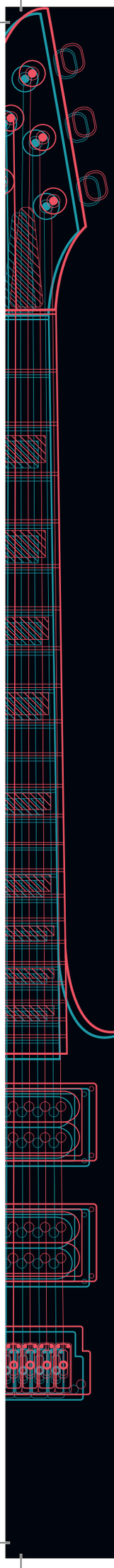

musicNT
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THE ECONOMIC AND CULTURAL VALUE OF LIVE MUSIC IN THE NORTHERN TERRITORY 2017

$1
INVESTED

$4.39
RETURNED

$74.74 MILLION

COMMERCIAL
$6.76 MILLION

CIVIC
$6.85 MILLION

INDIVIDUAL
$61.14 MILLION

CONTENTS

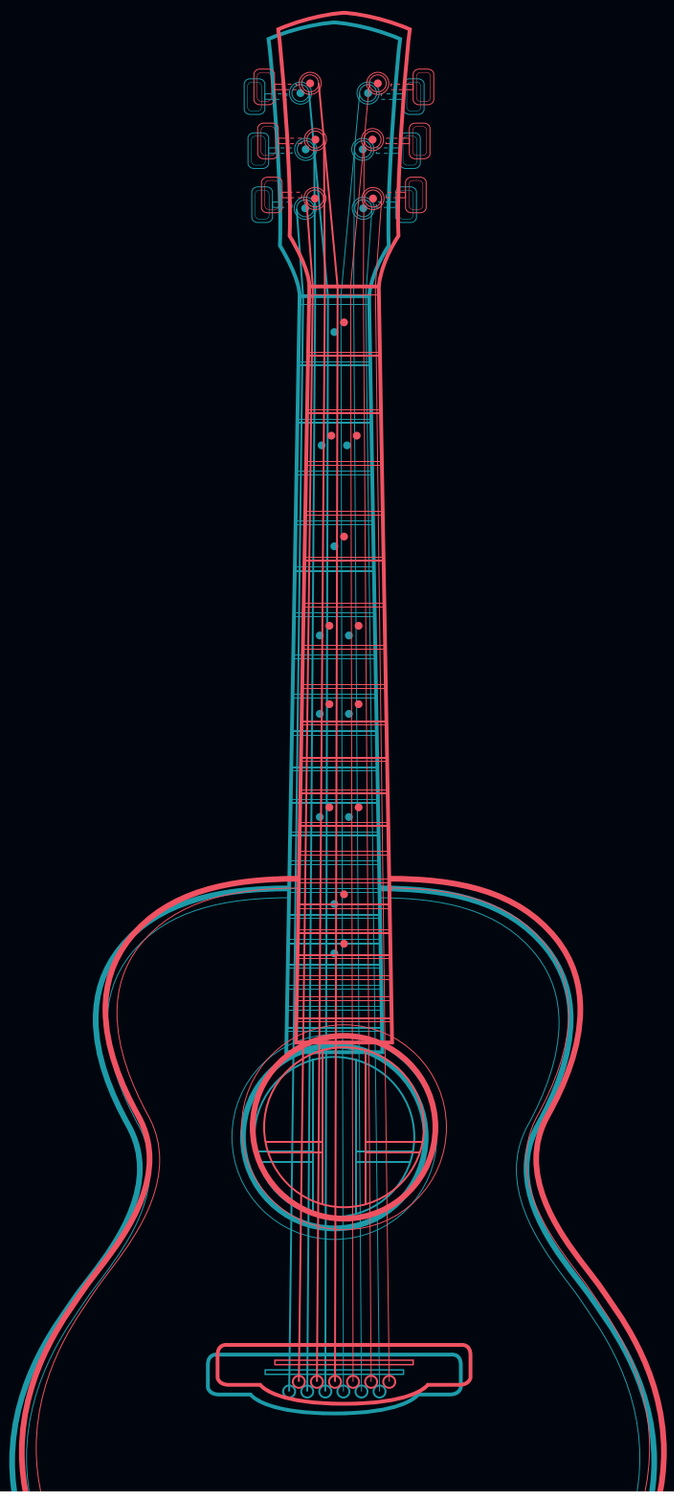
02

INTRODUCTION

Valuing the economic and cultural contribution of live music is a complex task. Live music impacts physical, human, social, and symbolic capital at both an individual and community level. Audiences derive a range of tangible and intangible benefits from experiencing live music that are not easily captured, or expressed, through the price of a ticket. Similarly, the overlapping creative, cultural and commercial concerns that **motivate live music producers** are not easily reducible to a balance sheet.

This research articulates how some of this complexity is converted by users into a set of economically valuable outputs that impact upon the welfare of society. To do this, we use cost-benefit analysis to estimate the value the cluster of activities, associated with live music making, contribute to the Northern Territory. **Cost-benefit analysis** (CBA) is the Australian Government preferred approach to evaluating policy choices and represents best-practice for this type of enquiry (Office of Best Practice Regulation, 2005).

This research builds on our national valuation of live music for the **National Live Music Office** (2015). A key limitation of this previous report was that response rates from audiences in the Northern Territory were low. Engaging with producers of live music in the Northern Territory was also outside the scope of our previous research. This report addresses both of these issues by providing, for the first time, a detailed examination of the live music sector in the Northern Territory.



METHODOLOGY

Cost-benefit analysis

Cost-benefit analysis is required to identify real and opportunity costs associated with expenditure on live music, and benefits that flow from these. This includes all economic impacts, preferences and avoided costs. Avoided costs, in this context, are any public benefits enabled by live music activity that would otherwise need to be provided by the community to maintain the status quo. For example, if all live music venues in the Northern Territory disappeared overnight, the community would experience an economic and cultural deficit. In this scenario the cost of reversing this deficit – through providing the same level of live music activity, or at least the benefits associated with this – would need to be met by the community, typically through public spending. So long as this scenario remains a fiction, those costs are avoided and accounted for as a benefit to the community.

In order to address the complexity inherent in the sector, our cost-benefit analysis develops and applies a framework for a **complete economic valuation** of live music in the Northern Territory. This requires that we identify who bears the costs of producing live music and what benefits flow to whom as a result of this. To do this it is necessary to quantify the costs and benefits to:

- government at all levels
- producers
- users, and
- the community, environment and society.

Because the notion of value is not an absolute, and is not always created or ascribed in the same way for everyone[1], our application of the cost-benefit framework articulates the process of how value is created through live music activity.

Cost-benefit framework

In economic terms all commercial activity, including live music, has a set of inputs that come at a cost. For live music these might include the performers, staging and venue. These types of inputs represent the direct costs of the goods and services that enable the event to happen. There are also opportunity costs associated with all activity, which in this instance are a way of accounting for any benefits that might be lost to a consumer who chooses to attend live music instead of doing something else with their time and money.

These costs represent an investment, which enables various commercial (and non-commercial) activities around live music to occur.

In turn, this activity impacts on various types of capital.

In this research we focus on the impact of live music activity on four states of human capital:

- **Physical capital**: the saleable assets created by the activity;
- **Human capital**: a person's health, psychological well-being, knowledge and skills;
- **Social capital**: an individual's extant levels of happiness, trust, and engagement with others, and;
- **Symbolic capital**: the extent to which the activity and its artefacts inspire an individual, or gives them something to aspire to.

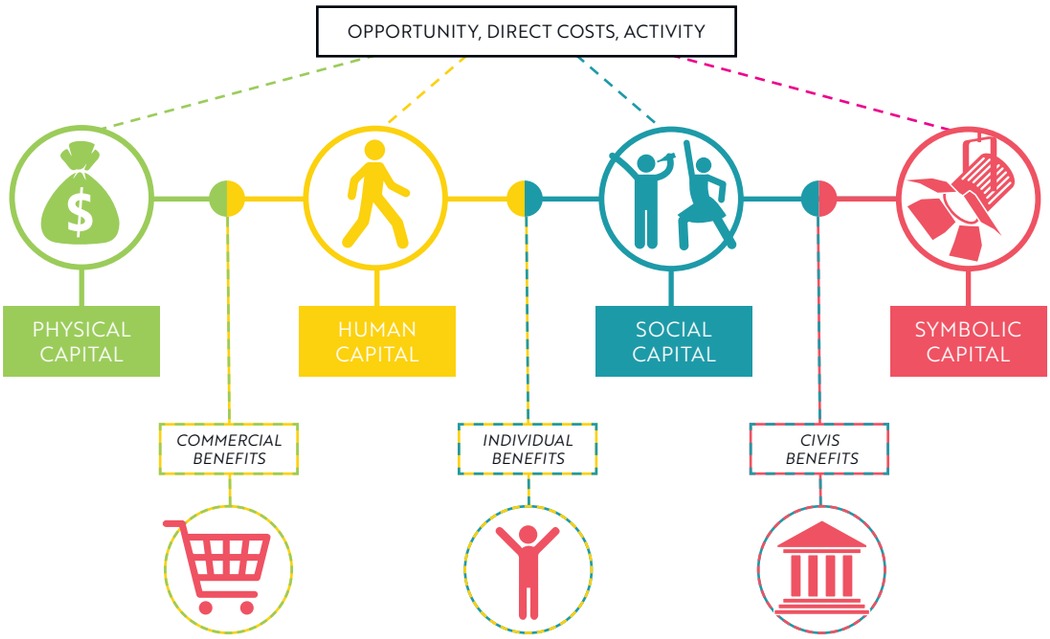
In order to measure the impact that live music has on these forms of capital it needs to be expressed in some way. This is because capital, of any kind, is a latent attribute. Capital can't be observed directly but only inferred; for example, through changes to an individual's health, productivity and well-being or changes to commercial and civic net worth.

