THE ECONOMIC & CULTURAL VALUE

OF

LIVE MUSIC

IN AUSTRALIA 2014

UNIVERSITY of TASMANIA

LIVE MUSIC OFFICE
LIVE AND LOCAL

CREATIVE CITY SYDNEY
CITY OF SYDNEY

CITY OF MELBOURNE

Government of South Australia
Arts SA

EXECUTIVE SUMMARY

This report provides a valuation of the economic, social and cultural contribution to the Australian community of the Australian Live Music Industries. The valuation employs a cost-benefit analysis framework that draws on a national survey of consumers; interviews with venue owners and operators; and currently available sector data.

Cost benefit analysis considers the benefits that flow to the broader community from money spent on a particular activity, in this case live music. Cost benefit analysis is commonly used by governments to evaluate the merits of policy choices and assumes that any positive change in public welfare enabled by an activity is a benefit that might otherwise need to be met by the community.

Our research has identified that live music spending in Australia delivers at least a 3:1 benefit-to-cost ratio. This means that for every dollar spent on live music in Australia, $3.00 worth of benefits are returned to the wider Australian community. We conservatively value this contribution at approximately $15.7 billion for 2014.

This figure is larger than previous valuations of the Australian live music industries due to our more detailed model of consumer spending and a more complete accounting of the various ways live music benefits the community.

A key finding of our research is that producer accounts of live music spending, such as ticket, food and alcohol sales, represent less than half of actual spending on live music attendance. Valuations of the live music sector that rely on producer data, by extension, are likely to under-represent the sector's economic inputs and outputs. Similarly, accounts of the live music industry that do not consider civic and individual benefits that flow from live music activity are likely to under-value the contribution that live music makes to our community.

To avoid the possibility of presenting inflated figures, we have, wherever necessary, overestimated costs and underestimated benefits. This has resulted in a conservative, but rigorous valuation that may increase with the availability of additional data. For example, we were unable to identify the impact of volunteering on the live music sector due to a lack of information on the prevalence and scope of volunteer activity.

The $15.7 billion of benefit identified by this research comprises approximately $2.1 billion of commercial benefits, $3.2 billion of civic benefits and $10.4 billion of individual benefits.

Commercial benefits comprise of the profits generated by live music producers and a net positive impact on productivity at work reported by live music attendees.

Both producer and consumer sentiment, signalled by their three year outlook, was largely positive, with a majority of venues and 36 per cent of consumers expecting to be more or much more engaged with live music. The main reasons consumers indicated they were less likely to attend live music in the future were related to stage of life and access to venues. These two issues appear to be related and may represent a section of consumers who are aging out of the market or whose ability to attend live music is impacted by family responsibilities.

Civic benefits include an estimated 65,000 full and part-time jobs enabled by spending on live music and taxation revenue to all tiers of government.

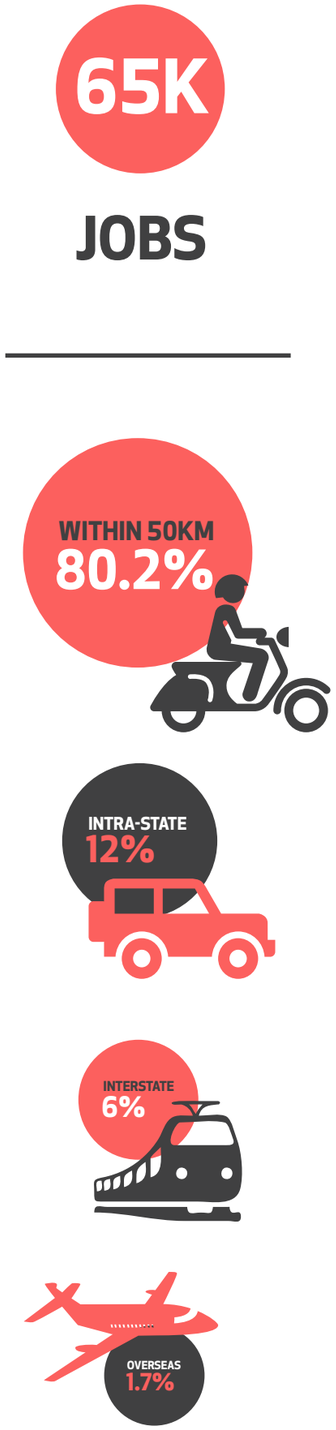
Live music is also identified as a source of regional competitive advantage. Approximately half of the survey respondents reported travelling inter- and intra-state to attend live music, with one in five travelling overseas. This suggests there is a strong case for investment of public funds into live music making.

Individual benefits describe the in-use-value of live music as identified by our survey respondents. This incorporates consumers revealed preference, or expenditure, and a contingent valuation of their live music consumption. Contingent valuation is a commonly used technique to quantify, in economic terms, benefits to consumers such as improved wellbeing that are not directly sold. The contingent valuation reflects the range of intangible benefits reported by consumers and producers that they feel are associated with experiencing live music. These included benefits such as greater social capital and improved health-and-wellbeing.

There are a number of limitations to these findings that would benefit from future research. In particular, further research is needed to identify:

- The costs and benefits of volunteering in the live music sector.
- The benefits non-users of live music might receive from live music activity in their community, and how they value this.
- The impact of live music on productivity.
- A satellite account for live music, that comprehensively details how live music making directly impacts on the Australian economy.

This research has demonstrated that live music activity in Australia delivers significant benefits to the Australian community. Investment of time and money in the live music sector delivers an impressive return and is clearly producing a public good. We encourage decision makers in both industry and government to reflect on these findings and consider how they might continue to improve and develop the live music sector in Australia through funding, better regulation and small business support.



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LIVE MUSIC

IN AUSTRALIA 2014

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INTRODUCTION

The value of live music is intuitively understood by the millions of Australians whose lives are enriched by time spent on sticky floors, in muddy fields and at concert halls. Music is an experiential medium and live performance is its most elemental form. Trying to articulate this intuitively understood value, however, quickly reveals complexity as live music informs identity, leaves longstanding memories and helps create meaning across communities and cultures.

