

Economic contribution of the New Zealand music industry in 2019 and 2020

A report for Recorded
Music New Zealand

December 2021



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21 December 2021

Economic contribution of the New Zealand music industry in 2019 and 2020

Dear Damian,

We are pleased to provide our report on the economic contribution of the New Zealand music industry in 2019 and 2020.

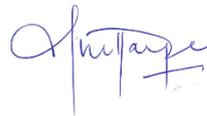
This report is provided in accordance with the terms of our letter of engagement dated 29 March 2021, and is subject to the Restrictions set out in Appendix C.

If you have any queries please do not hesitate to contact us.

Yours sincerely



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Executive Summary

2019 was the best year for the New Zealand music industry, in terms of economic contribution, since we began our annual analysis in 2013. The significant increase in economic contribution from 2018 to 2019 was primarily driven by a big increase in streaming revenues, as well as a good year for live music and overseas earnings.

In 2020, the industry felt the effects of Covid-19. The only subsector to grow from the previous year was retail, driven by continued growth in streaming revenues. Revenues from radio broadcasting, live performance and overseas income all reduced in 2020, primarily due to Covid-19.

2020 economic contribution estimate

We estimate that, in 2020, the New Zealand music industry directly contributed \$347m to the national gross domestic product (GDP), and \$732m in total (after accounting for multiplier effects).

We also estimate the industry contributed around 2,850 direct full-time equivalent (FTE) jobs, and around 6,000 FTEs in total (once indirect and induced jobs are included).

Table 1. Estimate of overall economic contribution of the music industry in New Zealand, 2020

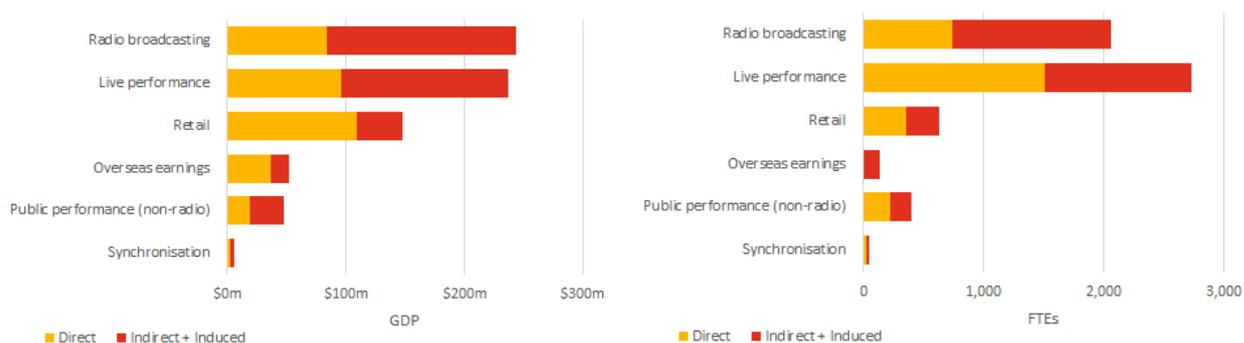
Industry sector	Total sales (\$m)	Value added (GDP, \$m)			Employment (FTEs)		
		Direct impact	Indirect + induced	Total impact	Direct impact	Indirect + induced	Total impact
Retail	172	109	38	148	352	279	631
Physical music	13	10	5	15	59	41	101
Downloads	16	10	3	14	30	24	54
Online streaming	142	89	30	119	263	213	476
Public performance (non-radio)	57	19	28	48	219	178	397
Radio broadcasting	210	84	160	244	739	1,320	2,059
Live performance	177	96	141	236	1,510	1,223	2,733
Synchronisation	4	2	3	5	27	22	48
Overseas earnings	36	36	16	52	0	135	135
Total	656	347	386	732	2,848	3,156	6,003

Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2018-20.

Radio broadcasting and live performance are the two largest subsectors by GDP impact, with 33% and 32% of the total impact respectively. Live performance had the highest employment contribution, with 46% of the total impact. Retail is the third largest sub-sector, making a significant GDP contribution but a lower employment impact.

Figure 1. Estimate of overall economic contribution of the music industry in New Zealand, 2020



Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2018-20.

2019 economic contribution estimate

2019 had a higher economic contribution than 2020, and we discuss the trends over time overleaf. The relative contributions of each sector in 2019 are very similar to 2020.

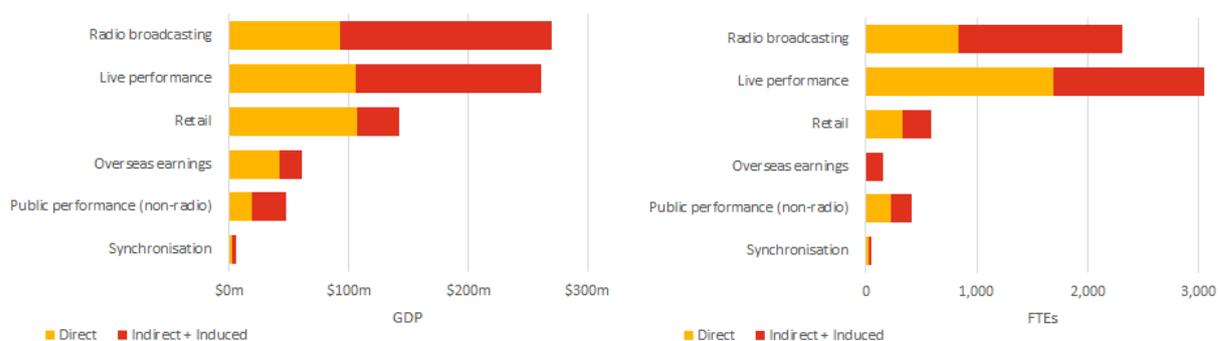
Table 2. Estimate of overall economic contribution of the music industry in New Zealand, 2019

Industry sector	Total sales (\$m)	Value added (GDP, \$m)			Employment (FTEs)		
		Direct impact	Indirect + induced	Total impact	Direct impact	Indirect + induced	Total impact
Retail	169	107	35	142	332	262	594
Physical music	14	11	6	16	65	45	110
Downloads	18	11	3	14	30	25	55
Online streaming	137	86	26	111	237	192	428
Public performance (non-radio)	58	19	28	47	225	182	407
Radio broadcasting	232	93	177	270	831	1,484	2,316
Live performance	195	106	155	261	1,688	1,368	3,056
Synchronisation	4	2	3	5	27	22	49
Overseas earnings	42	42	18	61	0	157	157
Total	702	370	416	786	3,104	3,474	6,578

Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2017-19.

Figure 2. Estimate of overall economic contribution of the music industry in New Zealand, 2019



Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2017-19.

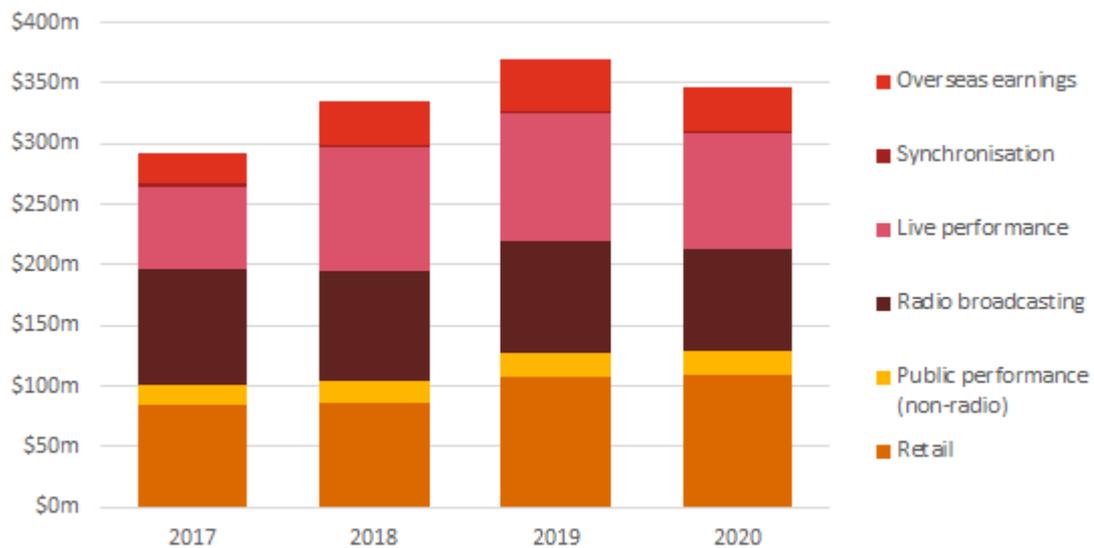
Overall trends over time

Our estimate of the music industry's economic contribution increased each year from 2016 to 2019, before decreasing from 2019 to 2020.

The decrease in 2020 was primarily due to Covid-19, with reduced revenues from radio broadcasting, live performance and overseas earnings. Most notably, live performance and overseas earnings were impacted by domestic gathering restrictions and international border closures. While 2020 had a lower contribution than 2019, it was at a similar level to 2018.

Live performance earnings were the main driver of growth in 2018. Streaming revenues drove growth in 2019, and helped hold up overall revenues in 2020.

Figure 3. Composition of direct GDP contribution, 2017-20



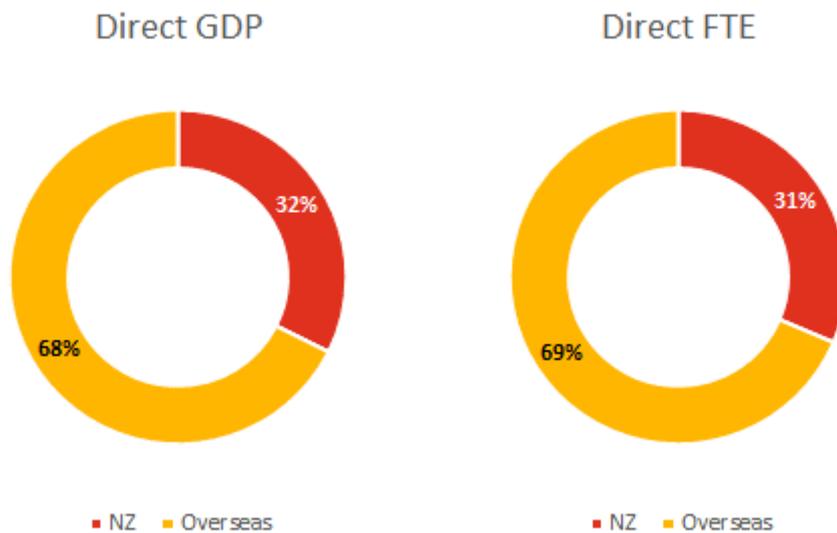
Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over the prior three years.

New Zealand generated content

New Zealand generated content accounts for just over 30% of the economic contribution of the New Zealand music industry. While this proportion has slowly increased in recent years, overseas content continues to account for the majority of the contribution.