Data collection

Data collection for this research comprised a survey of live music audiences across the Northern Territory and qualitative interviews with producers of live music.

FIGURE 01

COST / BENEFIT FRAMEWORK



Surveying was conducted at venues and festivals in the Northern Territory between July and September 2017. During this period **646 surveys were collected** from audiences in Darwin; Alice Springs; Tennant Creek; Katherine; Barunga; and other remote communities. The audience survey asked consumers to tell us what they spend money on when they attend live music. We also asked them about their engagement with live music and the benefits they might experience from this. We used this data to construct a satellite account for live music spending in the Northen Terrritory, detailed below. We also used this data to identify the individual benefits reported by consumers of live music and consumer sentiment towards live music in the Northern Territory.

The survey tool used for this research was developed for a national valuation of popular live music for the **Live Music Office** (Live Music Office, 2015) and has been employed in similar research for the City of Sydney, examining the value of music venues and arts-spaces (Muller and Carter, 2016a and 2016b). The survey tool has been refined through its use in these projects, notably to incorporate categories of costs and benefits identified by consumers in previous studies. This provides a point of comparison, particularly with the national report, and helps improve the accuracy of survey responses.

Qualitative interviews were conducted with **28 live music producers** who work across the Northern Territory. These anonymous interviews examined how the live music sector functions, from small venues through to national festivals, as well as the enabling and constraining factors on the sector. Qualitative content analysis of these interviews was used to identify common themes. These themes were compared with the audience survey data and standardised where possible. This data provides the basis for the account of the operation of the live music sector in the Northern Territory below. A strict data collection and management protocol was observed throughout the research process and all information collected is presented anonymously, and in aggregate, in this report.

To support our modelling we have also drawn on data from the **Australian Performing Rights Association** and ***Live Performance Australia's Ticket, Attendance and Revenue Survey***. These are used to provide an estimate of volume of attendance and to populate our satellite account.

06

LIVE MUSIC IN THE NORTHERN TERRITORY

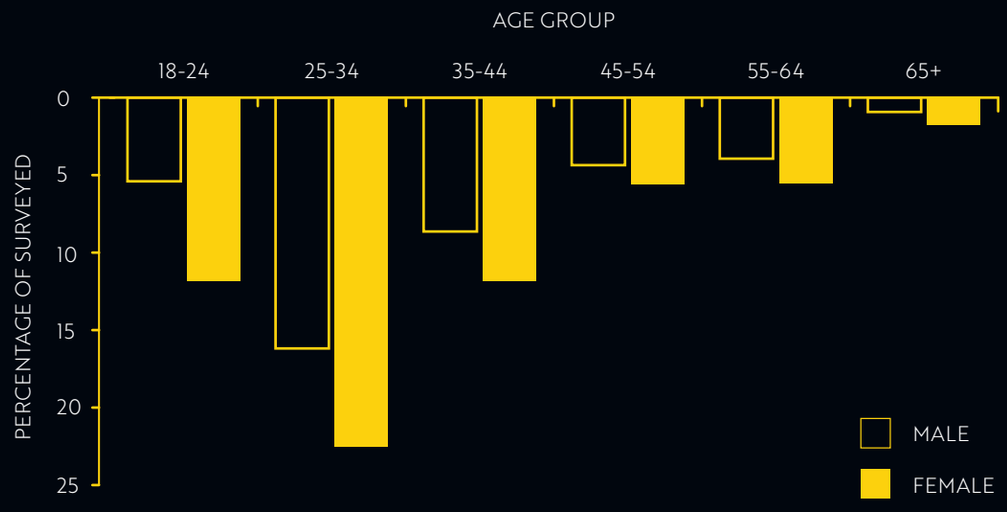
DEMOGRAPHICS AND VOLUME OF LIVE MUSIC CONSUMPTION

As noted above, audience data was collected from **646 attendees at live music events** across the Northern Territory. In order to ensure a representative sample we normalised this data by weighting it against the Australian Bureau of Statistics' most recent 'popular concert' attendance figures (ABS, 2015a). This process is known as post-stratification, which is a statistical method used to ensure the distribution of age and gender in our sample aligns with known national figures.

Without weighting, the p value of the Chi-squared test on gender distribution heterogeneity was **2.197e-08 ($p < 0.05$)**; similarly, the p value of age distribution was less than 0.05. Applying the post-stratification weights, the p values of age and gender distributions were greater than 0.1, indicating the weighted distributions are not significantly different to the actual population distribution.

FIGURE 02

SURVEY SAMPLE WEIGHTINGS BY AGE AND GENDER



A potential bias exists in this data due to the highly engaged nature of live music audiences and the crossover between audiences and producers noted in our previous national study (National Live Music Office, 2015). In order to provide a rigorous and defensible account of live music in the Northern Territory we tend towards overestimating costs and underestimating benefits where necessary. Because of this, all figures presented in this report should be understood as conservative.

Live music satellite account

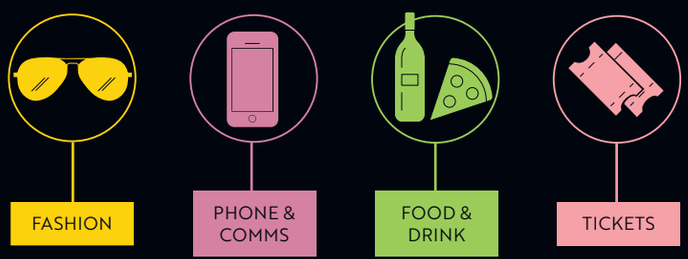
To identify expenditure on live music production in the Northern Territory we combined reported attendance and sales figures from Live Performance Australia with receipts data provided by the Australian Performing Rights Association. These provide a **reliable estimate of audience spending** on tickets through ticketing agencies and large venues through to door sales of smaller venues and one-off events.

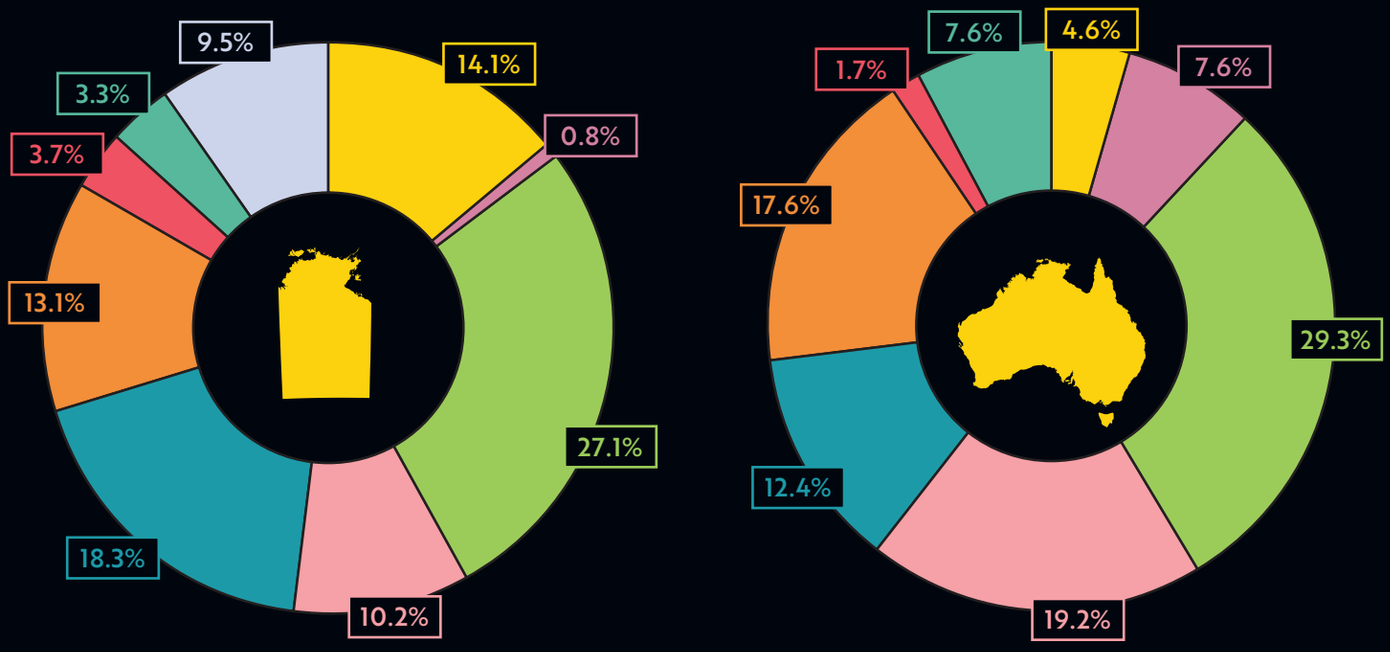
Using these figures as a starting point we used our survey data to develop a satellite account for live music spending in the Northern Territory. A satellite account is a tool used to measure economic sectors and industries not defined in national accounts (UNWTO, 2002). In our case it describes the type and amount of consumer spending on live music and related purchases. Building a satellite account is necessary as there is no official satellite account data collected for live music through either the Australian Bureau of Statistics or the Australian Taxation Office.

Based on our survey of audiences spending on live music in the Northern Territory is comprised as shown in **Figure 03**.