Australia's live music sector is similarly complex, comprising multiple, interrelated industries whose contributions to the economy need to be accounted for. Within a single venue, or at a single performance on any given night, there is likely to be several interdependent commercial interests in play. The motivation and operation of these businesses is poorly understood due to a lack of available fine-resolution data.

The original contribution of this study is to locate the discrete values of live music activity and, for the first time, illustrate the dynamic ways in which they interact.

We depict how producers and consumers use their time and money to enable live music making in Australia. This affects individual and community states of physical, human, social, and symbolic capital, which is converted by users into a set of economically valuable outputs that impact upon the welfare of society. Our model adopts the best-practice principles of cost and benefit analysis to estimate the value of the unique cluster of activities associated with live music making in Australia. As this report includes the first known valuation of live music as an economic, social and cultural ecosystem within a defined region, we also identify several new directions for future research.

Among its many attributes, ***live music*** events build communities and social connections; provide economic value, employment and career paths; and help create vibrancy, buzz and atmosphere in a precinct.

RACHEL HEALY, JOINT ARTISTIC DIRECTOR
ADELAIDE FESTIVAL 2017- 2019

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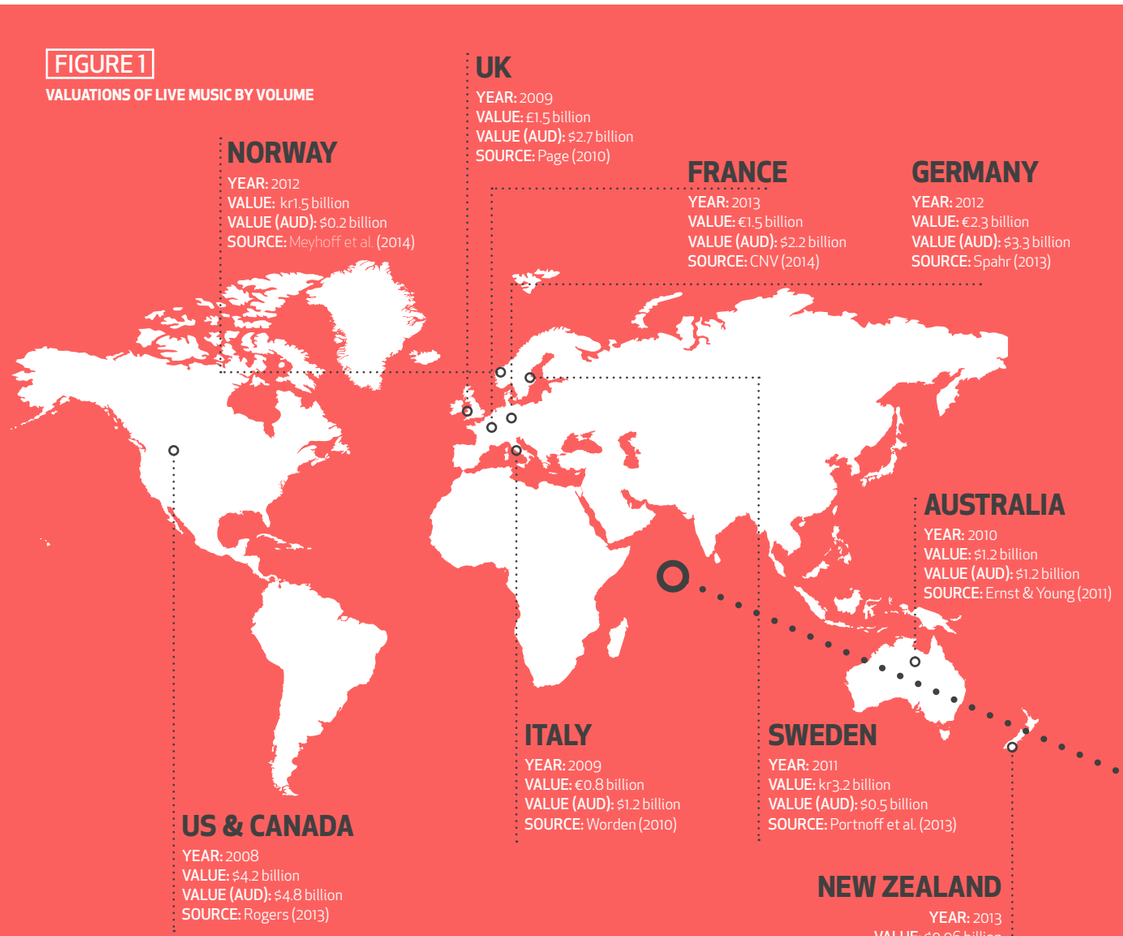
VALUING LIVE MUSIC

Economic Value

Several attempts have been made to place a dollar value on Australian and international live music industries. These studies typically focus on statements of economic impact, such as the increases in spending and employment associated with participation and patronage (CNV, 2014; Deloitte Access Economics, 2011; Ernst & Young, 2011, 2014; Meyhoff, Krohn, & Sjøvold, 2014; Newton, 2012; Page, 2010; Portnoff, Nielsén, & Sternö, 2013; Pricewaterhouse Coopers, 2014; Rogers, 2013; SGS Economics, 2011; Spahr, 2013; Worden, 2010).

The headline figures reported by many of these studies describe the volume of live music transactions such as ticket sales and, in some cases, related consumer spending on food and beverages. The figures for each country in Figure 1 show transaction volume figures for Australia and other live music markets as reported in a number of recent studies.

FIGURE 1
VALUATIONS OF LIVE MUSIC BY VOLUME



Problematically, such valuations inevitably overstate the fiscal benefits of the sector by failing to account for the substitutability of profit. For example, when an internationally touring artist who brings their own production visits a region, the volume of ticket transactions is a poor proxy for community benefit, when the vast majority of profits are enjoyed off-shore.