Figure 4. Share of direct GDP and employment from New Zealand generated content, 2020

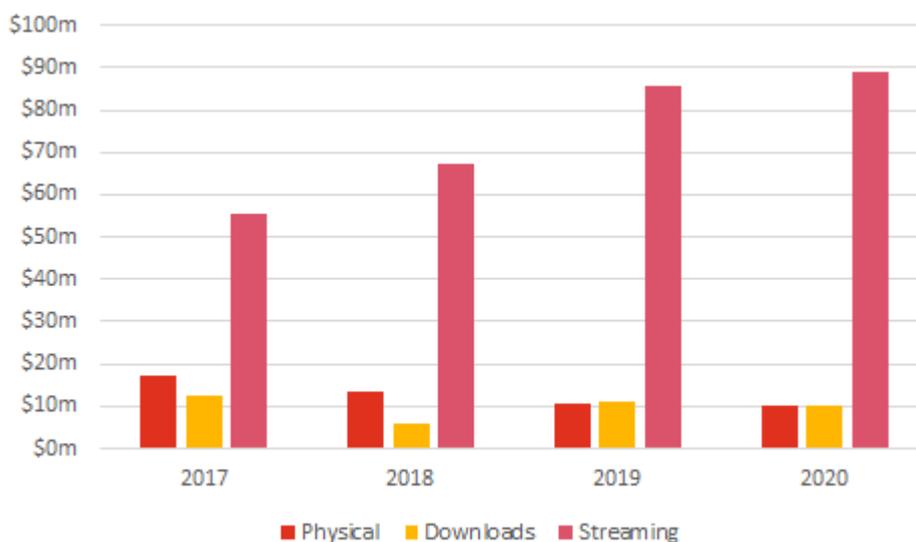


Source: Industry-provided data, PwC analysis

Retail consumption channels

In previous years, we have noted the decline in revenues for traditional physical music retail, and the transition to downloads and then streaming. Streaming is now the main alternative to physical retail consumption and accounts for 81% of revenues in the retail subsector.

Figure 5. Retail direct GDP contribution, by retail channel, 2017-20

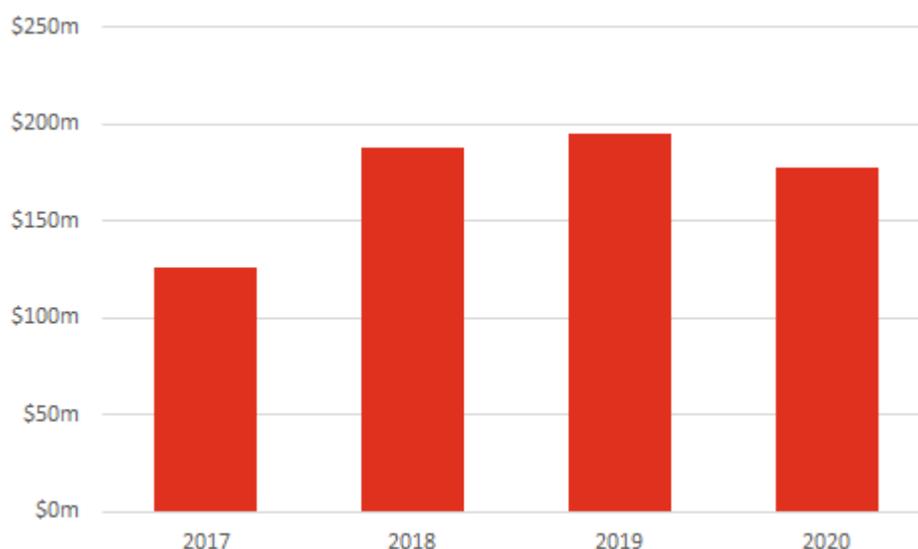


Source: Industry-provided data, PwC analysis

Live performance trends

Revenues from live performance fluctuate from one year to the next based on different touring schedules. 2019 was the strongest ever recorded year for live performance revenue in New Zealand. 2020 was lower than both 2019 and 2018, due to domestic gathering restrictions, and border closures preventing international artists touring New Zealand.

Figure 6. Total sales from live performance, 2017-20



Source: Industry-provided data, PwC analysis

Wider impacts

Although this report focuses on estimating the contribution of the music industry in New Zealand to employment and GDP, we emphasise that the industry has a broader cultural and social role to play. Music contributes to New Zealand in a number of other ways that are not measured by GDP. These include the enjoyment, or utility, that New Zealanders derive from consuming and producing music, and the value to New Zealand's international brand from the success of New Zealand artists and music.

There are other New Zealand businesses whose success in part relies on music and the sale of copyright/intellectual property rights – for example, Les Mills Music, DJ software company Serato, and technology and gaming businesses. The economic impact of the creation and distribution of the music used by these businesses is included in this study. However, the broader contribution of these businesses to New Zealand's economy is not included.

1. Introduction

This report presents estimates of the contribution of the music industry to the New Zealand economy. It provides a snapshot of the industry using data for the 2019 and 2020 calendar years.

In addition, the report provides some broad insights on the trends occurring in New Zealand's music industry that are affecting the impact of the industry on New Zealand's economy.

This report has been commissioned by Recorded Music New Zealand (Recorded Music NZ) supported by funding from its project partners, the Australasian Performing Right Association Australasian Mechanical Copyright Owners Society (APRA AMCOS) and the New Zealand Music Commission.

This report presents estimates of the industry's overall contribution to New Zealand's GDP and employment, as well as estimates across the five main subsectors of the industry:

- retail
- public performance (non-radio)
- radio broadcasting
- live performance
- synchronisation.

We also report estimated overseas earnings as a separate subsector, comprising income from overseas live performance and recordings and publishing. Our analysis of these earnings is outlined in a separate report¹.

This report was published annually between 2013 and 2019. No report was published in 2020, due to Covid-19 related challenges. As a result, this year's report covers two calendar years of data.

¹ PwC (September 2021), Overseas earnings of the New Zealand music industry 2020.

2. Approach

Purpose and scope of report

This report examines some 'bottom-line' measures of the music industry's impact on the national economy. In this respect, it differs from other reporting that focuses on the total revenue earned by the industry, a 'top-line' measure that does not account for factors such as intermediate inputs purchased from other industries or imported from overseas.

By estimating bottom-line measures, this report enables comparisons between the music industry, other industries, and the economy as a whole. It is intended to provide industry participants and policymakers with a robust basis for understanding the importance of the industry to the New Zealand economy.

We have estimated three measures of the New Zealand music industry's economic contribution:

- **total revenues/sales** – the gross output of all music industry participants, provided by industry bodies
- **value added** – the industry's contribution to New Zealand's GDP, which is calculated as the total returns to labour and capital in the industry
- **employment** – the number of full-time equivalent staff (FTEs) employed as a result of music industry activity.

In addition to its direct economic impacts, an industry will have multiplier effects elsewhere in the economy. In order to do business, firms must purchase inputs from other industries, while the wages and salaries that they pay will subsequently be spent elsewhere in the economy. These effects fall into two categories:

- **Indirect (or upstream) impacts** occur when businesses in the music industry purchase goods and services from other industries in order to record and produce a song, market an album, or put on a concert.
- **Induced impacts** are generated when the wages and salaries paid out by the music industry are spent on goods and services, thereby stimulating further economic activity.²

The total economic impact of the industry is equal to the sum of its direct, indirect, and induced impacts. In order to estimate the direct and total economic impacts of the music industry in New Zealand, we have used multiplier analysis based on national input-output tables.³ We have described our application of multiplier analysis in Appendix B.

We note that economic impact, and GDP contribution, is not the same thing as 'benefit' as would be used in a cost-benefit analysis. While there are methodological similarities, there are a number of differences.

Although this report focuses on estimating the contribution of the music industry in New Zealand to employment and GDP, we emphasise that the industry has a broader cultural and social role to play. Music contributes to New Zealand in a number of other ways that are not measured by GDP. These include the enjoyment, or utility, that New Zealanders derive from consuming and producing music, and the value to New Zealand's international brand from the success of New Zealand artists and music.

There are other New Zealand businesses whose success in part relies on music and the sale of copyright/intellectual property rights – for example, Les Mills Music, DJ software company Serato, and

² We note that there is considerable discussion in economics over the inclusion of induced impacts. We have included induced impacts in order to calculate the total economic impact of recorded music.

³ Butcher Partners (2013), New Zealand 2013 Input-Output Table and Multipliers, based on Statistics New Zealand data.

technology and gaming businesses. The economic impact of the creation and distribution of the music used by these businesses is included in this study. However, the broader contribution of these businesses to New Zealand's economy is not included.

Defining the music industry

Industry basis

The music industry incorporates a number of distinct activities and related revenue streams. This report seeks to account for this complexity and report its conclusions in a usable and accessible format.

One way to define the music industry is presented in Figure 7 overleaf.

This study examines the main revenue streams accruing to the industry. These include both revenues from the sale of music and royalty payments for the use of music:

- Revenues earned from physical and digital retail sales of music, including traditional retail sales of CDs and vinyl, and revenues received from on-demand music streaming. We refer to this subsector as **retail**.
- Revenue from communication of music played on radio, television, and the internet, and for the public performance of recorded music in premises such as but not limited to retailers, hospitality outlets (bars and cafes), educational institutions, and gyms. We refer to this subsector as **public performance**. Given the size of the radio component of communication and public performance, we have included that component separately in our reported tables as **radio broadcasting**.
- Live performances of music, whether in concerts, festivals, or music venues. We refer to this subsector as **live performance**.
- Royalties earned by individual rights holders from licensing music for use in advertisements, games, films, and television programmes. We refer to this subsector as **synchronisation**.
- We also include the export revenue earned by New Zealand musicians. This is revenue earned outside New Zealand for live performances overseas, and recordings and publishing overseas. We refer to this subsector as **overseas earnings**.

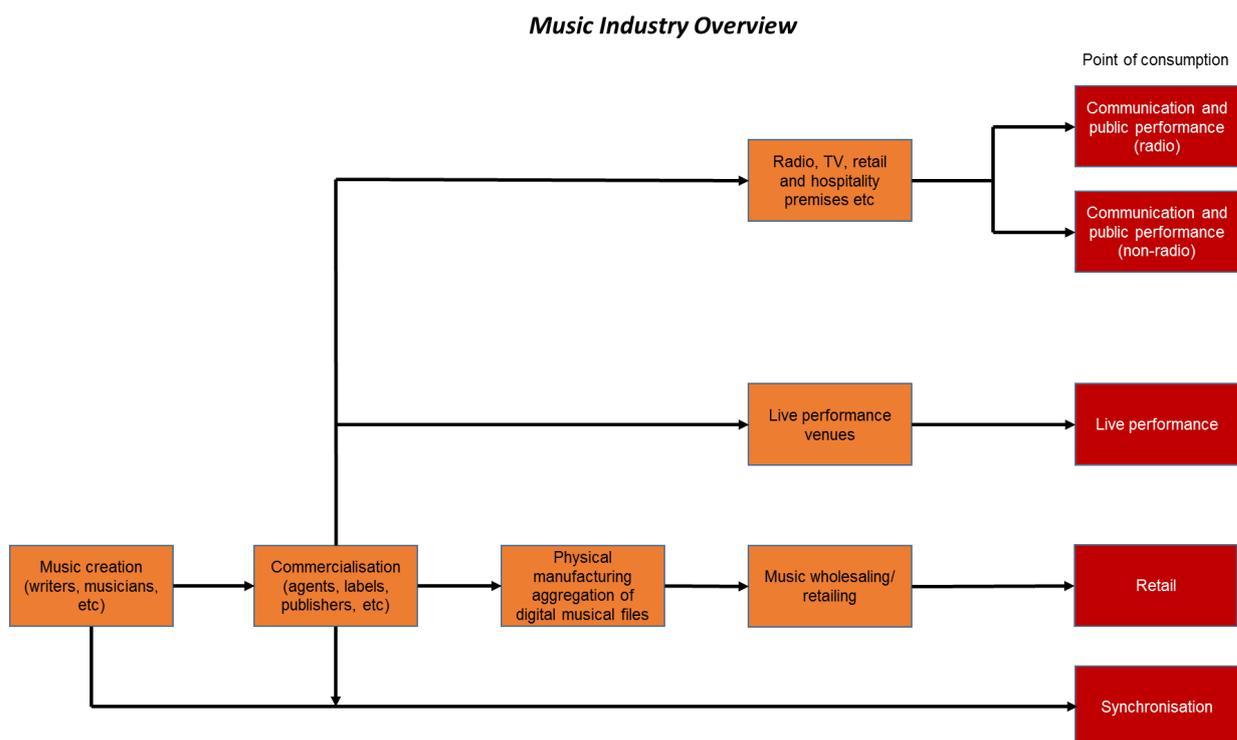
These revenue streams are all associated with the consumption of music in different forms or through different channels. But before music can be brought to the consumer, it must be created, commercialised, manufactured, and distributed. Some of these activities are considered to be part of the core music industry, while others are defined as intermediate inputs purchased from other industries.