This breakdown of spending provides a baseline for the costs and benefits articulated in this report. This breakdown of spending differs significantly from the accounts of audience spending reported in our previous national survey (National Live Music Office, 2015). Notably audiences in the Northern Territory reported a lower percentage spend on ticket sales (19.2 per cent nationally) and a much higher percentage on accommodation (12.4 per cent nationally) and clothing (14.1per cent nationally). This correlates well with producer reports of the sector, particularly that ticket prices are lower in the Northern Territory than in other parts of the country. The higher percentage spend on accommodation likely reflects a higher number of interstate and overseas visitors attending live music in the Northern Territory as well as significant distances between population centres. Although the bulk of intrastate audiences were local approximately 9 per cent had travelled more than 100km to attend live music at the venues and events we surveyed. Of this 9 per cent approximately two thirds had travelled more than 300km.

LIVE MUSIC SURVEY





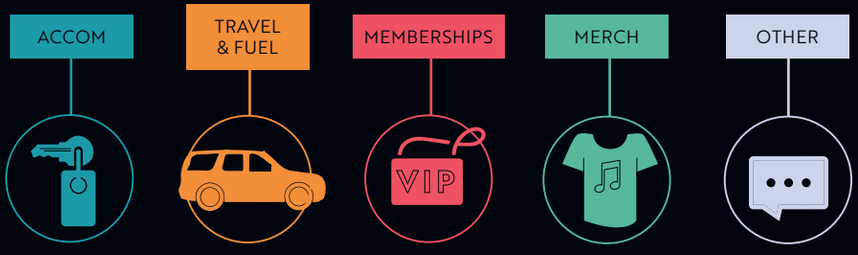
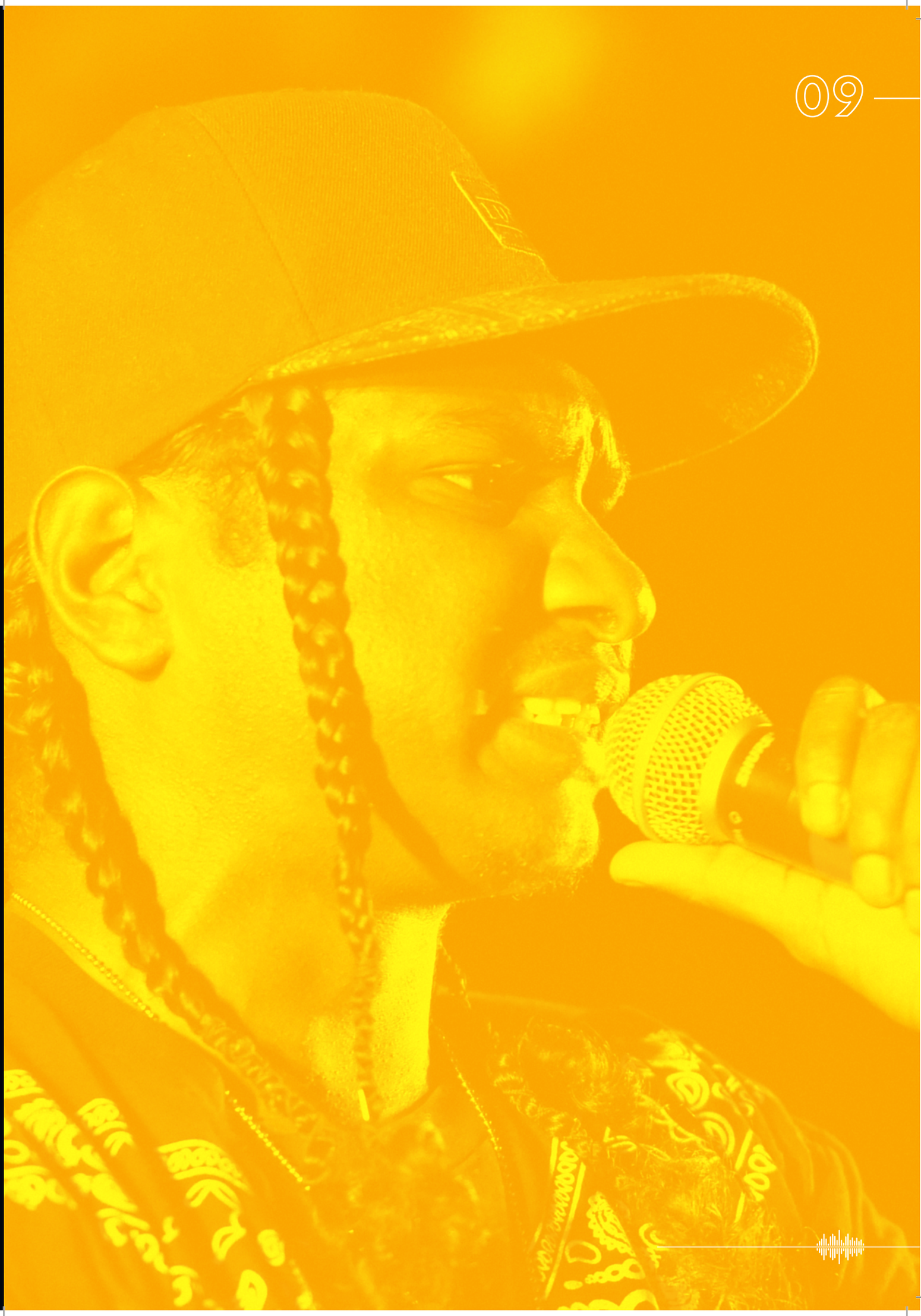


FIGURE 03

AUDIENCE SPENDING ON LIVE MUSIC IN THE NT



COSTS

The total social and economic cost of live music making in the Northern Territory and related enterprises in 2017 is estimated to be **$17.01 million**. This includes direct costs of $16.89 million and opportunity costs of $0.12 million. As discussed above, this comprises direct costs of labour, materials and infrastructure that enable live music in the Northern Territory as well as opportunity costs incurred by spending money on live music instead of other activities.

DIRECT COSTS

The sum of relevant live music tickets sales is estimated to be $1.72 million (APRA & LPA). Using our basic satellite account of consumption – wherein ticket sales are 10.2 per cent of consumers' live music expenditure – we estimate by extrapolation that in 2017 **consumers directly spent $16.89 million on live music** in the Northern Territory. These direct costs estimate the change to final demand that is attributable to live music. We have not included intermediate inputs like the cost of production or promotion of live music events as we assume audience spending largely accounts for these.

It's noted below in the ecosystem section, some live music promotion in the Northern Territory is subsidised by all tiers of government and this has created a market distortion in ticket prices. This type of subsidy represents, in economic terms, the shadow price of an activity (McKean, 1968). Shadow price has the effect of enlarging producer profits or reducing cost to consumers. For live music the shadow price is also impacted by activities including volunteering, sponsorships, grants programs and free concerts. Shadow price is recognised as a real stimulus to live music production but is difficult to systematically account for and is outside the scope of this enquiry. A more comprehensive accounting of shadow price in relation to live music is recommended as a direction for future research.

Opportunity costs

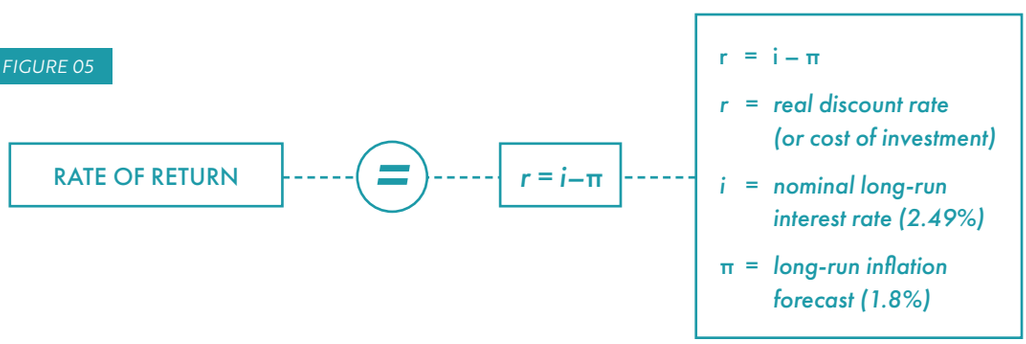
In order to determine the opportunity cost associated with live music in the Northern Territory we need to identify the value of the opportunity that is being foregone by audiences. There is obviously a range of alternatives that audiences might spend their money on, which might return both positive and negative yields. It's impossible to identify, and so model, all of these options. Instead we use long-term capital growth as a conservative basis for our estimates. Put another way, by choosing to spend money on live music, audiences are foregoing at least the interest they would have earned by putting the same money into a 10-year bond. The opportunity costs is therefore at least equal to interest forgone on this investment, see **figure 04**.

The rate of return is determined from the 10-year bond rate of 2.49 per cent, as at 1 October, 2017 (RBA, 2017). 1.8 per cent is the long-run inflation rate, based on the final year projection of the percentage change in consumer price index[2], see **figure 05**.

Therefore applying the long-run cost of investment of 0.7 per cent, the gross opportunity cost of live music making in the Northern Territory in 2017 is approximately $0.12 million.

FIGURE 04

FIGURE 05



THE LIVE MUSIC ECOSYSTEM IN THE NORTHERN TERRITORY

The live music sector in the Northern Territory is distinct from other states insofar as the **relatively small population, seasons and significant distances** between centres impact negatively on profits and tend to increase cost compared to similar operations elsewhere in the country.

VENUES

Much live music activity centres on Darwin and Alice Springs. There are limited primary purpose live music venues across the Territory and very few outside of these two larger population centres. Alongside this activity is a significant covers and corporate music scene, particularly in Darwin, that was noted as historically providing **high performance fees relative to the rest of the country**. This was described as contracting in recent years as large bands have been replaced by solos, duos and DJs who can provide entertainment services for less money.