The more robust of these analyses apply the widely accepted economic input / output method to estimate the economic contribution of the live music making industries. For example, in Australia, the gross value added (GVA) to the economy by live music was estimated to be $652 million (Ernst & Young, 2011). More recently in the United Kingdom it was estimated to be £789 million (UK Music, 2014), or AU$1,466 million. Related approaches to valuing live music (or, more broadly, the creative industries) include the works of (Ansell & Barnard, 2013; Bakhshi, Freeman, & Higgs, 2013; Higgs, Cunningham, & Bakhshi, 2008; Higgs, Cunningham, & Pagan, 2007; Sigurðardóttir, 2011; Williamson, Cloonan, & Frith, 2003).

All of these findings need to be treated with similar caution, as they rarely account for the fact that if consumers didn't spend their money on live music, they would spend it on something else. Counter-methods that might mitigate this such as opportunity costing and/or equilibrium modelling are not evident in the studies cited. Consequently input / output analysis *on its own* is largely discredited as a basis for decision making in policy (Australian Bureau of Statistics (ABS), 2010b; Gretton, 2013).

More importantly, nearly all of the economic modelling of live music carried out to date is limited by a reliance on producer estimates of expenditure. In most industrial settings—such as in the recorded music industry where a finite number of producers operate via a limited, densely clustered number of sales channels—this is an acceptable method of data collection. Live music, on the other hand, is not a well-defined (or easy to define) industry.

By asking a sub-set of producers for the motivating data, analysts are *de facto* limiting the scope of their work to live music activities that fit within their own conception of what constitutes live music and/or convenience sample. For example, the French study cited in Figure 1 was limited to the pop and jazz sectors; the North America research covers only the top 200 grossing tours, excluding festival and club events; and the Australian, UK and Italian figures only reference peak body or specifically licensed or registered venues (Laing, 2012).

Many of the recent Australian studies on the economic impact of live music are affected by similar limitations. Newton (2012), for example, argues that lists of live music venues used by Ernst and Young (2011) and Deloitte Access Economics (2011) did not align with those identified in NMIT's annual 'State of Play' reports; and that the modelling conducted by Ernst and Young and Deloitte likely understated the scale of live music activity. This was attributed primarily to differences in sampling methods, which may have been compounded by the 2011 reports relying on static venue lists generated from the Australian Performing Rights Association's (APRA AMCOS) dynamic database. To address his concerns over sampling accuracy, Newton and 100 volunteers undertook a census of Melbourne venues that, combined with data from Live Performance Australia, produced a much more accurate estimate of the scope of live music activity in the city. A key limitation of Newton's research however is that it is only descriptive of volume and does not attempt to value the economic impact.

Another significant issue is one of scope, in that the sum of live music consumption in the economy is invariably under-reported, not reported or not available to producers. Licensed venues and ticketing agencies are often the only source of data available to economists working in this space, and these have been shown to provide an incomplete picture of live music motivated transactions (Newton, 2012). Additionally producers are unlikely to be able to reliably account for the secondary markets that exist within their venues, such as ticket scalping and merchandise sales.

LIVE MUSIC BY VOLUME

> It's a community experience which is important in the development of modern culture. The health of live music is a sign of an energetic, inspired and fulfilled community.
>
> CATH HARIDY - ARTIST MANAGER

Cultural and Social Value

Several researchers have argued strongly for the need to account for social and cultural benefits alongside the economic contributions of music and other art forms (Arts Council England, 2014; Behr, Brennan, & Cloonan, 2014). Although difficult to measure directly, these benefits are real and may manifest in a number of ways including improved productivity, a greater sense of wellbeing and increased social capital (Carnwath & Brown, 2014).

The link between performing arts experiences and health and wellbeing is well established (Carnwath & Brown, 2014). Music in particular has been shown through clinical research to effect immunological response, although more research is needed into how this functions (Fancourt, Ockelford, & Belai, 2014). Music is often used as a mood manipulator by advertisers and retailers (North, Hargreaves, & McKendrick, 1999), and people frequently use music for 'emotional self-regulation' (DeNora, 2000). Active engagement with music has been shown to increase positive perceptions of self, which in turn leads to greater motivation, manifesting in turn in enhanced self-perceptions of ability, self-efficacy and aspirations (Hallam, 2005, 2010). It has also been demonstrated that school-age students who participate in musical activities are more socially active, and engaged in conversation with adults (parents, teachers *et cetera*) more readily. This suggests that the higher social functioning of musically active students is likely to result in higher self-esteem and, therefore, increased motivation and self-efficacy (Broh, 2002; Lillemyr, 1983; Sward, 1989). One implication of this is that experiencing live music may also have a positive benefit on productivity.

The benefits of live music participation are not limited to young people and students. Live music performance has been shown to alleviate apathy and improve quality of life among dementia subjects (Holmes, Knights, Dean, Hodkinson, & Hopkins, 2006); and an experiment into the effects of the participation of seniors in an ongoing chorale group observed that positive health outcomes occur when older individuals are in situations that provide meaningful social engagement with others (G. D. Cohen et al., 2006). Similarly, a long-term Swedish study into the correlation between attendance at cultural events (such as live music performances) and survival rates has further shown that those who frequently attend such events live longer than those who rarely attend (Bygren, Konlaan, & Johansson, 1996). Indeed, in a follow-up report, it was stated that "People who rarely attended such events ran a nearly 60 per cent higher mortality risk than those attending most often, after adjusting for a range of possible confounders" (Johansson, Konlaan, & Bygren, 2001). The same study examined the impact of music-making on mortality rates, with those who rarely participated in music-making registering a slightly higher mortality rate than those who sometimes participate (Konlaan, Bygren, & Johansson, 2000).

Live music has also been recognised as contributing to a sense of community, meaning and attachment to place (S. Cohen, 1999; Gallan & Gibson, 2013; Long, 2014). Live music is a communal event that incentivises like-minded individuals to gather, and "provides a sense of community that is not present when listening to music alone" (Black, Fox, & Kochanowski, 2007). The informal nature of the industry "blurs the business-social divide," (Watson, 2008) levelling the importance placed on social and business relationships to an equal standing. This is thought to be true of cultural and creative industry workers in general; as the long hours, socialising with other creative workers and the spill over between work and play generates a strong community (Pratt, 2000).