The following upstream activities are included in our definition of the music industry:

- music creation, including songwriters, musicians, recording studios, etc
- the activities of record companies and music publishing companies, including the recording and commercialisation of music
- the aggregation of digital music files for retail and the manufacture of physical carriers of music (eg CDs, DVDs)
- venue operation for live performances.

Our definition of the core music industry excludes some related industries, such as instrument manufacture and retailing as well as music teaching. Where activities in these industries support the production or consumption of music in New Zealand, we are likely to capture the multiplier effects (as discussed below).

Figure 7. Defining the music industry



Music expenditures also have an economic impact on other industries. As we have described above, businesses in the music industry must purchase inputs from other industries, while the wages and salaries that they pay will subsequently be spent elsewhere in the economy. Consequently, the total impact of the music industry will include:

- purchases of intermediate inputs from sectors that are not directly linked to music, such as advertising and marketing, transport services, plastics manufacturing (such as for DVDs), accounting and legal services, sound and lighting, and equipment hire
- additional consumer spending in other industries, such as food and beverage retailing, housing, and recreation, resulting from employment within the music industry and supplier industries.

Geographic boundary

This report aims to account for all economic impacts that take place in New Zealand. In order to do so, we have adopted an approach that is consistent with the national accounts statistics produced by Statistics New Zealand. As we discuss in more detail in Appendix B, this approach measures the total value of goods and services produced in New Zealand, rather than the net income of all businesses and individuals located within New Zealand.

In other words, we account for the domestic consumption of music of any origin from New Zealand-based channels. For instance, our measures of economic impact will:

- include activities related to the physical sale of overseas-originated music to a consumer in New Zealand, but exclude the (relatively minor) cost of importing the physical product.
- include income earned by overseas musicians touring New Zealand, as it was earned in New Zealand regardless of whether it is ultimately repatriated elsewhere.

Consistent with our 2019 report, we include payments made to New Zealand recording artists and songwriters from overseas sources. Statistics New Zealand's approach to calculating GDP means that royalties are treated as export revenue, and for the purposes of this study are pure value-add in our analysis.

Bottom line measures of economic impact

We have chosen to use a GDP measure, rather than revenue or an alternative measure, for two reasons.

- GDP impact is the most commonly used measure of total economic impact. It is used by Statistics New Zealand when reporting on the size of the New Zealand economy and in many other economic impact studies.
- It eliminates the impact of double counting, which is particularly problematic in industries where there are multiple steps before a good is purchased for final consumption.

Treatment of the economic effects of illegal music use

The illegal use of music is beyond the scope of this report. This report is intended to provide a snapshot of the industry's actual economic impact at a point in time and as a result does not discuss revenue foregone due to the illegal use of music.

3. Economic contribution of the music industry in New Zealand

This section summarises the direct and total economic impact of the music industry in New Zealand. It estimates the industry's overall contribution to New Zealand's GDP and employment, and allocates economic impacts between the five main subsectors of the industry: retail, communication and public performance, music radio broadcasting, live performance and synchronisation.

We also report overseas earnings as a separate subsector. This comprises income from overseas live performance and recordings and publishing overseas.

The subsequent sections provide further detail on each subsector.

Overall industry – 2020

The tables below summarise our estimates of the overall economic impact of the music industry in New Zealand in 2020.

Table 3. Estimate of overall economic contribution of the music industry in New Zealand, 2020

Industry sector	Total sales (\$m)	Value added (GDP, \$m)			Employment (FTEs)		
		Direct impact	Indirect + induced	Total impact	Direct impact	Indirect + induced	Total impact
Retail	172	109	38	148	352	279	631
Physical music	13	10	5	15	59	41	101
Downloads	16	10	3	14	30	24	54
Online streaming	142	89	30	119	263	213	476
Public performance (non-radio)	57	19	28	48	219	178	397
Radio broadcasting	210	84	160	244	739	1,320	2,059
Live performance	177	96	141	236	1,510	1,223	2,733
Synchronisation	4	2	3	5	27	22	48
Overseas earnings	36	36	16	52	0	135	135
Total	656	347	386	732	2,848	3,156	6,003

Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2018-20.

The main findings of the study are that in 2020:

- We estimate that the music industry in New Zealand directly added \$347m to national GDP and provided the equivalent of approximately 2,850 FTEs.
- The total economic impact of the music industry in New Zealand includes direct, indirect, and induced (ie spending supported by the wages paid by the music industry) impacts. In total, we estimate that the New Zealand music industry contributed \$732m to national GDP and supported around 6,000 FTEs.
- Radio broadcasting and live performance are the two largest subsectors by GDP impact, with 33% and 32% of the total respectively. Live performance had the highest employment contribution, with 46% of the total. Retail is the third largest sub-sector, making a significant GDP contribution but a lower employment impact.

Table 4. Percentage impacts by sub-sector, 2020

Industry sector	Total sales	Value added (GDP)		Employment (FTEs)	
		Direct impact	Total impact	Direct impact	Total impact
Retail	26%	32%	20%	12%	11%
Public performance (non-radio)	9%	6%	7%	8%	7%
Radio broadcasting	32%	24%	33%	26%	34%
Live performance	27%	28%	32%	53%	46%
Synchronisation	1%	1%	1%	1%	1%
Overseas earnings	6%	10%	7%	0%	2%
Total	100%	100%	100%	100%	100%

Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2018-20.

Overall industry – 2019

The tables below summarise our estimates of the overall economic impact of the music industry in New Zealand in 2019.

2019 had a higher economic impact than 2020, and we discuss the trends over time in more detail below. The relative contributions of each sector in 2019 are very similar to 2020.

Table 5. Estimate of overall economic contribution of the music industry in New Zealand, 2019

Industry sector	Total sales (\$m)	Value added (GDP, \$m)			Employment (FTEs)		
		Direct impact	Indirect + induced	Total impact	Direct impact	Indirect + induced	Total impact
Retail	169	107	35	142	332	262	594
Physical music	14	11	6	16	65	45	110
Downloads	18	11	3	14	30	25	55
Online streaming	137	86	26	111	237	192	428
Public performance (non-radio)	58	19	28	47	225	182	407
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Live performance	195	106	155	261	1,688	1,368	3,056
Synchronisation	4	2	3	5	27	22	49
Overseas earnings	42	42	18	61	0	157	157
Total	702	370	416	786	3,104	3,474	6,578

Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2017-19.

Table 6. Percentage impacts by sub-sector, 2019

Industry sector	Total sales	Value added (GDP)		Employment (FTEs)	
		Direct impact	Total impact	Direct impact	Total impact
Retail	24%	29%	18%	11%	9%
Public performance (non-radio)	8%	5%	6%	7%	6%
Radio broadcasting	33%	25%	34%	27%	35%
Live performance	28%	29%	33%	54%	46%
Synchronisation	1%	1%	1%	1%	1%
Overseas earnings	6%	11%	8%	0%	2%
Total	100%	100%	100%	100%	100%

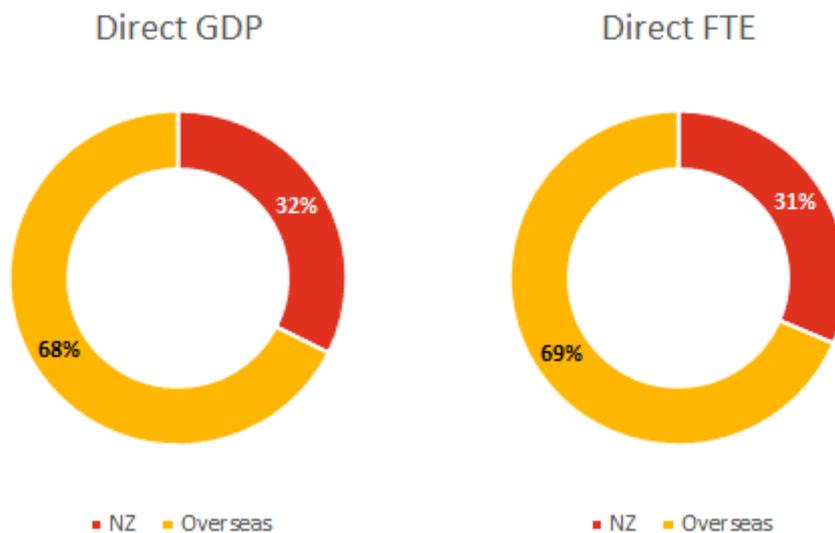
Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2017-19.

Split between New Zealand and offshore generated content

- In 2020, 32% of the direct contribution to New Zealand's GDP, and 31% of the direct contribution to employment, was derived from New Zealand generated content.
- This is equivalent to a direct impact of \$112m and 894 FTEs from New Zealand generated content. After taking into account indirect and induced impacts, New Zealand content contributed \$246m to national GDP and supported 1,918 FTEs.
- The pattern in 2019 was very similar to 2020.

Figure 8. Share of direct GDP and employment from New Zealand generated content, 2020



Source: Industry-provided data, PwC analysis

Table 7. Estimated contribution from New Zealand generated content, 2020

Industry sector	Total sales (\$m)	Value added (GDP, \$m)			Employment (FTEs)		
		Direct impact	Indirect + induced	Total impact	Direct impact	Indirect + induced	Total impact
Retail	21	13	18	32	132	106	238
Physical music	2	2	1	2	9	6	16
Downloads	2	1	2	3	13	10	23
Online streaming	17	11	16	26	111	90	200
Public performance (non-radio)	16	15	22	37	151	122	273
Radio broadcasting	48	19	37	56	170	304	474
Live performance	50	27	39	66	423	342	765
Synchronisation	2	2	2	4	18	15	33
Overseas earnings	36	36	16	52	0	135	135
Total	173	112	134	246	894	1,023	1,918

Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2018-20.

Table 8. Estimated contribution from overseas generated content, 2020

Industry sector	Total sales (\$m)	Value added (GDP, \$m)			Employment (FTEs)		
		Direct impact	Indirect + induced	Total impact	Direct impact	Indirect + induced	Total impact
Retail	151	96	20	116	220	173	393
Physical music	11	9	4	13	50	35	85
Downloads	14	9	2	11	17	14	32
Online streaming	126	78	14	93	152	123	276
Public performance (non-radio)	41	4	6	11	69	56	124
Radio broadcasting	161	65	123	188	569	1,016	1,585
Live performance	128	69	101	170	1,087	881	1,968
Synchronisation	2	1	1	1	9	7	15
Overseas earnings	0	0	0	0	0	0	0
Total	484	234	252	486	1,954	2,132	4,086

Source: Industry-provided data, PwC analysis

Trends over time

- The industry's estimated GDP and employment contributions increased each year from 2016 to 2019, before decreasing from 2019 to 2020.
- 2019 was the best year for the New Zealand music industry, in terms of economic contribution, since we began our annual analysis in 2013. The significant increase in contribution from 2018 to 2019 was primarily driven by a big increase in streaming revenues, as well as a good year for live music and overseas earnings.
- In 2020, the industry felt the effects of Covid-19. The only subsector to grow from the previous year was retail, driven by continued growth in streaming revenues. Revenues from radio broadcasting, live performance and overseas income all decreased, primarily due to Covid-19.
 - Live performance income was affected by domestic gathering restrictions for part of the year, and ongoing border restrictions which prevented international artists touring New Zealand.
 - Overseas income was affected by gathering and border restrictions.
 - Radio broadcasting revenues reduced significantly during the first lockdown.
 - The closure for part of the year of bars, restaurants and other venues reduced public performance revenues.

The economic contribution in 2020 was at a similar level to 2018.