Primary purpose venues appear stratified into small rooms (less than 150 capacity), mid sized rooms (up to approximately 300 capacity) and outdoor spaces that are regularly employed for large (up to 5000 capacity) events such as touring acts and festivals. This is a peculiarity of the Northern Territory live music sector as anywhere can potentially function as a venue at particular times of year. Because of this the bulk of activity occurring in the dry season in the North and winter in the south, with spring and autumn 'shoulders' increasingly built out. The small, and seasonal, population of the Territory appears a constraining factor on the sector, as do the seasons themselves. Among interviewees there was general consensus that these seasons had reached saturation in terms of the number of events that could be sustained. New entrants into this market are seen as needing to displace existing operators. There was some suggestion that quality of events and programming may provide a way to grow audience numbers or income from these events.

Barriers to venue operation and industry growth

Live music producers identified a strong band scene among highschool students that does not translate to ongoing activity once students graduate. Partly this is due to students moving away to pursue tertiary study and partly to limited opportunity to continue performing. The population of Darwin and Alice Springs dictates that emerging bands are not able to perform original music regularly. Furthermore, there are few suitable spaces to establish new venues in and the costs associated with licensing and outfitting a new venue are prohibitive relative to projected income. Unlike in larger population centres this means Northern Territory artists are typically unable to build up capital for recording and touring through gigging. For these reasons bands from the Northern Territory have typically relocated, at least part-time, to Melbourne or Sydney to pursue music careers.

There are limited commercial support services for artists, for example managers and publicists, based in the Northern Territory. It is possible for Northern Territory artists to access these services from interstate. Several interviewees commented that this may present a barrier to emerging bands being able to engage with industry interstate. More importantly it means that sector workers do not have immediate access to the types of informal and highly interdependent networks that are central to the operation of the live music sector in other parts of the country.

Motivation and benefits of operators

All commercial operators in the sector appear to fall under the Australian Bureau of Statistics' (2015d) definition of a small business, being a business with less than 20 employees, and the Australian Taxation Office (2017) definition of small businesses being those with less than $10million aggregate turnover. Income for businesses in the sector follows reported consumer spending and includes tickets, food and beverage sales and merchandise. For-profit producers interviewed for this research typically viewed live music as a loss-leader and/or drawcard that enabled them to generate a profit from other goods and services.

There are a significant number of not-for-profit organisations operating alongside commercial operators, typically incorporated with a board structure. Motivations for these organisations include using music as an education, health promotion and community development tool; a vehicle for expressing culture and identity; and as a form of justice diversion. Many of these motivations for working with live music are shared by for-profit operators.

Government funding appears central to the operation of live music in the Northern Territory with many venues and festivals

reliant on funding to meet their costs. There are some examples of producers seeking to diversify their income through sponsorship and philanthropic funding though this is limited across the sector.

Seasonal and workforce challenges

A significant portion of the workforce are contractors and/or part-time employees, who typically work several jobs or 'wear different hats' to sustain themselves. The workforce, and audience, is largely transient with many of the sector workers interviewed for this research having lived in the Northern Territory for less than five years. Representation of Aboriginal people in sector, rather than performing, roles is rare. Notably only two of the interviewees for this research were Aboriginal and there was a general consensus among those asked, that this reflects the nature of the sector.

The seasonal nature of live music work in the Northern Territory encourages many workers to move interstate for at least part of the year, and in some cases to relocate. Alternatively, workers who stay in the Northern Territory may end up working in unrelated fields, initially as a way to subsidise their income and then full-time if they find more stable work. In both instances this has the effect of exiting experienced workers who may be able to serve as mentors and disrupting institutional memory. Many interviewees commented that this could make retaining relationships with venues and workers in remote and regional parts of the Northern Territory difficult.

Touring in the NT

Touring into, out of and within the Northern Territory is costly and logistically complex. Very little touring activity through, or out of, the Territory appears commercially viable over the long term.

Small venues are typically unable to offer the types of guarantees that would make touring within and from outside the Northern Territory viable. The exception is artists who view touring as a kind of working holiday. Mid-size (300-500 capacity) venues are more able to accommodate interstate artists, but the margins are slim and interstate artists can be resistant to bearing the risks associated with this. Transport and accommodation are typically the greatest costs for this type of event, and these costs scale up depending on the number of performers. Several respondents commented that it can be cheaper to fly interstate artists in and out of Darwin on the same day, than pay accommodation.

Large scale, outdoor, events and festivals are the most obvious way to make touring into the Northern Territory a viable commercial proposition, but these come with increasing cost, complexity and risk. Production and staging for large touring gigs is typically hired from interstate and, while gear can be left in Darwin for a season to allay freight costs, is a major expense. Many outdoor events also require toilets and other amenities to be installed and several interviewees identified portaloos, specifically, as a significant expense.

Festivals are capable of dispersing these types of costs, and risk, across their programming. This is harder for promoters of one off concerts or events, even with a series of events across a season due to recurring production costs. Reflecting this, exclusive performance deals mean that adding additional dates around a festival or major event is not realistic.

Most successful tours in and out of the Northern Territory benefit from some degree of subsidy; typically through grant funding or direct investment from government to underwrite the costs of performers. In this regard, government funding has an important role to play in facilitating access to music and musicians that otherwise wouldn't tour to the Northern Territory. As per the cost-benefit analysis presented in this report, there is

FIGURE 06

ORIGIN OF LIVE MUSIC AUDIENCE

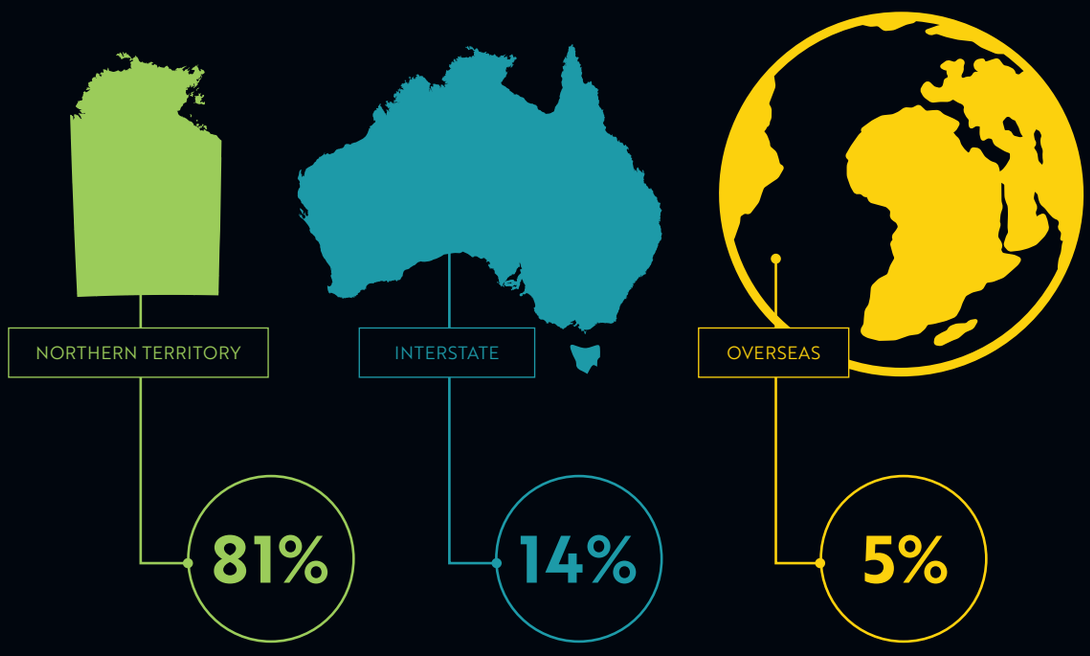
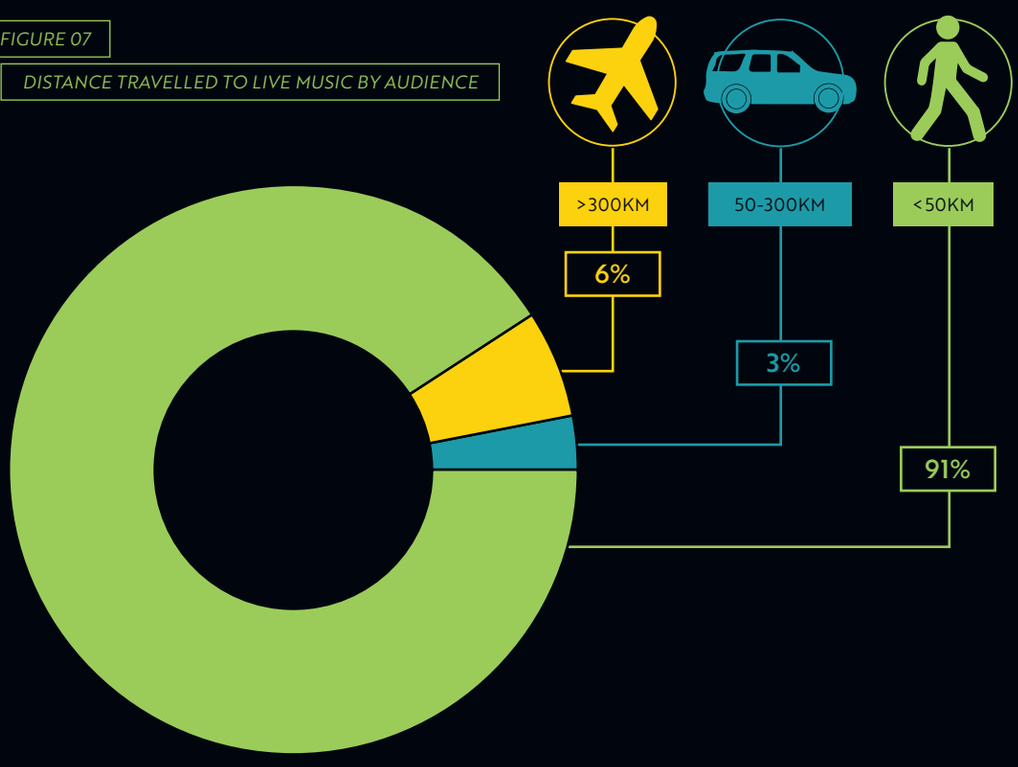


FIGURE 07

DISTANCE TRAVELLED TO LIVE MUSIC BY AUDIENCE



also clear evidence that direct funding of festivals and one-off events provides flow on benefits to Northern Territory businesses. However, this also creates a market distortion in the form of a shadow cost whereby audiences aren't always paying the true cost of the entertainment they're enjoying through ticket spending. This has a flow on effect by forcing promoters of tours that don't receive subsidisation to lower their ticket prices to meet market expectation. Several respondents observed that Northern Territory audiences seem unwilling to pay ticket prices above $40 and our satellite account data reveals audiences commit a lower percentage of their live music spending to tickets than nationally.