A societal risk of such attachments is that the reliance of music scenes on social and subcultural capital can lead to systems of exclusion, as music scenes take on aspects of tribalism, which might make participation in these scenes difficult for outsiders (Harrison, 2010). It is generally argued, however, that the negative effects of group dynamics generated by music scenes are outweighed by the positive contributions to a sense of community and belonging that live music events create (Garrett, 2010; Hoffman, 2012; Welch et al., 2014).

The cultural value of live music, and in particular the venues where live music occurs, can be observed in debates around cultural policy, licensing regulations and the residential development and gentrification of inner-city suburbs where live music occurs (Gibson & Homan, 2004; Holt, 2013; Homan, 2010; Lobato, 2006; Shaw, 2009). There is clear evidence that cities such as Austin, Manchester and New Orleans, benefit from their reputation for live music through tourism and related flowthrough to their local economies (Flew, 2008; Homan, 2008; Long, 2014). Place-based symbolic capital encourages migration of consumers and producers, as the appeal of a vibrant live music scene draws creative individuals and music lovers from other regional and urban centres.

In Australia the cultural value of live music production to governments has been signalled through the establishment of live music precincts and agent of change legislation (Homan, 2008, 2011b). Protests around the closure of iconic and long-established venues demonstrate that sites of live music performance and heritage are of some value to audiences of live music, and probably 'non-users' alike. For example, the SLAM rally of 2010 to protest the closure of the TOTE (a popular live music venue) remains the biggest cultural protest in Australia's history (Walker, 2012). How this might be quantified in the context of Australia's live music sector has not been sufficiently articulated, however, recent research is beginning to provide insight into how this can be achieved.

Six years into a longstanding investigation into the value of the live music industries in the UK, Behr, Brennan and Cloonan (2014) argue that qualitative data is essential for providing a complete and nuanced picture of the value of live music, and in particular "those areas in need of support" (p,3).

Such studies highlight, if tacitly, that the cultural, social and economic values of live music are interdependent, insofar as the cultural value of live music creates and depends on its economic value, and both are underpinned by its social function (Sedita, 2008). They also demonstrate a maturing understanding of the complexity of the markets for aesthetic labour, and recognition that such complexity cannot always be captured or represented through traditional economic analysis. Earl's (2001) argument that economic analysis of live music in Australia has not sufficiently engaged with the measurable and quantifiable, cultural and social benefits remains undisturbed by the passage of more than a decade. Their at best limited engagement with qualitative producer and consumer accounts of live music activity represent an incomplete picture of the live music sector.

At what cost?

Much existing research argues convincingly that live music makes a valuable and positive contribution to the community. However there is almost no acknowledgement, let alone critical consideration, of these otherwise reasonable benefits in light of the financial and social costs of production. These include basic cost of producing live music as well as broader costs borne by society such as those associated with regulation, policing, hearing loss, excessive drinking, use of illicit substances and violence.

Acknowledgment of these costs is implicit, if mostly unquantified, in research examining the night time economy, where the discussion tends towards issues of costs, regulation and enforcement (Flew, 2008). Yet such studies rarely distinguish live music from recorded music venues, and are silent on the attribution of cause in this regard. For example, despite evidence of higher incidences of intoxication and drug use among nightclub and electronic music event patrons (B. A. Miller, Byrnes, Branner, Voas, & Johnson, 2013; P. Miller et al., 2014), similar studies of live music patrons are insufficient and inconclusive. One study in Glasgow identified the use of recorded music could both positively and negatively influence patron behaviour (Forsyth & Cloonan, 2008), but did not examine primary use live music venues. A small number of authors have also discussed the health risks associated with noise exposure, alcohol consumption and illicit drug use at music festivals from the perspective of treating doctors (Hutton, Ranse, Verdonk, Ullah, & Arbon, 2014; Zhao, Manchaiah, French, & Price, 2009); however population data describing the prevalence of these risks among live music patrons is scarce.

In Australia government and community concerns over the safety of after-dark audiences have been expressed through changes to licensing regulation aimed at curbing anti-social behaviour and alcohol-related violence. Live music venues suffer from *de facto* inclusion in regulatory reforms designed to address high-risk drinking behaviour such as violent assaults (Homan, 2010), even though a growing body of research suggests there is no empirical evidence that identifies live music as a cause of such behaviour (Giesbrecht, Bosma, Juras, & Quadri, 2014; Green & Plant, 2007).

Other costs identified, but again unquantified in the available literature, relate to business and labour practices (see, for example, Cloonan (2011)). The aesthetic labour of musicians is also acknowledged as precarious and dependent upon significant investments of social and cultural capital (Hracs & Leslie, 2014). Relatively few performing musicians are able to generate a living wage from their music, with the median income for practicing musicians in Australia calculated at just $7,200 per year (Throsby & Zednik, 2010). This suggests that a significant proportion of the costs of live music performance may be subsidised by other industry.

A critical appraisal of the impact of live music must therefore connect the economics to the increasingly understood cultural significance of the activity, without glossing over the financial and social costs of production. This report addresses many of these limitations through robust and holistic primary data collection and the ultimate application of a cost-benefit framework to deliver a more complete picture of the economic, social and cultural value of the live music industries in Australia.

3

METHODOLOGY

At the heart of any public investment decision is this basic question—does the planned investment lead to a net increase in social welfare?

Cost-benefit analysis (CBA) is now the government-preferred approach to evaluating policy choices (Office of Best Practice Regulation, 2005). A cost-benefit approach is required to identify the real and opportunity costs associated with expenditure, as well as the benefits that flow, including economic impacts, preferences and avoided costs.

Within the cost-benefit approach, avoided cost theory, as it is applied here, assumes that any positive change in public welfare enabled by live music is a benefit that would otherwise need to be met by the community in order to maintain the status quo. Cost benefit analysis is not, however, a static valuation technique. It is a comprehensive means of comparing one alternative to another, and therein lays its limitations for the purpose of stand-alone valuation.

Foremost, this study is concerned with estimating the value of live music making in Australia. This value is defined here to be *the sum of benefits enabled over a fixed period*—in this case, one year. Net value (benefits less costs) is only relevant to the extent that it allows demonstration of the process of how value is created, and to make observations about allocative efficiency.