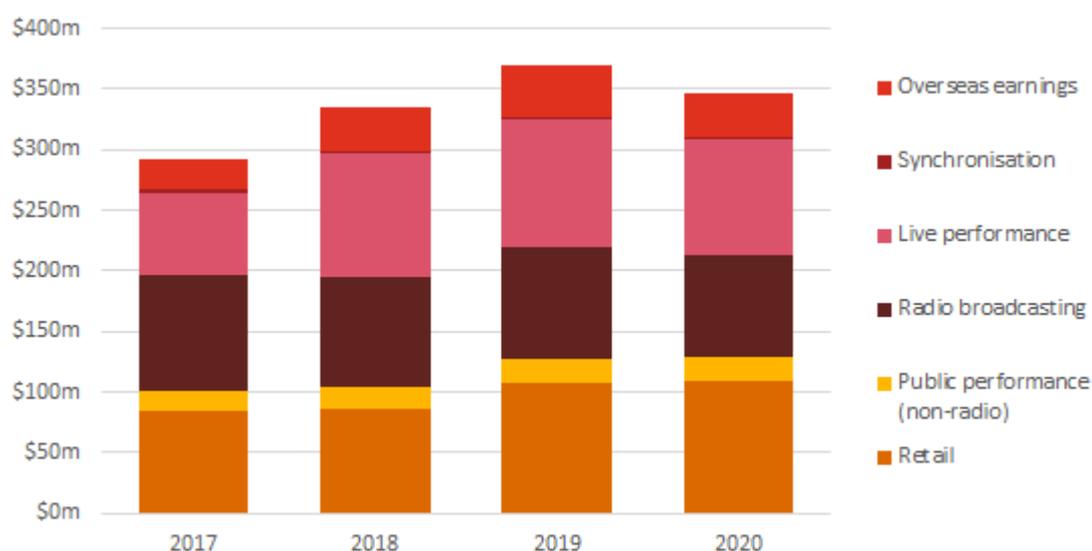
Table 9. Estimated economic contribution, 2017-20

Industry sector	Direct impacts				Total impacts			
	2017	2018	2019	2020	2017	2018	2019	2020
Retail								
Value added (GDP)	\$85m	\$87m	\$107m	\$109m	\$112m	\$115m	\$142m	\$148m
Employment (FTEs)	288	282	332	352	509	502	594	631
Public performance (non-radio)								
Value added (GDP)	\$16m	\$17m	\$19m	\$19m	\$39m	\$42m	\$47m	\$48m
Employment (FTEs)	194	207	225	219	350	374	407	397
Radio broadcasting								
Value added (GDP)	\$96m	\$91m	\$93m	\$84m	\$279m	\$265m	\$270m	\$244m
Employment (FTEs)	891	831	831	739	2,481	2,314	2,316	2,059
Live performance								
Value added (GDP)	\$68m	\$101m	\$106m	\$96m	\$168m	\$251m	\$261m	\$236m
Employment (FTEs)	1,132	1,653	1,688	1,510	2,050	2,992	3,056	2,733
Synchronisation								
Value added (GDP)	\$2m	\$2m	\$2m	\$2m	\$5m	\$5m	\$5m	\$5m
Employment (FTEs)	28	28	27	27	51	50	49	48
Overseas earnings								
Value added (GDP)	\$25m	\$37m	\$42m	\$36m	\$36m	\$53m	\$61m	\$52m
Employment (FTEs)	0	0	0	0	94	137	157	135
Total								
Value added (GDP)	\$292m	\$336m	\$370m	\$347m	\$639m	\$731m	\$786m	\$732m
Employment (FTEs)	2,533	3,001	3,104	2,848	5,535	6,370	6,578	6,003

Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over the prior three years.

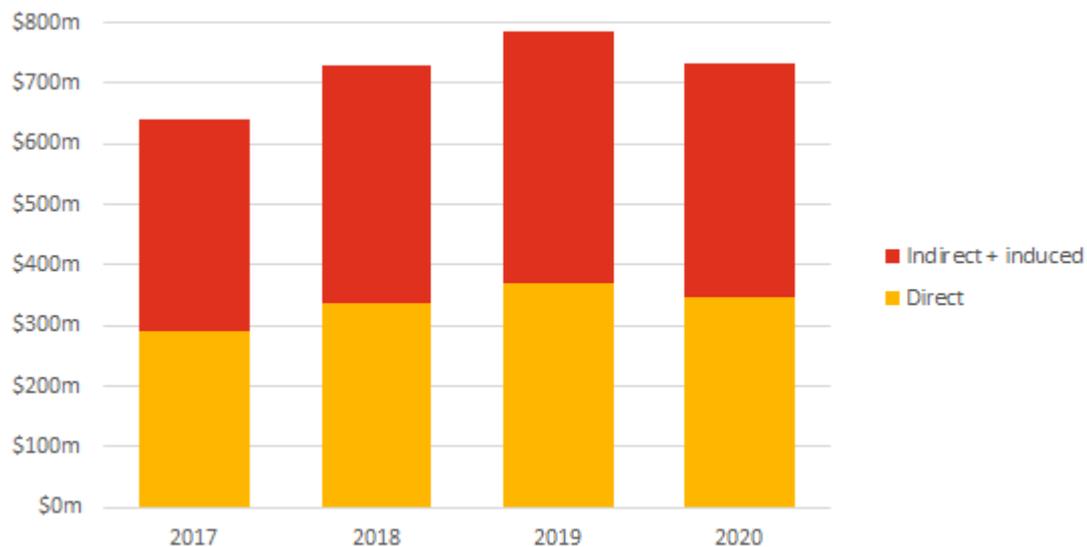
Figure 9. Composition of direct GDP contribution, 2017-20



Source: Industry-provided data, PwC analysis

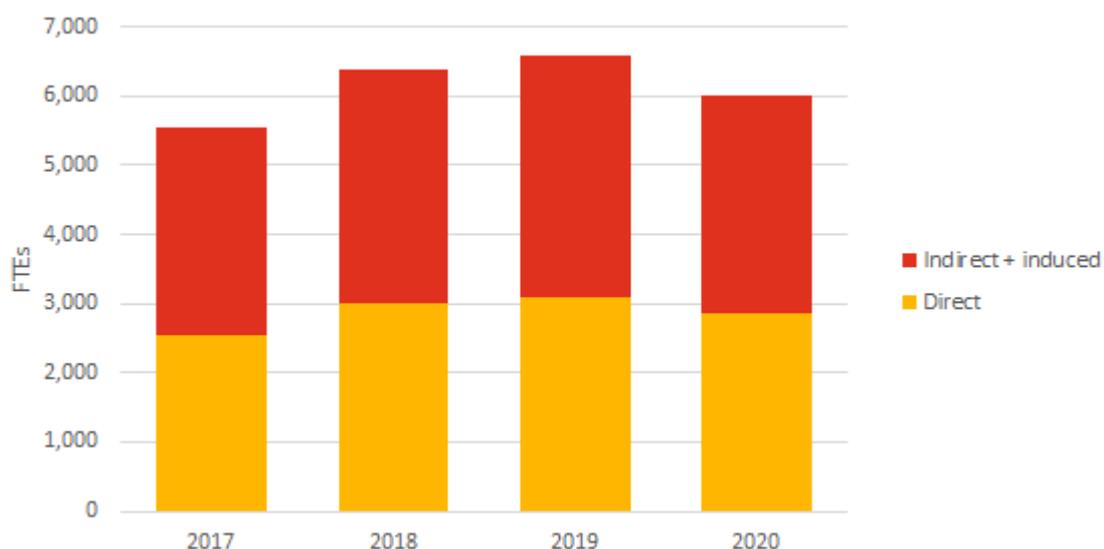
Note: Overseas earnings are an average over the prior three years.

Figure 10. Composition of total GDP impact, 2017-20



Source: Industry-provided data, PwC analysis

Figure 11. Composition of total employment impact, 2017-20



Source: Industry-provided data, PwC analysis

The methodology that underpins these estimates is outlined in Appendix B.

Comparison to other sectors

To help shed light on the relative size of the music sector in New Zealand, we compare it to other sectors, including some in the creative space and related to recreational activities. Table 10 presents GDP and employment estimates for a number of other New Zealand sectors.

We acknowledge that some of these studies may be out of date, but they help show an order of magnitude in comparison to the music sector.

Table 10. Estimated GDP and employment contributions for other sectors

Sector	Direct GDP	Direct FTEs	Study
Music	\$347m	2,848	PwC, 2021
Architecture	\$436m	5,350	PwC, 2017
Design	\$10,098m	94,200	PwC, 2017
Cruise ships	\$491m	9,100	Market Economics, 2018
Tourism	\$16,400m	225,000	MBIE, 2020
Agriculture	\$12,770m	83,000	Statista, 2021
Wine	\$1,092m	7,580	NZIER, 2015
Commercial fishing	\$550m	4,394	BERL, 2017

4. Music retail

The New Zealand retail music sector posted its fifth and sixth consecutive years of growth in 2019 and 2020, earning an estimated \$172m in retail revenues in 2020.

In 2020, we estimate that these gross revenues resulted in a direct impact on the New Zealand economy of \$109m in GDP and 323 FTEs within the music industry. After accounting for multiplier effects, the retail subsector had a total economic impact of \$143m and 578 FTEs.

New Zealand music contributed a small share of total value within the retail subsector accounting for approximately 9% of gross output.

Table 11. Estimated economic contribution through retail channels, 2020

Industry sector	Total sales (\$m)	Value added (GDP, \$m)		Employment (FTEs)	
		Direct impact	Total impact	Direct impact	Total impact
Physical music	13	10	15	59	101
Downloads	16	10	14	30	54
Online streaming	142	89	119	263	476
Total retail	172	109	148	352	631

Source: Industry-provided data, PwC analysis

Table 12. Estimated economic contribution through retail channels, 2019

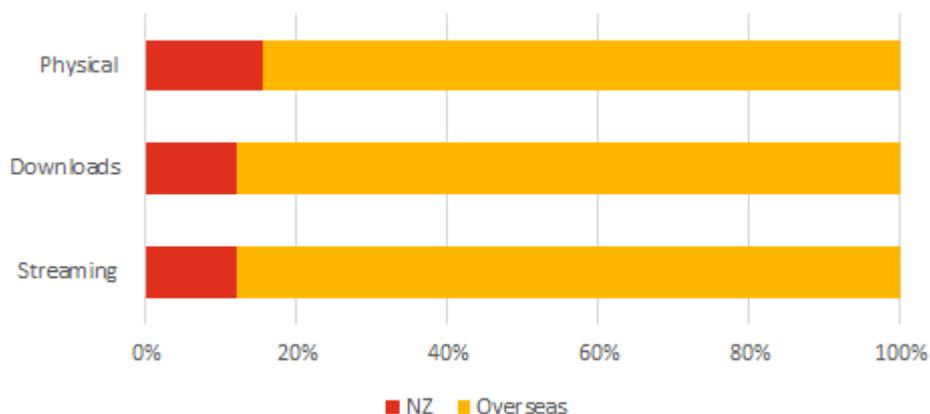
Industry sector	Total sales (\$m)	Value added (GDP, \$m)		Employment (FTEs)	
		Direct impact	Total impact	Direct impact	Total impact
Physical music	14	11	16	65	110
Downloads	18	11	14	30	55
Online streaming	137	86	111	237	428
Total retail	169	107	142	332	594

Source: Industry-provided data, PwC analysis

Split between New Zealand and offshore generated content

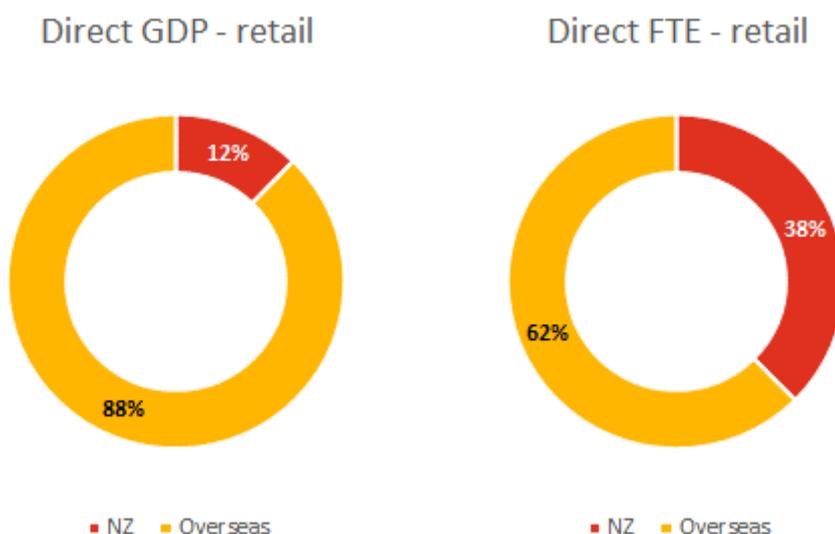
- For both streaming revenues and total revenues, 12% of revenue in New Zealand in 2020 was earned by New Zealand musicians.
- 12% of the subsector's contribution to GDP and 38% of the subsector's contribution to employment was derived from New Zealand generated content in 2020.
- This is equivalent to a direct GDP contribution for the retail subsector of \$13m and 132 FTEs supported from New Zealand generated content.
- The difference between GDP and employment impacts is due to the disparity in employment footprints for physical and online retail channels. Online retail has a much smaller footprint than retail through traditional bricks and mortar stores.
- The pattern in 2019 was very similar to 2020.