Many interviewees identified intra-territory touring circuits, particularly through remote and regional communities, as an area for growth. However, this is balanced against observations that this has been tried and that audiences in remote communities may not have the disposable income to make this type of circuit self-sustaining. Several interviewees commented on the success of Artback NT's now defunct music touring program, but that this success was closely related to the personnel involved and the program's ability to attract successive government funding. These two elements, along with an investment in training rather than equipment, were frequently cited as essential to creating a sustainable touring circuit throughout the territory. Interviewees constantly pointed to the need to train and appropriately pay workers in communities and to examples such as where music equipment has been left to rot in a shipping container because the person responsible for its use had changed or was no longer being paid.

Travel of consumers

Compared to our previous national survey (National Live Music Office 2015), audiences in the Northern Territory include greater representation of visitors from overseas (1.7% nationally) and interstate (6% nationally). Producers commented that the tourist market makes up a significant portion of live music audiences. There was a shared perception that, in Darwin, this market has been negatively impacted by an influx of workers to Darwin's Inpex Ichthys gas project. Producers in Alice Springs similarly noted a decline in tourists travelling through Alice Springs to visit Uluru.

Audiences also report travelling greater distances with 3 per cent of intrastate audiences travelling between 50 and 300km and 6 per cent travelling more than 300km to attend live music. The latter reflects the relatively low population and significant distances between population centres in the Northern Territory. However, both observations point to the value of live music as a source of regional competitive advantage. This correlates with producer accounts of live music audiences comprising a significant number of tourists. This is an obvious strength of the sector but could become a liability if tourist numbers decline.

Motivation and benefits of consumers

When asked about the perceived impact of attending live music, audiences reported overwhelmingly positive impacts on Health and Wellbeing; Social Connectedness; the Local Economy; and Community and Culture. This correlates with previous findings at a national level (National Live Music Office, 2015). These responses are best understood as an indicator of consumer sentiment around the value of live music in their community rather than proof that these benefits exist. The former is observable through the consumer surplus, reported below, while the latter is harder to quantify and outside the scope of this research.

Factors impacting audience attendance

Producers interviewed for this study widely reported a downturn in the Northern Territory's live music sector beginning as early as 2010. This is attributed to a range of factors including fewer tourists, an influx of fly in fly out workers and increased costs-of-living in Darwin. Data from Live Performance Australia (2016) does show a drop in revenue from ticket sales in the Northern Territory between 2010 and and 2012, but this has reversed and has been largely static for the past three years. Audience outlook towards attending live music was largely positive. 37 per cent of audiences reported they intended to see more live music in the next twelve months, with a further 52 per cent suggesting they would maintain their current attendance levels.

Audiences typically cited several factors affecting their live music attendance. The most commonly identified of these among the audiences we surveyed were free time, interest, disposable income and access. Surprisingly, given the distances travelled by many intrastate audiences, travel time and public transport were considered less important than stage of life / family commitments or social factors. A small number of respondents (3 per cent) identified safety concerns as affecting their attendance at live music.