As a result, the *substitutability* of the costs and benefits is less material than it would be in traditional cost-benefit analysis. This is because this study is not overtly comparing live music with anything, even if the use of the value arrived at as a basis for future comparison is not precluded. In valuing live music, this study is only measuring the gross contribution to the community. The hypothetical presumption that other events might fill the void left by no live music in Australia should not alter our understanding of its value at the point in time in which it is measured. After all, valuation is not a zero sum game.

The *impact* of time, too, becomes largely moot. As this study intends to value live music making in Australia only on the basis of 2014 performances, there is no need to speculate on the return that the community might achieve in future years. This is counter-intuitive to the theories of both price and cost-benefit analysis, which are highly sensitive to prospective cash flows and the psychological baggage that comes with them.

Nonetheless, this does not give licence to be casual with estimates and, if anything, imposes a higher standard of rigour, especially in regard to the risk of *over-estimation*. A conservative position is therefore adopted by tending, where necessary, to overestimate costs and underestimate benefits.

The other refinement made here to the cost-benefit approach is the offer of a more complete illustration of the value creation process. This is because the notion of value is relational, in that the meaning and activity of creating value emerges from a complex set of interconnected social relations (Ollman, 1976). Any study of value should therefore focus on the process by which value is created and ascribed (B. K. Johnson, Mondello, & Whitehead, 2007).

The cost-benefit approach also demands particular attention to identification of the recipients of benefits and the bearers of costs. In developing and applying a framework for a complete economic assessment of the value of an activity, it is therefore necessary to quantify the costs and benefits to:

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

Iterations of this model have been successfully applied to economy-wide valuations of public goods such as sport and physical recreation, volunteering, the Arts, and major events; and has been subject to academic peer-review (Muller, Cameron, Jameson, Robertson, & Grafton, 2013; Muller, Harvey, Arthur, & McMahon, 2014).

The intention of this process is to divert attention from market economics to social economics. While social economists have developed rigorous methodologies for articulating value—the most accepted of which is contingent valuation—what practitioners have lacked up until now is a theoretical paradigm to consistently locate and describe the costs and benefits of any given activity (or ecology thereof).

Cost Benefit Framework

Every activity has its inputs, which come at a cost. These include the direct costs of the goods and services, which enable it, and the costs of consumption that might otherwise have been spent on alternative activities (for example, the cost of the time an individual spends performing the activity, or the otherwise fallow infrastructure they demand for its performance).

From the investment of these current and opportunity costs, we create the activity; in this instance, the live music making ecosystem. This, in turn, may alter (for better or worse) one or all of the four states of human capital in the individuals and society participating in it.

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

Capital of any kind, however, is a latent attribute. As such, it does not so much defeat measurement; it is just that its measurement is highly arbitrary and, for economic purposes, somewhat pointless. It is only when the potential of capital is **expressed** that it has utility, or *value*. Tangible and measurable expressions of capital include changes to an individual's health, productivity and well-being; and, changes to commercial and civic net worth (through enlarged (or diminished) profits and/or avoided (or added) costs).

This report therefore uses:

- financial analysis to scope the activity and estimate, among other things, total turnover
- revealed preference and travel cost methodologies to arrive at estimates of direct and opportunity costs
- economic impact analysis to estimate productivity and commercial outcomes
- qualitative analysis to describe the 'capital' outcomes of live music activity and their relationship to inputs and outputs, and
- contingent valuation to describe the perceived use and non-use values of the collective enterprises.