Figure 12. Share of total retail sales earned by New Zealand generated content, 2020



Source: Industry-provided data, PwC analysis

Figure 13. Share of the retail economic impact from New Zealand generated content, 2020



Source: Industry-provided data, PwC analysis

Table 13. Estimated contribution through retail channels for New Zealand generated content, 2020

Industry sector	Total sales (\$m)	Value added (GDP, \$m)		Employment (FTEs)	
		Direct impact	Total impact	Direct impact	Total impact
Physical music	2	2	2	9	16
Downloads	2	1	3	13	23
Online streaming	17	11	26	111	200
Total retail	21	13	32	132	238

Source: Industry-provided data, PwC analysis

Table 14. Estimated contribution through retail channels for overseas generated content, 2020

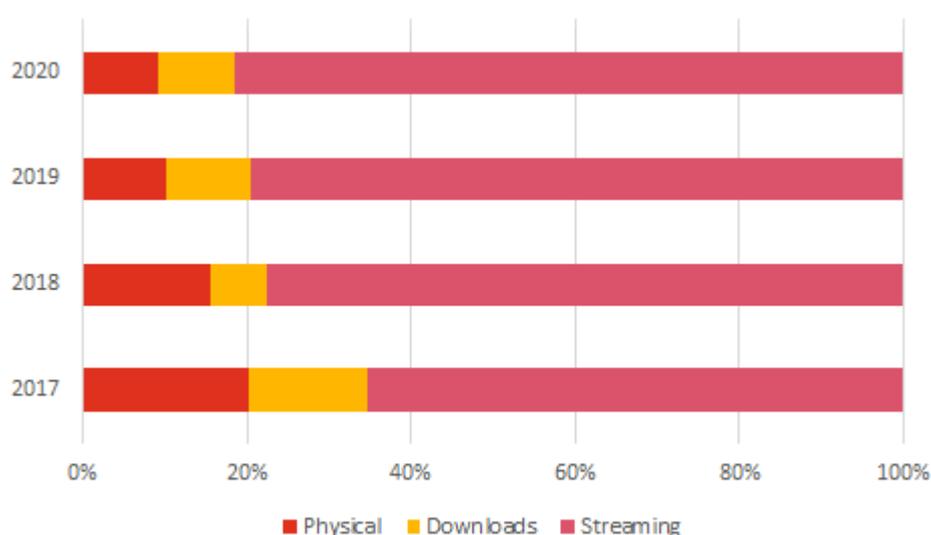
Industry sector	Total sales (\$m)	Value added (GDP, \$m)		Employment (FTEs)	
		Direct impact	Total impact	Direct impact	Total impact
Physical music	11	9	13	50	85
Downloads	14	9	11	17	32
Online streaming	126	78	93	152	276
Total retail	151	96	116	220	393

Source: Industry-provided data, PwC analysis

Trends over time

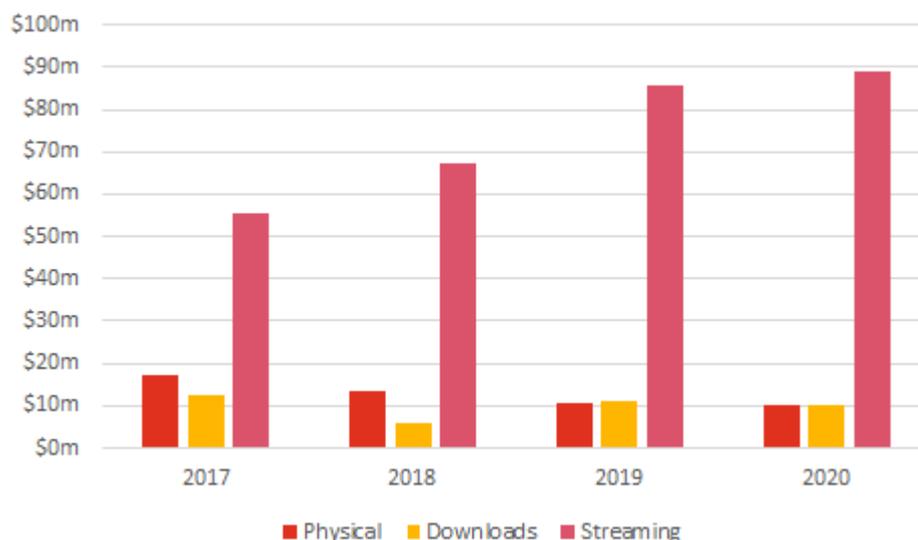
- Historically the majority of retail music's contribution to the New Zealand economy was driven from physical music retail. However, physical music retail has declined significantly and now makes up only 9% of total retail gross output in 2020, compared to 65% in 2011.
- The physical sales reduction has been offset by the growth of online streaming, which has grown rapidly over the past five years and now accounts for 81% of retail output. Streaming is now the main alternative to physical retail consumption.
- Digital consumption initially included a substantial illegal download component, which impacted total revenues from retail for a number of years. But the New Zealand music industry is now able to successfully monetise online music through streaming, and this has led to an increasing trend in total revenues from retail.

Figure 14. Retail direct GDP contribution, by retail channel, 2017-20



Source: Industry-provided data, PwC analysis

Figure 15. Retail direct GDP contribution, by retail channel, 2017-20



Source: Industry-provided data, PwC analysis

Box 1. Definition of the retail subsector

This subsector includes all activities related to music retail and on-demand streaming, whether they take place in a digital or physical format. This category encompasses a range of different consumption points, including on-demand streaming, online music stores, and physical retailers. In all cases these represent the industry's channels to market for the personal use or sale of recorded content.

Digital retail includes all revenues generated by the legal consumption of music through online and mobile channels, including:

- on-demand music streaming services such as Spotify, Apple Music and YouTube
- online retail services such as iTunes
- video or other music content available from licensed channels such as Facebook and Instagram.

Physical retail includes activities directly related to the sale of albums, vinyl, concert DVDs, and other forms of recorded music in physical formats – whether they are purchased in store or via online delivery.

5. Public performance (non-radio)

In 2020, the music industry in New Zealand earned \$57m in royalties for non-radio public performance.⁴

We estimate that these gross revenues resulted in a direct impact on the New Zealand economy of \$19m in GDP and 219 FTEs within the music industry. After accounting for multiplier effects, non-radio communication and public performance had a total economic impact of \$48m in GDP and 397 FTEs.

Table 15. Estimated economic contribution from non-radio public performance, 2020

	Direct economic impacts		Total economic impacts	
	All music	NZ music	All music	NZ music
Total sales	\$57m	\$16m		
Value added (GDP)	\$19m	\$15m	\$48m	\$37m
Employment (FTEs)	219	151	397	273

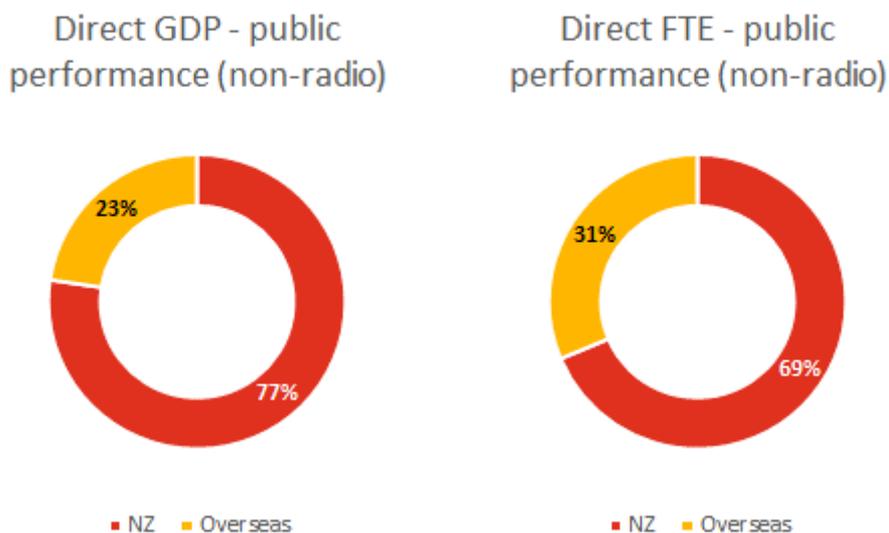
Source: Industry-provided data, PwC analysis

Split between New Zealand and offshore generated content

- New Zealand generated content is responsible for 77% of the direct GDP impact and 69% of the direct employment impact for the communication and public performance subsector.
- New Zealand music was responsible for a large share of the economic impact due to the significant role of royalties earned for New Zealand music.
- In 2020, the direct GDP impact from non-radio public performance from New Zealand content was \$15m, and 151 FTEs were supported by New Zealand generated content from this subsector.
- The pattern in 2019 was very similar to 2020.

⁴ Note our definition of “public performance” may differ from that used elsewhere in the industry. Please refer to the Glossary in Appendix A.

Figure 16. Share of the non-radio public performance economic impact from New Zealand generated content, 2020

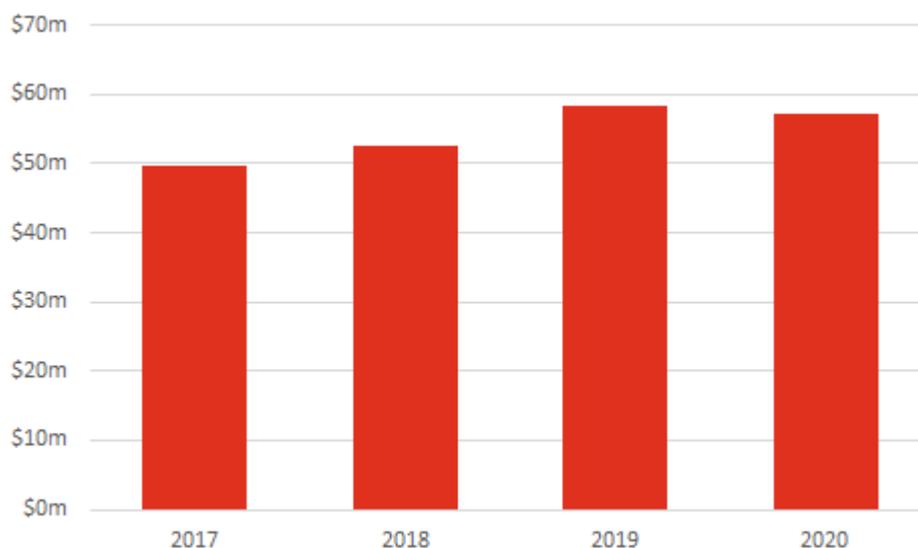


Source: Industry-provided data, PwC analysis

Trends over time

The non-radio public performance subsector has been growing at a steady rate, with the exception of a small decrease in 2020. The growth in revenue experienced by this subsector is supported by the collective work of OneMusic.

