Upper Hunter has opportunities to diversify into new areas of agribusiness, resources and energy, and various ancillary services. These new opportunities would build off comparative advantages and strengths that are resource-based, locational, infrastructure linked, knowledge based, and production process related. The plan establishes a new framework to encourage sustainable economic transition objectives, through actions that interweave diversification priorities into regional land use planning and build on partnerships with regional stakeholders.

Who were the partners that were involved?

An Economic Diversification Task Group was formed that included representation from:

- NSW Government
- Various central government departments
- Local economic development
- A joint organisation of local councils.

Alongside this taskforce, forums were held to collaborate with:

- Individual local authorities
- Various sector representative bodies
- Large businesses
- Universities and research institutes
- Chambers of commerce
- Community representatives.

Results/lessons

The plan has not yet had enough time to measure results. The Upper Hunter Economic Diversification Action Plan highlights a recent example from an Australasian context of an evidence-driven, collaborative approach to formulating a diversification strategy, along with an associated action plan.

Another similar example of diversification strategy formulation in Australia is the 2019 North West Queensland Economic Diversification Strategy and Action Plan. North West Queensland is also an economy heavily reliant on mineral extraction, that has followed a best practice approach to formulating a diversification strategy.

Relevant lessons for Queenstown

Both the Upper Hunter Valley and North West Queensland provide examples of recent approaches to economic diversification strategic planning in an Australasian context. Neither are yet at the stage of delivering results, but lessons can be learnt from the processes followed to formulate the strategies.

Concluding remarks

This report provided an in-depth quantification of economic diversity in Queenstown-Lakes.

The results do not paint a particularly pretty diversification picture for Queenstown-Lakes – no matter which angle you look at it – at a point in time, as a trend, or in a Queenstown compared to Wanaka context.

Compared to its peers, Queenstown-Lakes has a less diverse mix of employment across industries, and its externally generated revenue is narrowly focussed on international tourism.

The driver for change is clear in the wake of the Covid-19 pandemic. A more resilient and sustainable future for Queenstown-Lakes would benefit from a recovery that ultimately led to a more diversified local economy.

A review of economic diversification literature highlights that diversification strategy formulation must start with a comprehensive evidence base, have a long-term focus and be collaborative. Most importantly you need to work off an existing or potential comparative advantage – even if that is a creative way of pivoting things.

Case studies show a variety of approaches to diversification, but none of them in isolation are a quick win or offer a high chance of success. It is best to take a multi-pronged approach so that you don't put all your eggs in one basket.

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