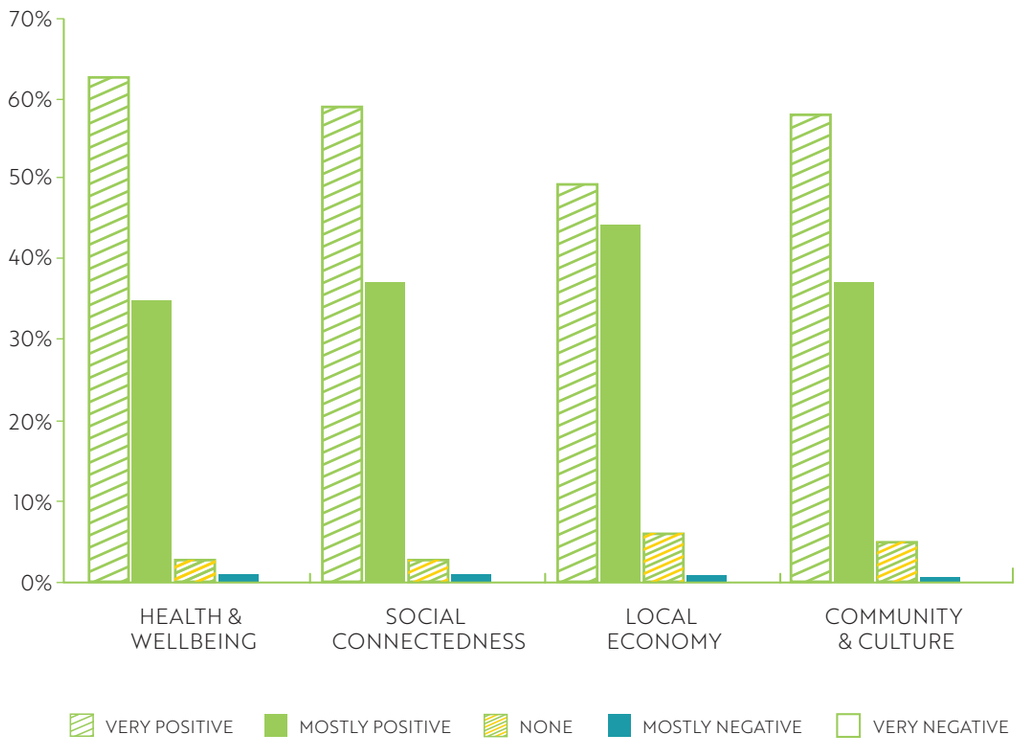


FIGURE 08

IMPACTS OF ATTENDING LIVE MUSIC

FIGURE 09

HOW OFTEN AUDIENCES ANTICIPATE ATTENDING LIVE MUSIC IN THE NEXT 12 MONTHS

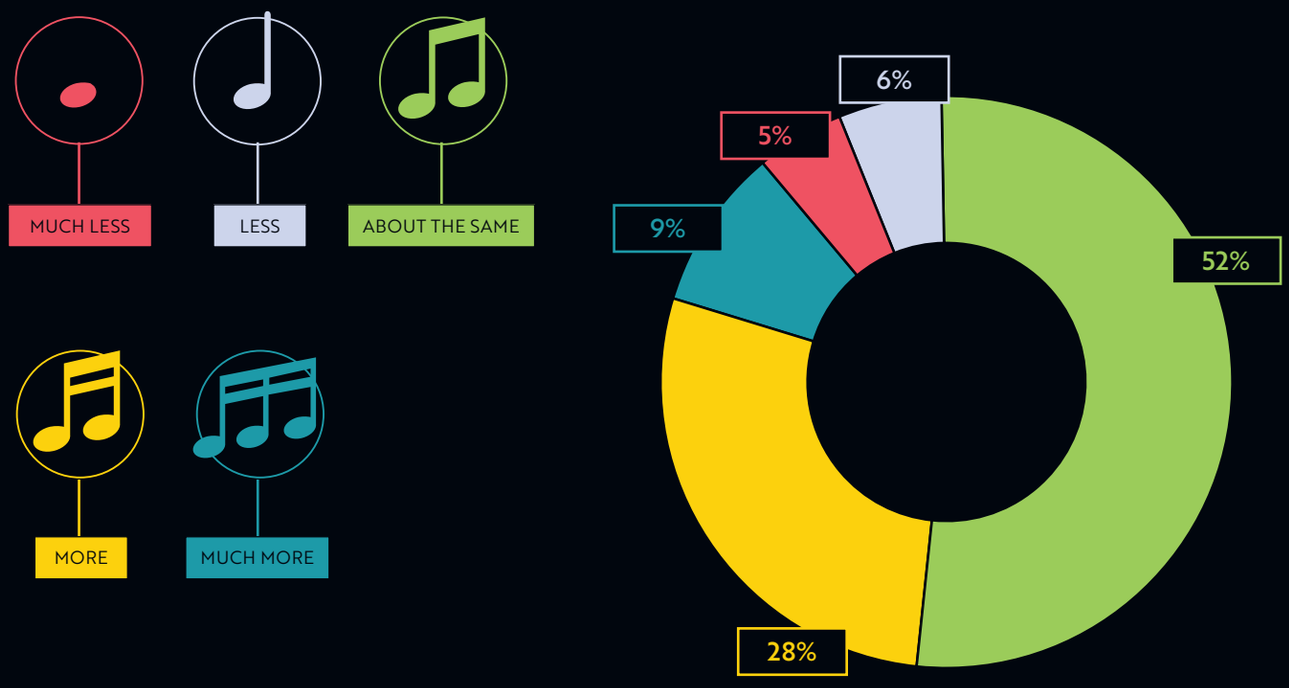
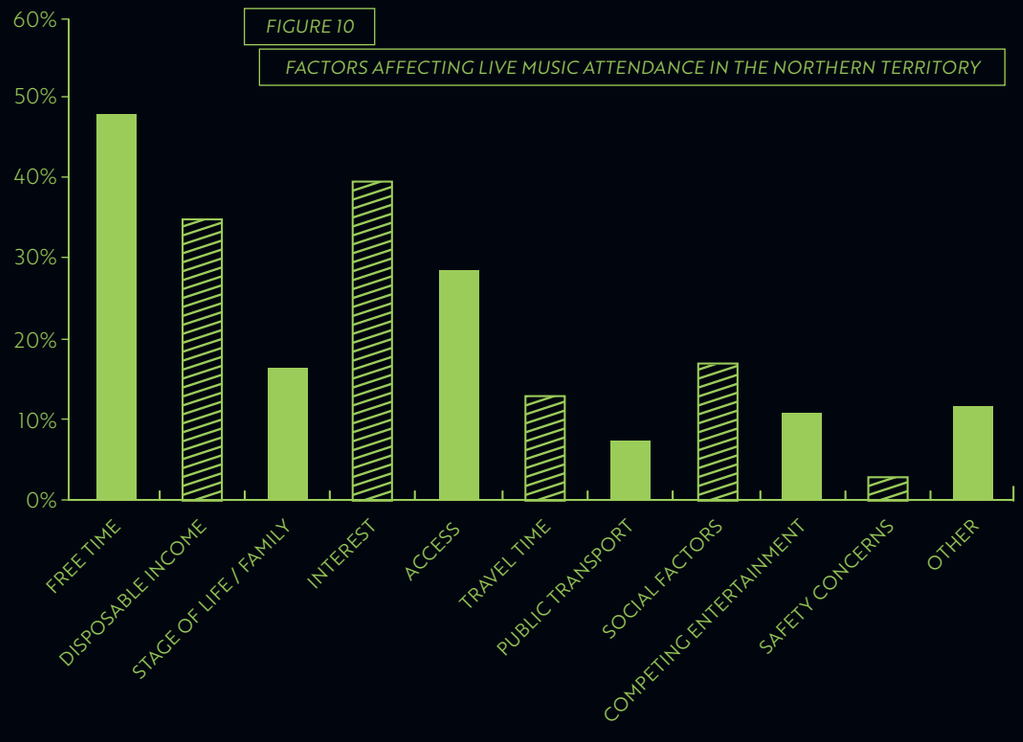


FIGURE 10

FACTORS AFFECTING LIVE MUSIC ATTENDANCE IN THE NORTHERN TERRITORY



BENEFITS

It is estimated that in 2017 live music making enabled at least **$74.74 million** worth of economically valuable benefits across the community in the Northern Territory. Using the Regional Input-Output Matrix (RIOM) model, it is estimated consumers' expenditure on live music increased output in the NT economy by $25.50 million. Increases in wages, rents, profits and taxes associated with the increase in production are estimated to deliver $4.91 million of additional value, or profit, to all NT based producers (compared to an alternative case where expenditure on live music ceased). Together with a productivity premium of $1.86 million, the sum of benefits returned to businesses as a result of live music making in the NT in 2017 was estimated to be $6.76 million.

In comparison, expenditure associated with live music making in the Northern Territory is further estimated to enable over **200 full-time and part-time jobs** worth $6.12 million and taxation revenue to all tiers of government of $0.73 million. Total civic benefits are estimated to be $6.85 million.

Using data from previous studies of live music in Australia, the additional value patrons of live music making in NT are likely to place on their live music purchases is estimated to be worth $61.14 million.

Commercial benefits

Expenditure allows us to measure the impact of live music making as it creates change in final demand producing economic impact on employment, output and gross national product. Economic impact includes the impact on intermediate goods and compensation of employees.

Analysis of the total impact, including indirect effects, is based on an understanding that industries, and individual companies within these industries, do not exist in a vacuum, but use each other's products to produce their own. Thus, an increase in demand for one industry's products leads to increases in the demand of other 'linked' industries. An input/output (I/O) representation of the economy is comprised of a set of industries which are linked by these I/O or intermediate relationships and by the final demand for each industry's output. The model used in this report is the Australian Regional Input-Output Matrix (RIOM) model.

RIOM is a closed model that applies the ABS Australian 2012-13 transaction tables (ABS, 2015) in conjunction with demand and employment information for each Australian State and Territory to model the impact of changes in demand on these regional economies, estimating changes in their output, employment and gross state product.

The transaction tables used in the model identify 60 industries across 19 industry sectors. For expenditure allocated to each industry sector, a unique multiplier impact is calculated estimating the impact on gross supply, output, gross state product (following the value-added method), employment, wages, imports and taxation.

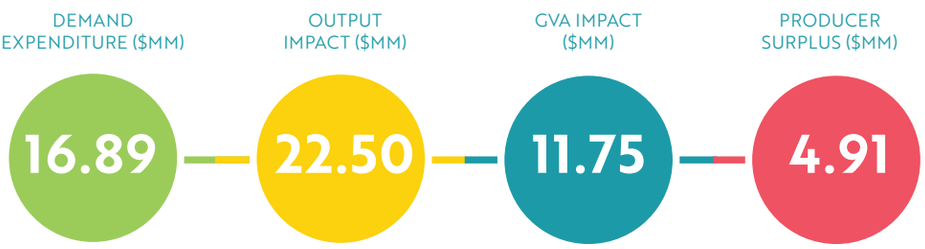
As previously noted, the producers and consumers of live music making in NT spent $16.89 million in 2017. This figure represents final demand in five main industry categories:

- **Accommodation**
- **Internet and Telecommunications**
- **Heritage, museums and the arts**
- **Retail Trade**, and
- **Road transport**.

Changes in employment and gross product in the Northern Territory (GTP) are proportional to changes in output. This follows the constant return to scale assumption inherent in I/O models. The estimated economic impact of direct live music making in the Northern Territory as well as related and motivated expenditure is shown in **figure 11** below.

FIGURE 11

ECONOMIC IMPACT OF DIRECT LIVE MUSIC MAKING



In RIOM each type of expenditure is allocated to a specific industry sector for the determination of economic impact. It is estimated that the impact of this expenditure is to increase output in the Northern Territory economy by $22.50 million. This includes the production of intermediate goods as well as imports of $8.74 million.

The Gross Value Added (GVA) to the Northern Territory economy is therefore $11.75 million, or 0.04% of the NT's Gross State Product (GSP) of $30.05 billion (ABS, 2015a).

Northern Territory firms also receive a net commercial benefit attributable to live music making. This is measured by producers' surplus, which is calculated as the difference between the price of goods or services, for example tickets, and the minimum amount the producer would be willing to accept. The difference between these figures is the benefit a producer receives.

Material inputs are already allowed for in our model, and we assume that the infrastructure (such as hotels) employed by live music typically exists regardless of live music making. Given this, we can calculate producer surplus by subtracting the cost of labour and taxes from the GVA. This leaves a theoretical surplus to firms of $4.91 million.

This surplus represents the fair return to providers of capital sufficient to cover the cost of investment and the opportunity cost of capital. However, this is only true so long as the marketplace remains static. Over the long-term, economic profits (profits in excess of the cost of capital) entice new operators into the market seeking a share of these gains. This has the effect of reducing profitability to normal.

The nature of this modelling means the $4.91 million is distributed amongst all NT firms who contribute intermediate or final goods and/or services that are consumed as a result of live music making in NT, and not just live music producers.

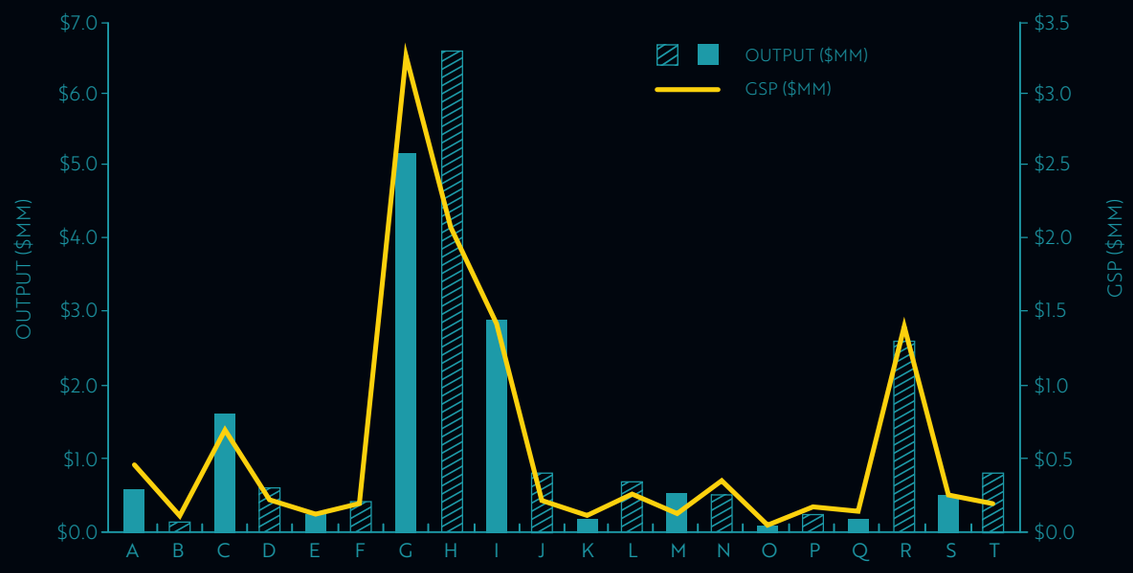
Using the same methods employed in our research for the Live Music Office (2015) we also estimate a net productivity benefit of $1.86 million. This places the total commercial benefit arising from live music in the Northern Territory in 2017 at $6.76 million.