Figure 17. Total sales from non-radio public performance rights, 2017-20



Source: Industry-provided data, PwC analysis

Box 2: Definition of public performance

In this report, the public performance subsector of the music industry includes all instances in which recorded music is communicated to the public or played in a public venue. In this report it includes:

- communication via radio, television, pay TV, and internet channels
- public performance in premises such as but not limited to retailers, hospitality outlets (bars and cafes), educational institutions, and gyms.

In our analysis, we have split the public performance subsector into radio (radio broadcasting) and non-radio (public performance (non-radio)) which includes television, pay TV, some internet channels, hospitality premises etc. The analysis in Table 15 and Figure 17 relate to non-radio channels.

When music is publicly performed, recording artists, record companies, songwriters, and music publishers earn money from royalties paid for this use. These royalties are calculated on a blanket basis and distributed according to the distribution policy of collective management organisations. Data is obtained from Recorded Music NZ and APRA AMCOS.

6. Radio broadcasting

In addition to the above definition of the public performance sector is music radio broadcasting, which we present as a separate category because of its size and impact.

In 2020, the radio broadcasting sector earned revenue of \$210m. We estimate that these gross revenues resulted in a direct impact on the New Zealand economy of \$84m in GDP and 739 FTEs within the music industry. After accounting for multiplier effects, music radio broadcasting had a total economic impact of \$244 million in GDP and 2,059 FTEs.

Table 16. Estimated economic contribution from radio broadcasting, 2020

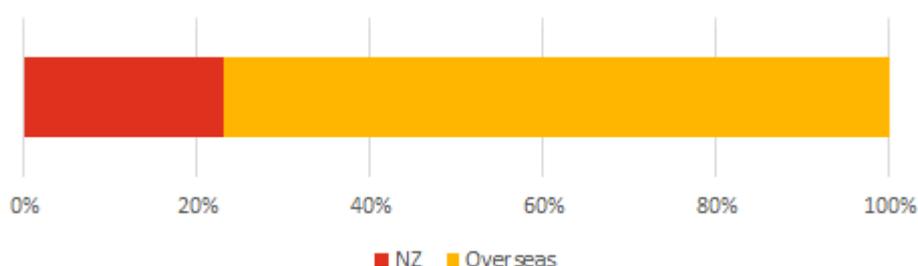
	Direct economic impacts		Total economic impacts	
	All music	NZ music	All music	NZ music
Total sales	\$210m	\$48m		
Value added (GDP)	\$84m	\$19m	\$244m	\$56m
Employment (FTEs)	739	170	2,059	474

Source: Industry-provided data, PwC analysis

Split between New Zealand and offshore generated content

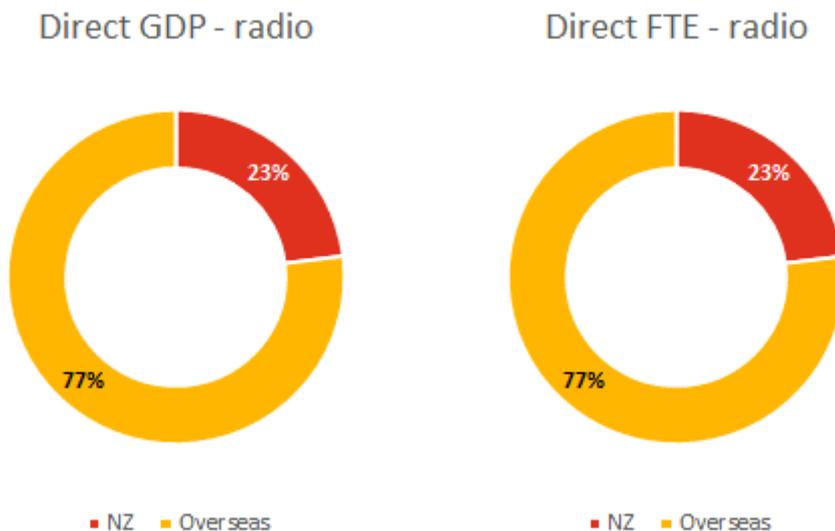
- 23% of total radio plays in 2020 were New Zealand music. This figure is based on RadioScope figures for all radio, including commercial radio, student radio, iwi radio and Pacific Community radio, but does not include Radio New Zealand.
- This proportion is substantially greater than the shares of both physical and digital retail which reflect New Zealand content. This is due in part to the voluntary NZ Music Code agreement between the Radio Broadcasters Association (on behalf of its commercial radio members) and the Minister of Broadcasting, which has been in place since 2002, and in part to the efforts of NZ On Air in promoting New Zealand music on radio.
- The 23% share of total radio plays is used to estimate the share of the subsector's direct GDP and FTE that arises from New Zealand generated content. It is equivalent to \$19m of GDP and 170 FTEs for the 2020 year.

Figure 18. New Zealand share of total radio plays, 2020



Source: Radioscope

Figure 19. Share of the radio economic impact from New Zealand generated content, 2020

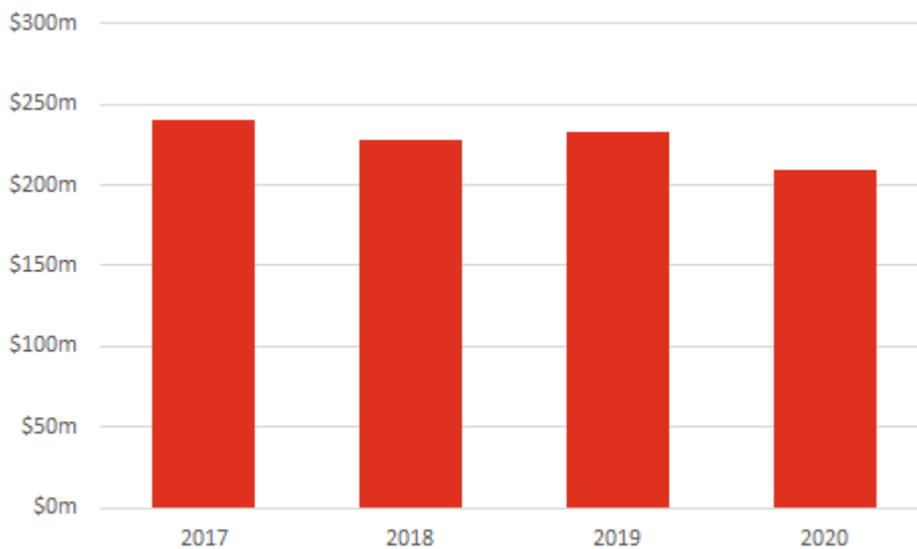


Source: Industry-provided data, PwC analysis

Trends over time

- Revenues in the music radio sub-sector have started falling in recent years, after a period of being flat. Revenues in 2020 were lower than in 2019, and the lowest since 2012.

Figure 20. Total revenues from music radio, 2017-20



Source: Industry-provided data, PwC analysis

7. Live performance

In 2020, the music industry in New Zealand earned an estimated \$177m in live performance revenues, based on live performance royalties collected by APRA AMCOS.

We estimate that these gross revenues resulted in a direct impact on the New Zealand economy of \$96m in GDP and 1,510 FTEs within the music industry. After accounting for multiplier effects, the live performance subsector had a total economic impact of \$236m and 2,733 FTEs.

New Zealand content was responsible for contributing just over a quarter of these impacts.

Table 17. Estimated economic contribution from live performance, 2020

	Direct economic impacts		Total economic impacts	
	All music	NZ music	All music	NZ music
Total sales	\$177m	\$50m		
Value added (GDP)	\$96m	\$27m	\$236m	\$66m
Employment (FTEs)	1,510	423	2,733	765

Source: Industry-provided data, PwC analysis

One notable feature of the live performance subsector is that it accounts for a greater share of the sector's direct employment (53%) than its GDP impact (28%). This suggests that it is more labour-intensive than other subsectors.

Table 18. Percentage split of live music impacts, by revenue channel, 2020

Industry sector	Total sales	Value added (GDP)		Employment (FTEs)	
		Direct impact	Total impact	Direct impact	Total impact
Retail	26%	32%	20%	12%	11%
Public performance (non-radio)	9%	6%	7%	8%	7%
Radio broadcasting	32%	24%	33%	26%	34%
Live performance	27%	28%	32%	53%	46%
Synchronisation	1%	1%	1%	1%	1%
Overseas earnings	6%	10%	7%	0%	2%
Total	100%	100%	100%	100%	100%

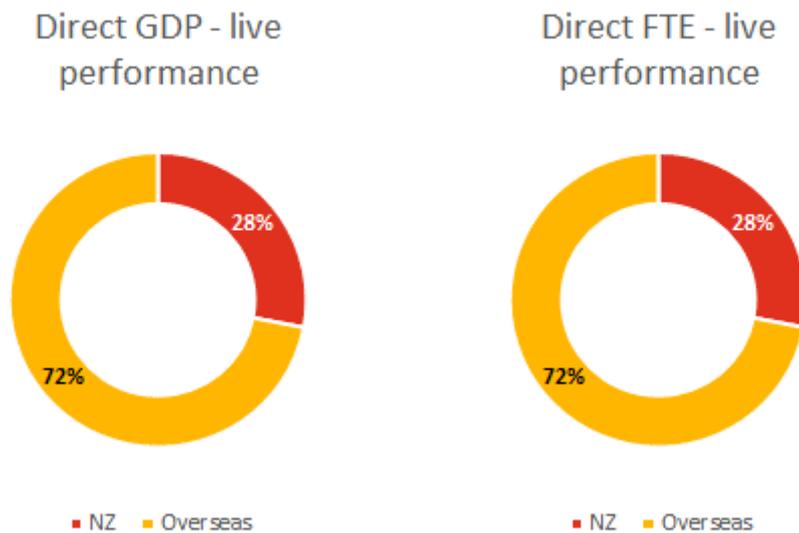
Source: Industry-provided data, PwC analysis

Note: Overseas earnings are an average over 2018-20.

Split between New Zealand and offshore generated content

- Approximately 28% of the subsector's direct contribution to GDP and employment is derived from New Zealand generated content. This is equivalent to \$28m of GDP and 463 FTEs.

Figure 21. Share of the live performance economic impact from New Zealand generated content, 2020

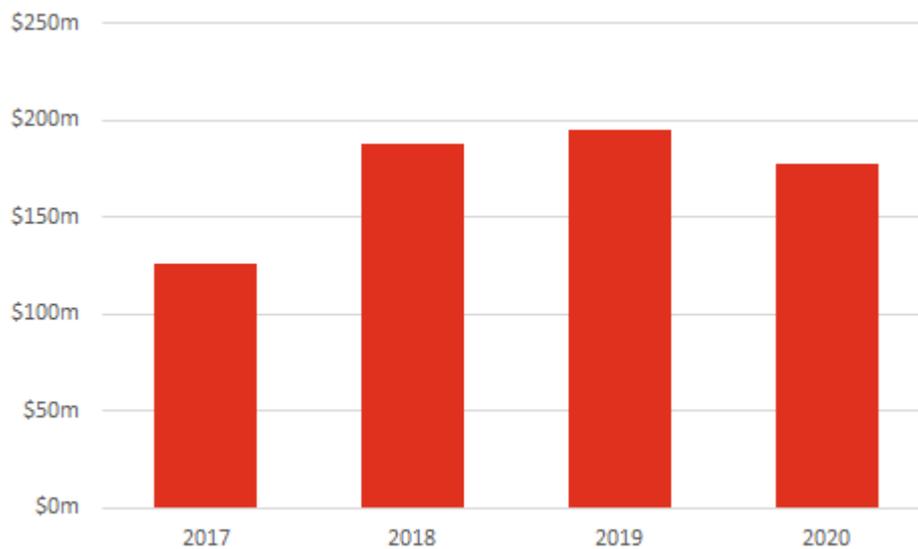


Source: Industry-provided data, PwC analysis

Trends over time

- Revenues from live performance fluctuate from one year to the next based on different touring schedules. 2019 was the strongest ever recorded year for live performance revenue in New Zealand. 2020 was lower than both 2019 and 2018, due to the impacts of Covid-19.