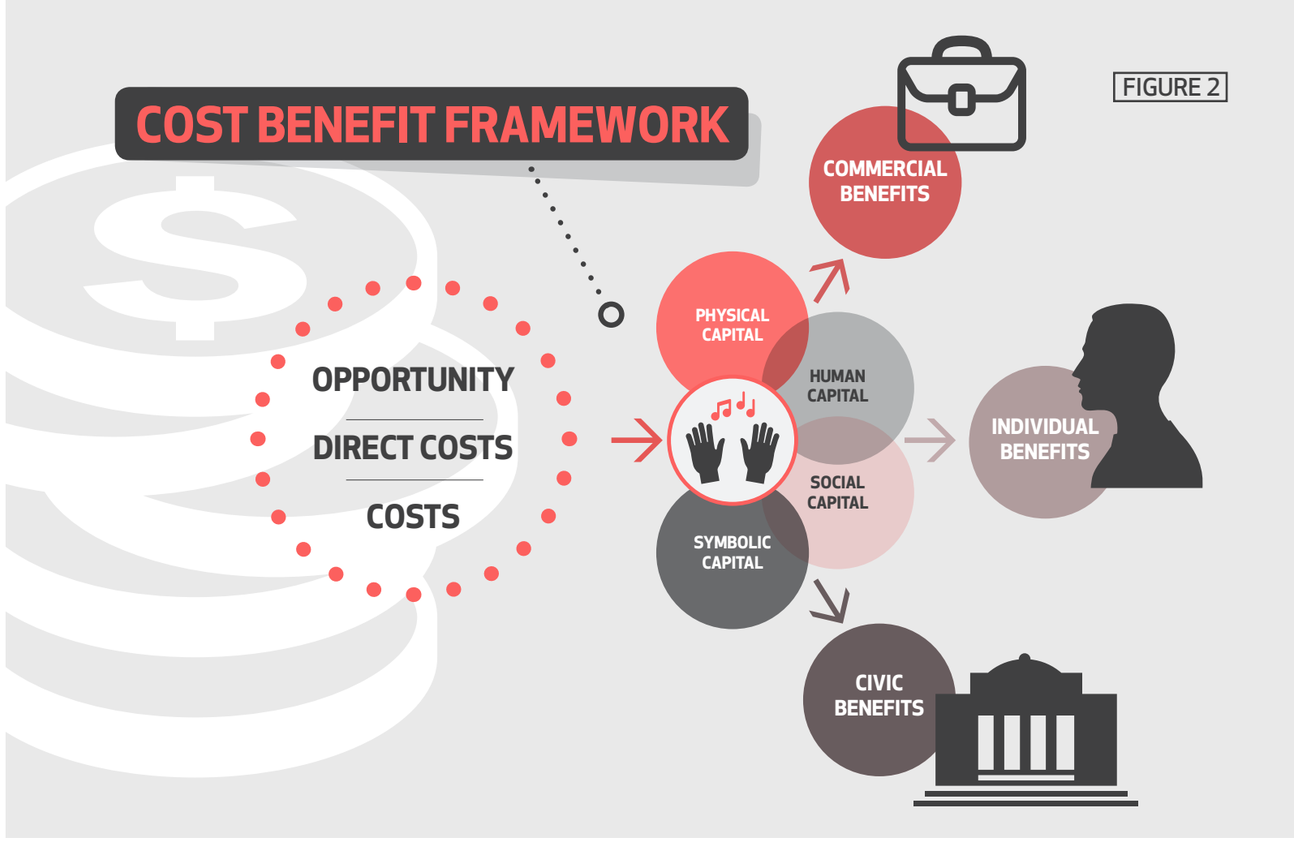


FIGURE 2

Data collection method

The analysis carried out in this study was supported and validated by:

- face-to-face interviews with live music venue owners / operators in Sydney, Melbourne, Adelaide and Hobart (n=38), and
- an online survey of live music consumers (n=1488).

Both primary data collection instruments are appended to this report.

Our data revealed factors affecting live music attendance and the various ways live music benefits and is valued by respondents. We were also interested in the commercial experience of producers, particular their motivations, operation and factors influencing their success or otherwise. Qualitative analysis of this data contributes to an understanding of how the market for live music operates, what the enabling and constraining factors may be, and where government and industry might invest most effectively.

Design of the qualitative survey and interview questionnaire was informed by the literature discussed earlier and refined by a focus group of industry professionals, local government staff and music researchers. Rather than imposing a limited set of criteria, the survey and questionnaire comprised mostly open-ended questions in an attempt to allow themes to emerge from the respondents' answers. A strict data collection and management protocol was thus employed to ensure that no venue or consumer could be identified during data analysis.

Qualitative content analysis was used to identify categories or themes that allowed similar responses to questions to be grouped together. After a first pass categories were refined and, where possible, categories were standardised across the producer and consumer data. Responses to questions were then sorted into these categories to allow for comparison and discussion. This qualitative analysis is not intended to be generalizable; instead, it describes the type and volume of responses we received to the questions posed.

4

LIVE MUSIC IN AUSTRALIA

Although generous in discussing their motivations, commercial risks and business models, a number of the live music venue owners and operators were reluctant or unable to fully disclose their cash flows. This reflects the commercially sensitive nature of financial data in an industry that is still largely cash-based and the often-complex commercial arrangements within each venue. Several venues, for example, could not provide an accurate account of what was paid to artists, as they allowed the bands to set and collect a door charge, or leased their space to independent promoters. Similarly, approximately half of the venues interviewed identified staff working in their venues that they didn't pay directly. Given the issues previously identified with producer data under-representing the economic impact of live music, we therefore prioritised the consumer survey as a more reliable source of economic data for the purposes of this cost benefit analysis.

The online survey was promoted directly to consumers through several industry and peak-body mailing lists and media stories in national and local news outlets. Participants were allowed to self-define live music; although, certain prompts were given to encourage a holistic consideration of the activity. This ensured that our definition of live music was consistent with community, rather than the researcher's, understanding of the term.

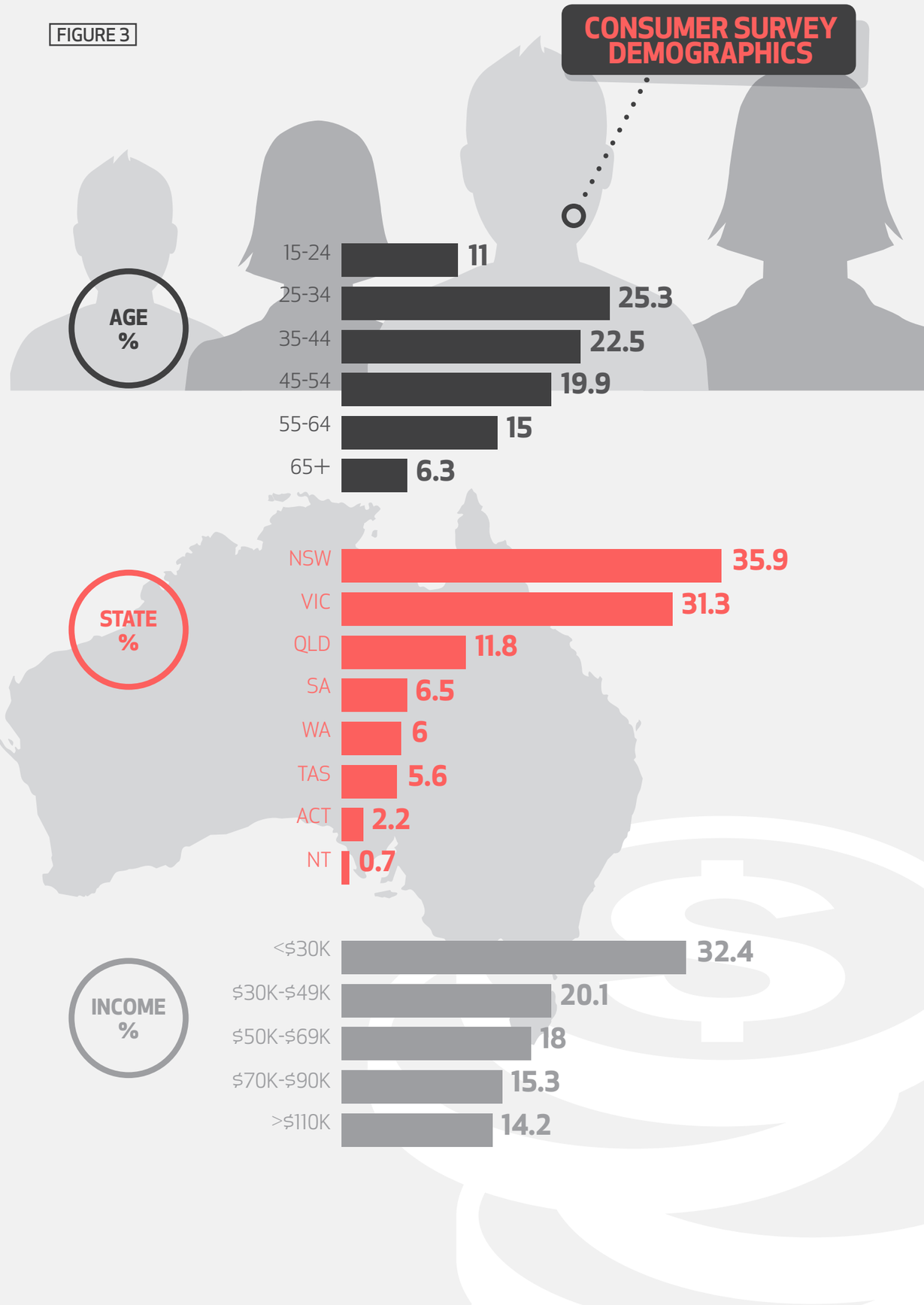
Of the survey respondents who provided demographic data, 64.2 per cent identified as male and 35.8 per cent as female. A breakdown of respondents by age, State of residence and reported income is shown in Figure 3. Respondents reported attending a range of live music, from hip hop and metal to classical and jazz, though there was a strong overall preference for popular music.