Distribution of impacts

The following tables and graphs map the distribution of impacts across different industry groups. The largest contributing increases to the Output and GSP (GVA) are seen in the Accommodation (H) and Retail trade (G) sectors.

FIGURE 12

IMPACTS ON OUTPUTS AND GSP



A	Agriculture, Forestry & fishing	$0.55	$0.44
B	Mining	$0.13	$0.08
C	Manufacturing	$1.61	$0.69
D	Electricity, Gas, Water and Waste Services	$0.60	$0.21
E	Construction	$0.26	$0.11
F	Wholesale Trade	$0.41	$0.19
G	Retail Trade	$5.20	$3.25
H	Accommodation and Food Services	$6.60	$2.12
I	Transport, Postal and Warehousing	$2.90	$1.45
J	Information Media and Telecommunications	$0.80	$0.21
K	Financial and Insurance Services	$0.18	$0.11
L	Rental, Hiring and Real Estate Services	$0.67	$0.25
M	Professional, Scientific and Technical Services	$0.55	$0.11
N	Administrative and Support Services	$0.52	$0.34
O	Public Administration and Safety	$0.09	$0.04
P	Education and Training	$0.24	$0.17
Q	Health Care and Social Assistance	$0.18	$0.14
R	Arts and Recreation Services	$2.64	$1.41
S	Other Services	$0.52	$0.24
T	Ownership of Dwellings	$0.83	$0.19

TOTAL OUTPUT ($M)

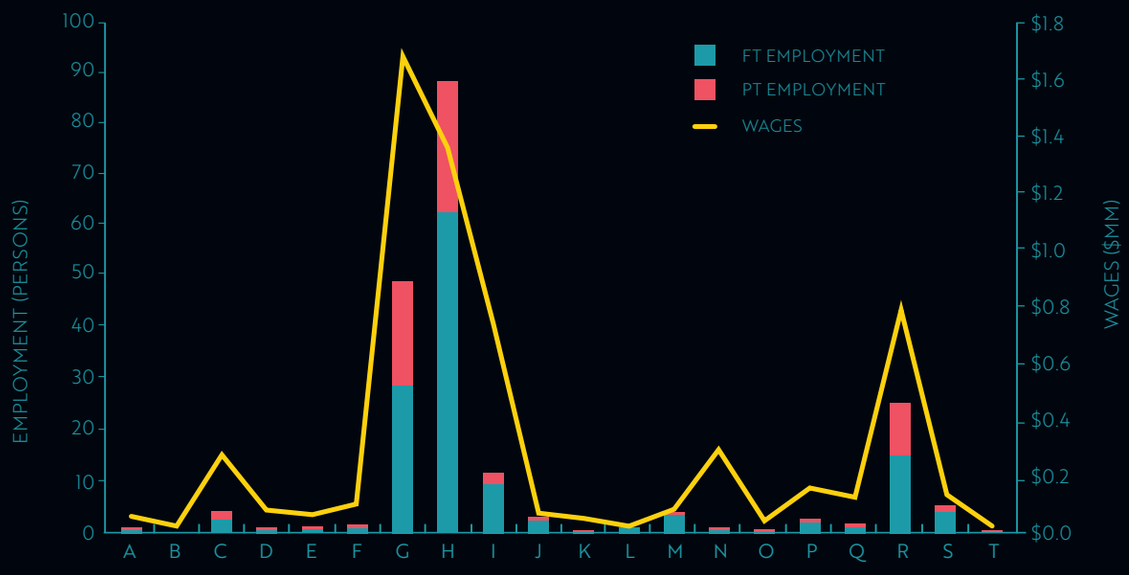
$25.5

TOTAL GSP ($M)

$11.75

FIGURE 13

IMPACTS ON WAGES AND EMPLOYMENT



TOTAL EMPLOYMENT (PERSONS)

206.02

TOTAL WAGES ($M)

$6.12

0.92	$0.06	Agriculture, Forestry & fishing	**A**
0.11	$0.03	Mining	**B**
3.98	$0.27	Manufacturing	**C**
1.28	$0.08	Electricity, Gas, Water and Waste Services	**D**
0.82	$0.05	Construction	**E**
1.44	$0.10	Wholesale Trade	**F**
49.25	$1.66	Retail Trade	**G**
88.60	$1.37	Accommodation and Food Services	**H**
11.93	$0.72	Transport, Postal and Warehousing	**I**
3.32	$0.07	Information Media and Telecommunications	**J**
0.36	$0.05	Financial and Insurance Services	**K**
1.89	$0.02	Rental, Hiring and Real Estate Services	**L**
4.19	$0.08	Professional, Scientific and Technical Services	**M**
1.22	$0.29	Administrative and Support Services	**N**
0.58	$0.04	Public Administration and Safety	**O**
2.83	$0.15	Education and Training	**P**
1.85	$0.13	Health Care and Social Assistance	**Q**
25.26	$0.79	Arts and Recreation Services	**R**
5.55	$0.15	Other Services	**S**
0.63	$0.01	Ownership of Dwellings	**T**

Civic benefits

In context of this study civic benefits represent costs avoided by government that they would otherwise be required to provide to ensure the same community-wide standard of living. We are able to quantify these as the number of jobs and taxes generated by live music expenditure. Other civic benefits, for example through volunteering, improved health and community outcomes and lowered rates of delinquency are acknowledged but require further research.

In the Northern Territory expenditure associated with live music making is estimated to generate approximately 206 jobs, 140 of which are full-time. Wages of $6.12 million are directly returned to households, with an equivalent welfare cost avoided by government. The estimate of taxes generated by live music expenditure is $0.73 million. Taxation receipts may not be directly proportional to the relevant investment of each tier of government. However, it is unlikely that the live music industry receives an equivalent re-investment from government; it could be argued that direct tax returns from live music making are used to finance other policy and social investments, such as hospitals and schools.

Individual benefits

Audiences who spend money to experience live music clearly derive some benefit from their transactions. Under a rational economic framework we assume that these consumers intentionally act to get the most usefulness, or utility, they can from spending resources like time and money. Inversely consumers are assumed not to deliberately spend money on things that reduce the amount of utility they receive.

What this means is that, just like producers, we expect consumers of live music to receive a gross benefit (or surplus) that is at least equal to the money they spend experiencing it. In this case, the $16.89 million households spend on tickets, food and beverages, and other purchases.

This spending on live music is assumed to be a revealed preference by consumers for spending on particular types of goods and services associated with live music expenditure. Determining the benefits to individuals associated with their engagement involves adding their revealed preferences to the contingent value of their live music consumption. It is found that consumers recognise a well-being surplus of $61.14 million that was directly attributable to having live music making in the Northern Territory in 2017.

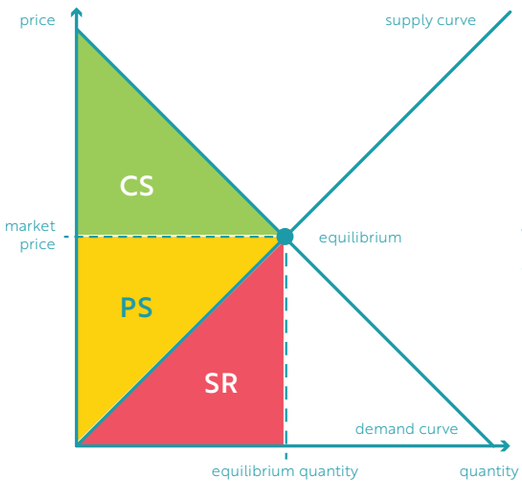


FIGURE 14

USE VALUE

V = CS + PS + SR

Where:

V = Value in use
CS = Consumer's Surplus
PS = Producer's Surplus
SR = Cost of Supply

Use value

Transactions occurring in markets are argued to be a social good because the exchange will only occur when both buyer and seller perceive value in the deal. For the vendor, this means making a profit; known as producers' surplus. Producers' surplus is estimated in the Commercial Benefits section of this report.

Consumer's surplus is the value above what they pay for a good or service, and assumes that welfare of both parties is improved. Markets for goods and services that do not meet this twin threshold do not occur naturally.

Consumer surplus is an important benefit in calculating the net costs or benefits of an activity, for it allows us to arrive at a use value of a product or service. The use value is the sum of the purchase price and consumer surplus.

To identify the value of consumer surplus we use a metric called willingness to pay (WTP). Using data collected from our national survey of live music consumers in 2014 (Live Music Office, 2015) and more recent work among live music audiences in Sydney (Muller and Carter, 2016), we have identified that live music audiences are willing to pay at least an additional 10 per cent of their annual income to maintain benefits they receive from live music that aren't quantified by their spending in this same period.

This methodology resulted in a conservative estimate of average user WTP at $938.07, or approximately $18 per week, with a standard error of $52.14 and a 95 per cent probability that the true average WTP lies in the interval $763.27 to $1,112.87. As 35.6 per cent of the NT population aged 18 years and over attended a live music event in 2017 (ABS, 2015), this reveals a gross consumer surplus of $61.14 million, or approximately four times their actual expenditure (not including shadow costs).

The gross value-in-use of live music making in the Northern Territory, being the sum of market price and consumer surplus, is therefore estimated to be $61.14 million.