Figure 22. Total sales from live performance, 2017-20



Source: Industry-provided data, PwC analysis

Box 3: Definition of the live performance sector

The live performance subsector of the music industry in New Zealand includes all types of live music played in New Zealand by local and overseas artists. These include:

- concerts and music festivals
- live music at music venues (ie door sales)
- orchestras
- music in theatre (excluding grand right musical plays).

8. Synchronisation

In 2020, the music industry in New Zealand earned an estimated \$4m in annual synchronisation fee revenue.

We estimate that these gross revenues resulted in a direct impact on the New Zealand economy of \$2m in GDP and 27 FTEs. After accounting for multiplier effects, synchronisation had a total economic impact of \$5m and 48 FTEs.

Table 19. Estimated economic contribution from synchronisation, 2020

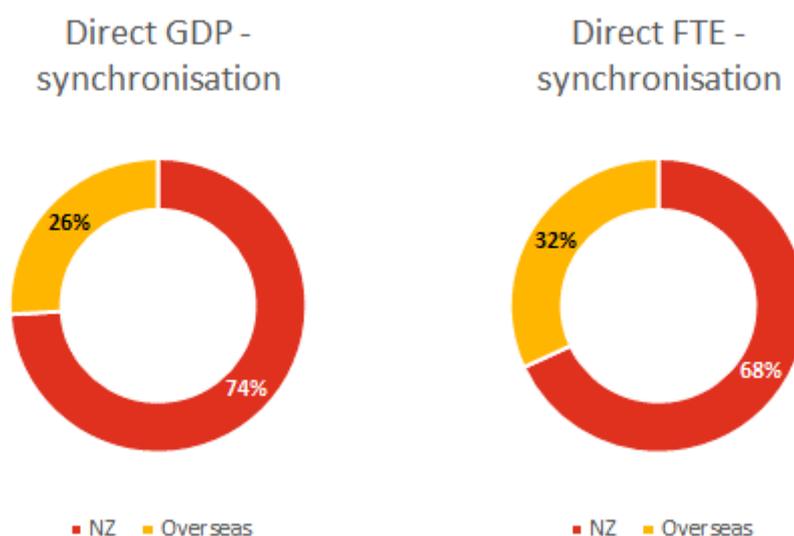
	Direct economic impacts		Total economic impacts	
	All music	NZ music	All music	NZ music
Total sales	\$4m	\$2m		
Value added (GDP)	\$2m	\$2m	\$5m	\$4m
Employment (FTEs)	27	18	48	33

Source: Industry-provided data, PwC analysis

Split between New Zealand and offshore generated content

Approximately 74% of the subsector’s direct GDP contribution is derived from New Zealand generated content and 68% of the subsector’s direct employment. This is equivalent to \$2m of GDP and 18 FTEs.

Figure 23. Share of the synchronisation economic impact from New Zealand generated content, 2020



Source: Industry-provided data, PwC analysis

Trends over time

The contribution of this sector has been broadly constant in the past four years with gross output at approximately \$4 million each year.

Box 4: Definition of the synchronisation subsector

The synchronisation subsector of the music industry in New Zealand includes all royalties earned when rights holders licence music for use in advertisements, games, films, and television programmes.

9. Overseas earnings

New Zealand music income earned overseas represent funds that flow back into the economy and contribute to gross national income. For official purposes, overseas royalties are considered direct contributions to GDP.

Overseas income is earned for the music industry in the form of:

- royalties received from the sale of physical music overseas
- royalties received from online sales and streams, that are purchased overseas
- radio royalties received as a result of airplay overseas
- synchronisation royalties from countries other than New Zealand
- earnings from live performances overseas
- earnings from other endorsements and appearances.

There is no required reporting or official statistics for exports relating to the New Zealand music industry. However, in 2020⁵, 2018⁶ and 2016⁷ PwC and Recorded Music NZ prepared estimates of the total overseas earnings, based on a combination of industry data sources related to earnings from international sales, live performances and any government grants received for international purposes. An estimate of the GDP impact from overseas earnings was included for the first time in the 2016 version of this report series.

Due to the relatively small number of artists with significant offshore earnings, the lumpy nature of earnings, the potentially significant impacts associated with individual artists and the fact that some artists may have been underreported or missed completely, we utilise a multi-year average of overseas earnings data to derive our annual estimate. We have elected to use a three-year average (2018-20) to derive this year's estimate, which matches the approach we used in previous reports.

These estimates have been used to calculate overseas earnings results shown below in Table 20.

Table 20. New Zealand music industry overseas earnings estimate, 2020

	2018-20 average
Royalties	\$23m
Live performances and appearances	\$13m
Total	\$36m

Source: Industry-provided data, PwC analysis

⁵ PwC (September 2021), Overseas earnings of the New Zealand music industry 2020.

⁶ PwC (December 2019), Overseas earnings of the New Zealand music industry 2018.

⁷ PwC (September 2017), Overseas earnings for New Zealand musicians, 2012-2016.

Appendix A: Glossary

The table below provides a glossary of music industry terms, industry associations, and commonly used acronyms.

Term	Definition
APRA AMCOS	<p>The Australasian Performing Right Association The Australasian Mechanical Copyright Owners Society</p> <p>The New Zealand branch licenses music users, on behalf of its members, and collects fees where music is used for communication or public performance. APRA licenses businesses such as (but not limited to) retailers, streaming services, radio and television broadcasters. These fees are then distributed directly to songwriters or to music publishers to whom songwriters have assigned their rights.</p> <p>Public performing licensing for venues such as hospitality, education and gyms is conducted jointly for both APRA AMCOS and Recorded Music NZ via OneMusic. (www.onemusic.com)</p>
Communication	The transmission of recorded music via mediums including radio, television and the internet.
Music Publisher	While music publishers historically made money by reproducing and selling sheet music, today they invest in, promote and represent songwriters (or song catalogues) and are responsible for ensuring payments are made when their songwriters compositions are reproduced.
On-demand	On-demand music services are businesses that provide access to music as opposed to selling digital music files. Examples include Spotify and Apple Music. These services can have different tiers of service: eg ad-supported, where the customer has free access but will hear audio advertising; and premium subscription which provides ad-free access via both computers and mobile devices such as handsets and tablets.
Public Performance	Public performance refers to two uses of music. First, the playing of recorded music in premises such as retailers, hospitality outlets (bars and cafes), educational institutions, and gyms. Second, the live performance of music in venues. Rights associations representing songwriters and recording artists licence the public performance of recorded and live music. In this report, we use the term 'public performance' to also include other revenue streams. For example we refer to "public performance (non radio)" as including all communication income other than radio.
Record Company	<p>A business that invests in, promotes, and represents recorded music made by recording artists. Record Companies typically represent a mixture of recorded music in which they own the copyright outright and recorded music in which they hold the copyright under exclusive licence from the owner.</p> <p>Often called a "record label".</p>
Recorded Music New Zealand	<p>Recorded Music New Zealand represents the interests of New Zealand recording artists, right holders and record companies, via licensing, advocacy, market development and promotion. Recorded Music NZ licenses music users such as radio and television broadcasters and collects revenues on behalf of registered right holders. Revenues are then distributed to the relevant right holders.</p> <p>Public performing licensing for venues such as hospitality, education and gyms is conducted jointly for both APRA AMCOS and Recorded Music NZ via OneMusic. (www.onemusic.com)</p>
Royalty	Royalties are fees paid to songwriters and recording artists that arise from rights under copyright law including sale of recordings and public performance.
Synchronisation Right	<p>A music synchronisation licence is required where a piece of recorded music is reproduced with a visual image, for example in a film, game, TV programme or advertisement.</p> <p>Often abbreviated as "synch right".</p>

Appendix B: Approach and methodology

This section provides a detailed overview of our approach and methodology, including definitions of our main economic impact measures, a discussion of our main data sources, and an explanation of how we calculated direct and total economic impacts. Finally, it discusses some opportunities for improving music industry data collection or undertaking future analysis.

Dollar terms used

Dollar values stated in this report refer to New Zealand dollars in nominal terms. In particular, the time series charts use nominal dollars for each year.

The only exception is the value of overseas earnings, which reflects a three-year average. That average is calculated using real dollars. For example, the value for 2020 is an average over 2018-20 using real dollars, and hence is an average in 2020 dollars. However, the 2019 value, based on a 2017-19 average, is presented in 2019 dollars (and so on).

Measures of economic impact

This report uses three main indicators of economic impact: gross output, value added, and employment. It relies on input-output (multiplier) analysis to estimate the indirect and induced impacts of the music industry.

Gross output

The gross output of an industry is equal to its total sales revenue. This figure incorporates both value created within that industry and the value of intermediate goods (eg raw materials, real estate, equipment and machinery) purchased by the industry from other industries.

Although gross output or sales revenue is commonly used as a measure of the value of an industry, it is an imperfect measure due to its inclusion of inputs purchased from other industries.

Value added

The value added of an industry is equal to the total value created within that industry. It can also be described as the GDP impact of an industry. It measures the contributions of labour (through wages and salaries) and capital (through profits and depreciation) to the output produced by the industry, and the taxes paid by the industry. As a result, it is equivalent to the gross output of an industry, less the value of all inputs purchased from other industries.

When using our value-added estimates, it is important to understand what they include. GDP measures, including those reported in Statistics New Zealand's national accounts and in most economic impact studies, measure the total value of goods and services produced in New Zealand, rather than the net income of all businesses and individuals located within New Zealand. As a consequence, we will:

- include income earned by overseas musicians touring in New Zealand, as it represents production in New Zealand regardless of whether it is ultimately repatriated elsewhere.
- include royalty payments paid to New Zealand musicians by overseas sources, as they represent exports of goods and services produced in New Zealand.

- These inclusions should be taken into consideration when using our estimates. The New Zealand music industry is relatively globalised – New Zealand consumers purchase a great deal of overseas-originated music, and New Zealand musicians tour and earn royalties overseas. We have excluded most music imports from our analysis by:
- measuring only economic benefits from New Zealand-originated music in digital retail and broadcasting
- including both New Zealand and overseas music in gross output figures for physical retail in the expectation that output multipliers will correct for any imported content.

There are two main reasons to measure value added in terms of GDP:

- GDP impact is the most commonly-used measure of total economic impact. It is used by Statistics New Zealand when reporting on the size of the New Zealand economy and in many other economic impact studies. Although GDP does have some weaknesses, they are not unique to the music industry in New Zealand. Across the whole economy, there is a significant gap between GDP and gross national income (GNI) figures due to the large role of foreign investment and lending in the New Zealand economy. According to World Bank figures, New Zealand's GNI has been three to seven percent lower than GDP in recent years. The same is true for specific industries as well.
- Recent changes to the development of New Zealand's national accounts mean that the treatment of these earnings now contribute to New Zealand's GDP. As such, estimates for the overseas earnings of New Zealand musicians directly contribute to the music industry in New Zealand's GDP.