In order to normalise the sample we therefore weighted it against the most recent ABS data on "popular concert" attendance (ABS, 2010a).

TABLE 1 **SURVEY SAMPLE WEIGHTINGS BY AGE AND GENDER**

AGE	MALES	FEMALES
15 to 24	2.20	3.81
25 to 34	0.92	1.60
35 to 44	0.88	1.52
45 to 54	0.88	1.54
55 to 64	0.85	1.48
Over 65	1.23	2.14

FIGURE 3



After applying the weights shown in Table 1, sample age and gender were not significantly different from the population distributions of popular music patrons (p>0.05 for both).

This weighting does not account, however, for other potential biases introduced by our sampling method. For example, a disproportionate number of respondents were highly engaged by live music, and performing musicians and industry workers were potentially over-represented. This is probably explained by our use of industry mailing lists to promote the survey and the self-selecting nature of respondents. Therefore although this outcome was anticipated and unavoidable due to the resource limitations of this study, it is not possible to draw conclusions about the population-wide volume of live music attendance from this data set.

Disregarding then our sample's self-reported *volume* of expenditure on the basis it was highly likely to be skewed (an issue we will resolve shortly); it was nevertheless found that individuals' *patterns* of spending shown in Figure 4 were not significantly affected by their level of engagement (hours per month; p>0.05). In other words, regardless of how much an individual reported spending on live music – whether it be $100 or $10,000 per year – there was not a statistically significant difference in their patterns of spending.

We can therefore vastly improve our understanding of the scope of individuals' investment in their live music interest by commencing to build a **satellite account.**

Live music consumption

A satellite account is a standard developed by the United Nations to measure the size of economic sectors that are not defined as industries in the national accounts (UNWTO, 2002). Live music is one such industry not discretely defined by the Australian Bureau of Statistics or, indeed, any central economic agency.

The consumption of live music actually involves making a variety of related purchases across already defined sectors. In this study we have measured a number of these, including:

- Accommodation and related expenses
- Clothes and fashion
- Food, beverages and other consumables
- Fuel, motor vehicle and travel expenses
- Memberships and subscriptions
- Merchandise (including CDs, programs, memorabilia)
- Phone, internet and communication expenses, and
- Tickets / entry fees

The composition of this spending is shown in Figure 4 and applied as a baseline to a number of the estimates of costs and benefits that follow. Of interest is the fact that producer accounts of live music making—even if perfectly conducted—will only ever capture ticket and food and beverage sales. It can be seen in Figure 4 that these categories describe **less than half** of the actual economic impact of live music making in Australia.

A small number of respondents identified other incidental expenses that are not included in our reckoning included child care, car parking, hearing protection, cameras and multimedia devices and recreational drugs. These are recommended for consideration in future live music satellite accounting, as is the inclusion where relevant of the instruments of live music production.

Live music attendance

As noted below, our survey captured highly engaged consumers whose attendance at live music events is unlikely to be representative of the broader population. Modelling the costs and benefits of live music in Australia depends, however, on an estimate of the volume of activity consumption. In other words, how much and how often do people consume live music?

In the absence of representative primary data, we have drawn on attendance and sales figures from Live Performance Australia (LPA) and the Australian Performing Rights Association (APRA AMCOS) (Ernst & Young, 2011, 2014), and cross-referenced it with data from the ABS (2010a, 2014a).