A cautionary note

Expressions of willingness to pay essentially measure satisfaction. Willingness to pay is not the same thing as a desire to pay more. In terms of value returned to individuals or the community, increasing prices results in a zero sum as the consumers' surplus would be converted into producers' surplus for no net gain. We assume that the greatest community benefit can be realised by converting non-consumers of live music into patrons.

Even though ticket prices for live events are known to be relatively inelastic for current consumers, non-consumers are likely highly price sensitive. As such, non-consumers of live music would be even less likely to attend live music if prices increased where no new value was being added. Deliberating exploiting the presently high levels of the community's WTP—by either increasing prices or withdrawing subsidies—is likely to be counter-productive.

THE VALUE OF LIVE MUSIC IN THE NORTHERN TERRITORY, 2017

We estimate the community-wide value of live music making in the Northern Territory to be worth **$57.73 million in 2017**. This figure is the sum of the commercial, individual and civic benefits identified above and are shown below in **figure 15**. As this study is the first of its kind to be conducted in the Northern Territory this figure is necessarily larger than previous estimates on the value of individual festivals or parts of the sector. However, it is also likely an underestimation of the true value of the sector due to the limitations of available data and the methods employed by this study discussed above. Specifically, there are significant civic and individual benefits through activity such as volunteering that could not be taken into account. Further, music has an immense cultural value to the Aboriginal peoples of the Northern Territory that we have not attempted to quantify.

FIGURE 15

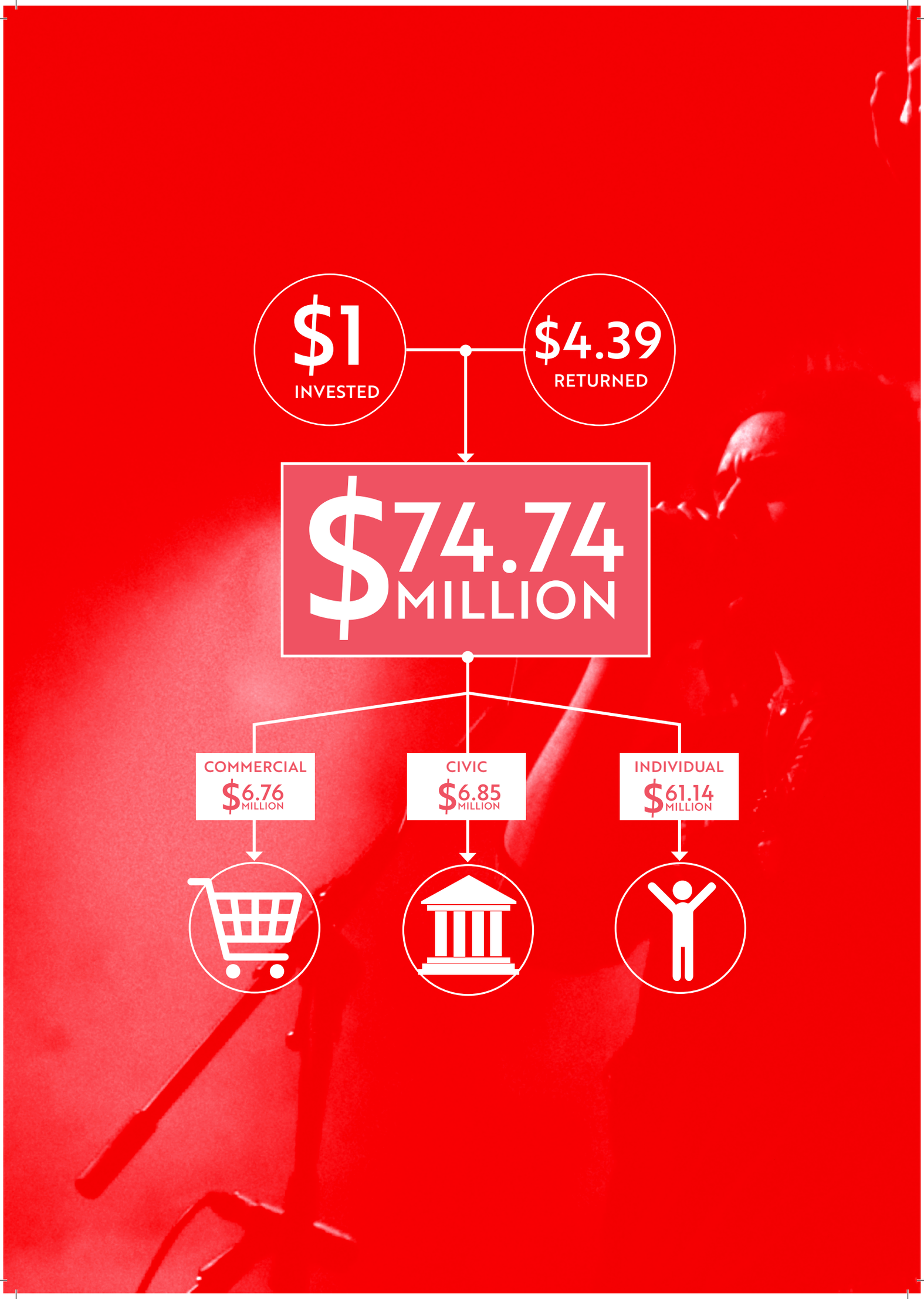
THE VALUE OF LIVE MUSIC TO THE NORTHERN TERRITORY, 2017

Costs			
Direct		16.89	
Opportunity		0.12	17.01
Benefits			
Commercial			
Producers' surplus	4.91		
Productivity	1.86	6.76	
Civic			
Employment	6.12		
Taxation revenue	0.73	6.85	
Individual			
Patrons	61.14		
Non-users	-	61.14	74.74
Net benefit			**57.73**
Benefit : cost ratio			**4.39 :1**

The sum of benefits returned to the Northern Territory community only has real meaning in context of the cost required to deliver them. For this reason we contrast the net value of live music making with the cost of inputs. This produces a benefit to cost ratio of 4.39:1. Put another way, for every dollar invested by the community in live music making the Northern Territory, over four dollars worth of value is returned.

The 4.39:1 benefit to cost ratio reported here is larger than our previous estimate of 3.1:1 for the whole of Australia in the Live Music Office (2015) report. This is attributable to the significantly lower percentage of audience spending on tickets in the Northern Territory. One explanation for this is that the distances travelled to attend live music are greater in the Northern Territory and that this results in audiences spending more on accommodation and other services. However, it is more likely that spending on tickets is lower in the Northern Territory because of government subsidies to ticket prices through direct and grant funding of events. This is recommended as an area for future research, but should not detract from our finding that audience spending on live music in the Northern Territory returns proportionally more benefit to the community than the national average.

In addition to its significant cultural value, live music making has a demonstrable economic value to the Northern Territory. Our analysis has shown that, because the benefits derived from live music making exceed its costs, the operation of the sector is efficient and supports the common good.


$1
INVESTED
$4.39
RETURNED
$74.74
MILLION
COMMERCIAL
$6.76
MILLION
CIVIC
$6.85
MILLION
INDIVIDUAL
$61.14
MILLION

CONCLUSION

This study contrasts the net value of live music making in Australia with the cost of inputs. It can be seen that for every dollar invested by the community, over four dollars are returned. A Cost benefit analyses of this type within the live music landscape has never before been conducted in the Northern Territory and the findings of this study speak for themselves. If you could guarantee a minimum annual return of 400 per cent on every dollar commercially invested, then people would sit up and notice. These results reveal a number of outcomes that should be of particular interest to the community and place a firm value on the live music sector across the Northern Territory.

This analysis has shown that, because the external benefits of live music making in the Northern Territory exceed the social costs, the outcome is in fact efficient. We conclude that those who invest their time and money in enabling live music making in the Northern Territory are supporting the common good.

Hopefully this report can educate readers to the economically real and significant value of live music making in the Northern Territory. Although there are a number of limitations to the findings that would benefit from future research, the opportunity now exists for decision makers in both industry and government to leverage this framework for continual improvement in the marketing and delivery of their services. We also see this report as a strong framework for guiding future policy direction to support the live music sector across the Territory.

“ONE DOLLAR INVESTED EQUALS FOUR DOLLARS RETURNED”

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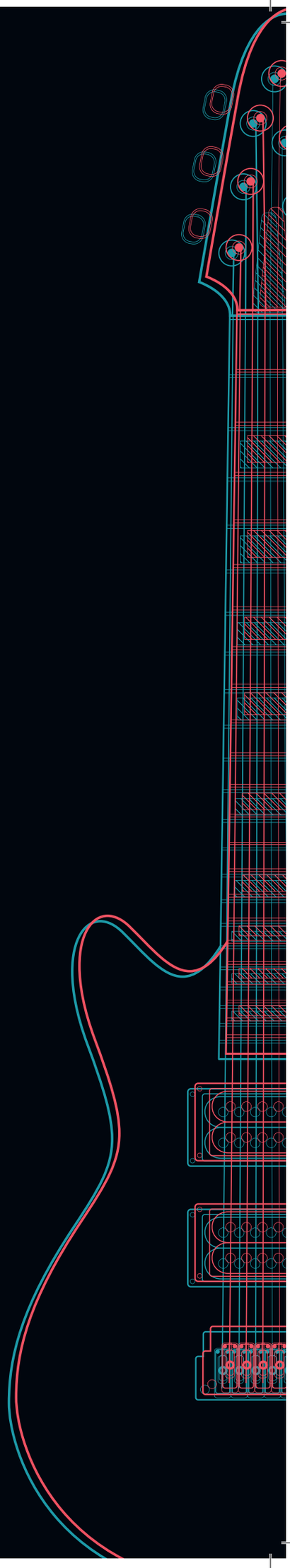

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