Employment

We measure employment on the basis of FTEs, rather than total (full-time and part-time) jobs or headcount. Under this measure, part-time jobs are counted as a proportion of a full-time job – so, for example, a job that involved working 20 hours a week would be counted as 0.5 of an FTE. This provides us with the most comparable measure of employment in an industry, as rates of part-time employment can vary between different industries.

Data sources

Our estimates of the economic impact of the music industry in New Zealand are based primarily upon the following sources of data:

- Recorded Music NZ figures on physical and digital sales wholesale revenue
- APRA AMCOS data on songwriter royalties and Recorded Music NZ data on recording royalties
- Statistics New Zealand and other industry-level estimates of economic activity and input-output tables for New Zealand industries.

We used multiple sources of data for the overseas earnings study, including data from collection agencies, copyright owners, financial representatives, music managers, other industry organisations and surveyed musicians directly.

In each case, the data obtained related to:

- earnings from international sources from all sales, publishing and synchronisation
- earnings from live performances and touring internationally
- any government grants received for international purposes.

Where possible, other data was used to provide a sense check on estimates derived from these sources.

Our analysis combines the data from all sources. The overall data is comprehensive, and we understand that it covers the majority of the musicians who generate significant overseas earnings. Industry stakeholders believe that combined data will incorporate the bulk of the dollar value of overseas earnings.

The calendar years (year ended December quarter) have been selected as the basis for the economic impact calculations and these are the most recent full set of annual data available. All amounts in this report relate to impacts that occur in this period.

Avoiding double counting

In several cases, Recorded Music NZ and APRA AMCOS figures measured different components of the same market subsector. For example, Recorded Music NZ provided data on total wholesale revenues from physical and digital music retail, as reported to it by rights holders, while APRA AMCOS provided data on mechanical royalties (ie royalties paid each time a piece of recorded music is reproduced) paid directly to it from physical and digital music retail. As royalties are paid as a proportion of retail sales, including both of these figures in our analysis would mean double-counting activity in this market subsector.

In order to avoid double-counting, we have examined the definitions of each measure of the market and discussed with data providers where necessary.

Multiplier analysis

Direct, indirect and induced impacts

Like any industry, the music industry has spill over effects on other parts of the New Zealand economy. For our purposes here, these impacts can be divided into two categories:

- indirect (or upstream) impacts
- induced impacts.

Indirect impacts occur as a result of purchases of goods and services from other industries. When a record is made or a concert is put on, businesses within the music industry purchase a range of inputs: advertising and marketing, transportation services, machinery and instruments, rented real estate, etc.

Induced impacts occur as a result of the wages and salaries paid out by the music industry. When a musician collects a royalty check, he or she will then spend some of that money on a range of goods and services, thereby stimulating further economic impact.

Estimating direct economic impacts

We estimate the direct impact of the music industry in terms of its contribution to gross output, value added, and employment as follows:

- For each market subsector, we start with figures on either gross output (eg total digital music sales, total estimated ticket sales) or value added (eg broadcasting royalties).
- We use data from Butcher Partners to estimate the ratios of value added (VA) to gross output (GO) and VA (or GO) to employment in these industries. These ratios were then used to estimate direct GO/VA and employment in each market subsector.

Estimating total economic impacts

Spending in the music industry has multiplier effects in other industries as a result of the way in which that spending flows through the economy. Every dollar that is spent directly on music will also stimulate or support other types of economic activity indirect and induced from the industry.

In order to estimate flow-on effects, we applied multipliers calculated using 2012/13 input-output tables for all New Zealand industries, which are the latest available. Multipliers were available for gross output, value added, and employment in these industries.

- Indirect impacts were estimated using Type 1 multipliers, which account for the first-round and indirect effect of purchases of goods and services by each industry.
- Induced impacts were estimated using Type 2 multipliers, which account for induced effects from wages and salaries paid by each industry.

Approaches followed for individual subsectors

The table below summarises the activities in each subsector of the music industry that are included in our GDP calculations.

Industry subsector	Revenue earned in NZ		Revenue earned overseas
	From NZ artists	From overseas artists	
Retail	Included in GDP	Accounted for in GDP	Included
Public performance and radio	Included in GDP	Songwriter royalties not included, as they are earned offshore Recording artist royalties retained by record companies are accounted for in GDP	Included
Live performance	Included in GDP	Included in GDP, as performance occurred here	Included
Synchronisation	Included in GDP	Synchronisation fee revenues paid out to overseas artists are not included, as they are earned offshore Synchronisation fee revenue accruing to local agents (e.g. record companies, music supervision companies) are accounted for in GDP	Included

The table overleaf summarises the methodology and assumptions used to calculate the economic contribution of individual subsectors of the music industry.

Subsector	Information base	Direct value added	Direct FTEs	Total value added and FTEs
Retail – physical music	Wholesale physical sales data provided by Recorded Music NZ	<p>Estimated total retail sales revenue using Statistics NZ Annual Enterprises Survey (AES) data.</p> <p>Estimated split between retailer margin, wholesale (record label) margin, value of rights embodied in physical product, and manufacturing cost using AES data.</p> <p>Estimated value added from the retail margin using the average ratio of value added to gross margin in the “recreational, clothing, footwear, and personal accessory” and “department stores” industries.</p> <p>Estimated value added within record companies by applying the ratio of value added to gross output in the “heritage and artistic” industry and adding the total value of rights embodied in the physical product.</p> <p>Estimated value added from manufacturing using the ratio of value added to gross output in the “printing”, “publishing (except internet and music publishing)” and “polymer product and rubber product manufacturing” industries.</p>	<p>Based on ratios of employment to value added as follows:</p> <ul style="list-style-type: none"> retailer margin – the average of the “recreational, clothing, footwear, and personal accessory retailing” and “department stores”, record company margin - “heritage and artistic” manufacturing - “printing”, “publishing (except internet and music publishing)” and “polymer product and rubber product manufacturing”. <p>No additional employment impact calculated for the value of rights embodied in the physical product, as this is likely to be repatriated overseas as profit. (Employment in record label activities is captured elsewhere.)</p>	<p>Based on total (direct, indirect, induced) multipliers as follows:</p> <ul style="list-style-type: none"> retailer margin – the average of the “recreational, clothing, footwear, and personal accessory retailing” and “department stores” record company margin - “heritage and artistic” manufacturing - “printing”, “publishing (except internet and music publishing)” and “polymer product and rubber product manufacturing”. <p>No spillover impacts calculated for the value of rights embodied in the physical product, as this is likely to be repatriated overseas as profit.</p>
Retail – digital music	Wholesale digital sales figures provided by Recorded Music NZ, plus data on songwriter royalties for digital sales	<p>Estimated total retail sales revenue using information provided by APRA AMCOS.</p> <p>Estimated split between retailer margin, record label revenue, and royalty revenue using information provided by APRA AMCOS. Used AES data to estimate the value of the rights embodied in the digital product.</p>	<p>Based on ratios of employment to value added for the “heritage and artistic activities” industries.</p>	<p>Based on total (direct, indirect, induced) multipliers for the “heritage and artistic activities” industries.</p>

	provided by APRA AMCOS.	<p>Because online retailers primarily based overseas, the retailer margin was assumed to have no value added impact.</p> <p>Estimated value added within record companies by applying the ratio of value added to gross output in the “heritage and artistic activities” industry and adding the total value of rights embodied in the physical product.</p>	No additional employment impact calculated for the value of rights embodied in the digital product, as this is likely to be repatriated overseas as profit. (Employment in record label activities is captured elsewhere.)	No additional employment impact calculated for the value of rights embodied in the digital product, as this is likely to be repatriated overseas as profit.
Public performance rights	Data on songwriter royalties provided by APRA AMCOS and recorded music artist royalties provided by Recorded Music NZ for radio and TV broadcasts and public performance of music.	<p>Estimated the share of royalties paid out to New Zealand songwriters and recording artists using Radioscope data on the New Zealand music share of total radio plays.</p> <p>All (songwriter and recording artist) royalties paid for New Zealand artists converted directly to value added as they represent direct income earned locally.</p> <p>Estimated that 50% of recording artist royalties paid for overseas-originated music would be retained by record companies as profits and funding for their New Zealand-based marketing activities, while the remaining 50% would be paid directly to overseas recording artists or repertoire owners.</p> <p>Estimated an economic impact related to the recording artist royalties retained locally by record companies using the ratio of value added to gross output in the “heritage and artistic activities” industry.</p> <p>Songwriter royalties paid for overseas-originated music does not generate any value added in New Zealand.</p>	Based on ratio of employment to value added for the “heritage and artistic activities” industry.	Based on total (direct, indirect, induced) multipliers for the “heritage and artistic activities” industry.
Radio broadcasting	Data on total radio licensing fees and licensing fee rate provided by APRA AMCOS	<p>Estimated the total radio output that is related to the music industry based on the licensing fees as being the proportion of the total evidenced by the licensing rate.</p> <p>Output = Licensing fees/licensing rate</p>	Based on ratio of employment to value added for the “motion picture and sound recording activities” and “broadcasting and internet services” industries.	Based on total (direct, indirect, induced) multipliers for the “motion picture and sound recording activities” and “broadcasting and internet services” industries.
Live performance	Data on songwriter royalties provided by APRA AMCOS for live performance of music and APRA AMCOS information on the royalty rate.	<p>Gross output (ie ticket sales) estimated by dividing the value of songwriter royalties by the royalty rate applied to ticket sales.</p> <p>Value added in live performance estimated by applying the ratio of value added to gross output in the “heritage and artistic activities” industry to estimated gross output.</p>		

<p>Synchronisation rights</p>	<p>Estimated total songwriter and recording artist royalties earned from synchronisation deals in New Zealand provided by Recorded Music NZ.</p>	<p>Estimated the share of royalties paid out to New Zealand songwriters and recording artists using Recorded Music NZ estimate of the New Zealand music share of total synchronization revenues.</p> <p>All (songwriter and recording artist) royalties paid for New Zealand artists converted directly to value added as they represent direct income earned locally.</p> <p>Estimated that 50% of (songwriter and recording artist) royalties paid for overseas-originated music would be retained by negotiating agents as profits and funding for their New Zealand-based activities, while the remaining 50% would be paid directly to overseas rights-holders.</p> <p>Estimated an economic impact related to the recording artist royalties retained locally by record companies using the ratio of value added to gross output in the “heritage and artistic activities” industry.</p>	<p>Based on ratio of employment to value added for the “heritage and artistic activities” industry.</p>	<p>Based on total (direct, indirect, induced) multipliers for the “heritage and artistic activities” industries.</p>
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Appendix C: Restrictions

This report has been prepared for Recorded Music NZ to present estimates of the economic contribution of the New Zealand music industry, based on industry information, to help the industry assess its impact on the New Zealand economy. This report has been prepared solely for this purpose and should not be relied upon for any other purpose. We accept no liability to any party should it be used for any purpose other than that for which it was prepared.

To the fullest extent permitted by law, PwC accepts no duty of care to any third party in connection with the provision of this report and/or any related information or explanation (together, the “Information”). Accordingly, regardless of the form of action, whether in contract, tort (including without limitation, negligence) or otherwise, and to the extent permitted by applicable law, PwC accepts no liability of any kind to any third party and disclaims all responsibility for the consequences of any third party acting or refraining to act in reliance on the Information.

We have not independently verified the accuracy of information provided to us, and have not conducted any form of audit in respect of Recorded Music NZ. Accordingly, we express no opinion on the reliability, accuracy, or completeness of the information provided to us and upon which we have relied.

The statements and opinions expressed herein have been made in good faith, and on the basis that all information relied upon is true and accurate in all material respects, and not misleading by reason of omission or otherwise.

The statements and opinions expressed in this report are based on information available as at the date of the report.

We reserve the right, but will be under no obligation, to review or amend our report, if any additional information, which was in existence on the date of this report, was not brought to our attention, or subsequently comes to light.

This report is issued pursuant to the terms and conditions set out in our engagement letter dated 29 March 2021.