FIGURE 4

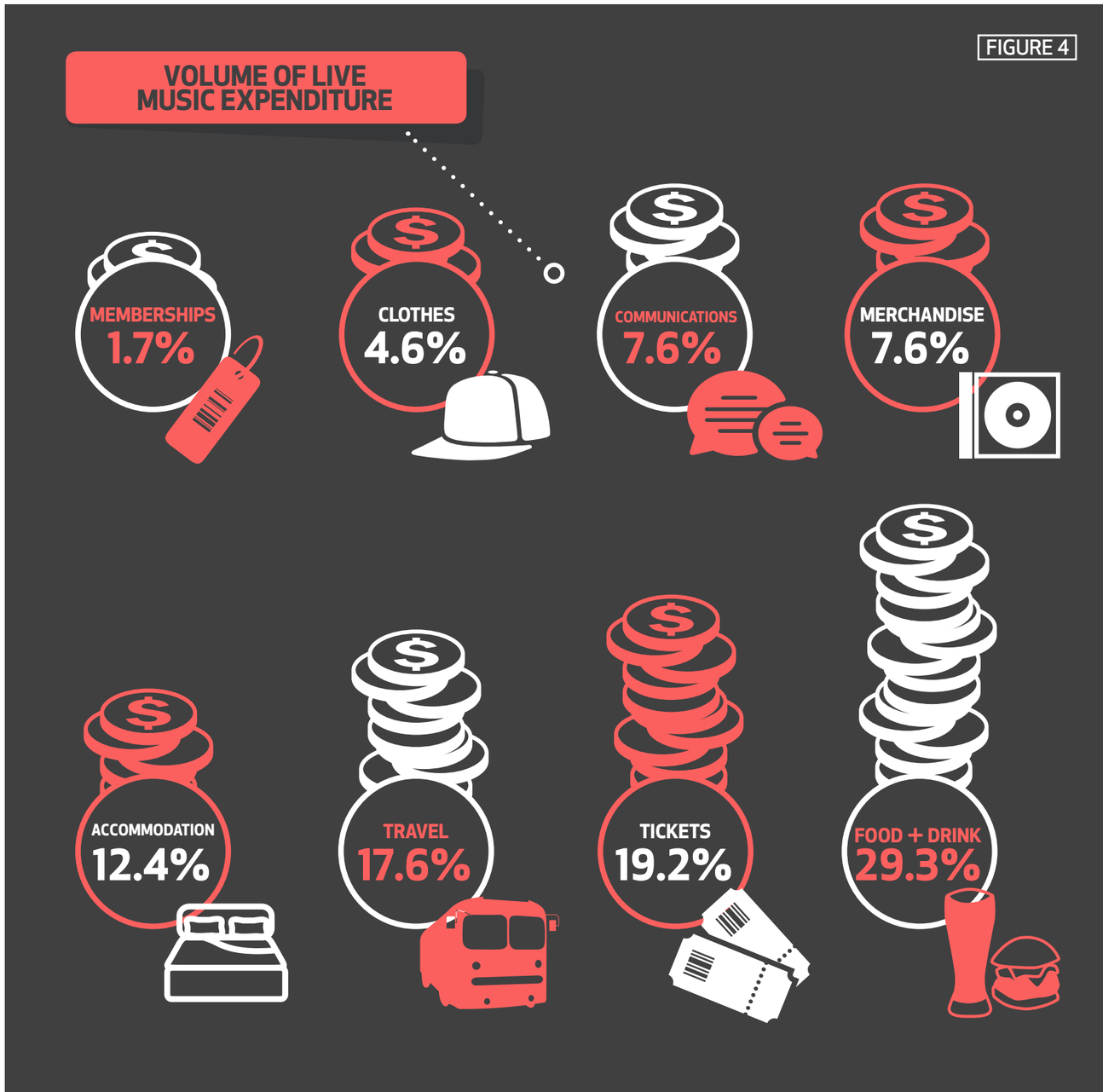


FIGURE 5

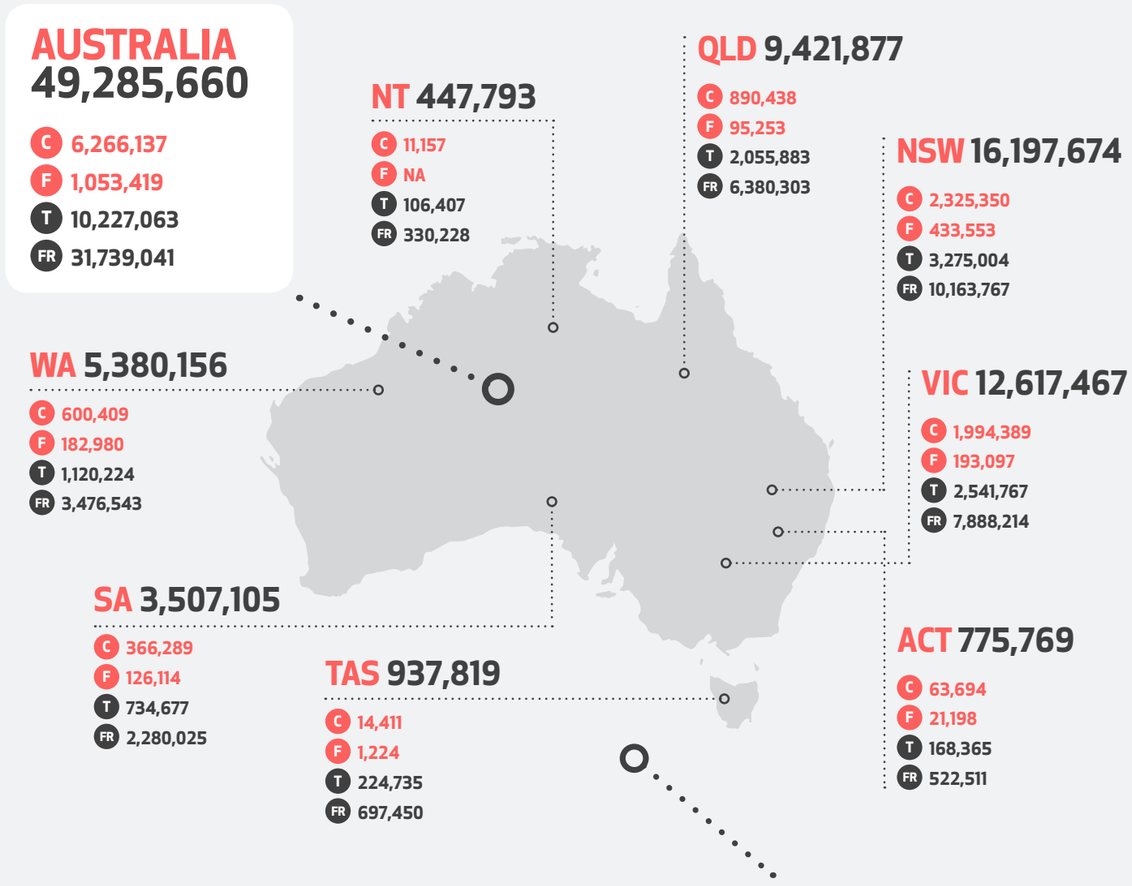
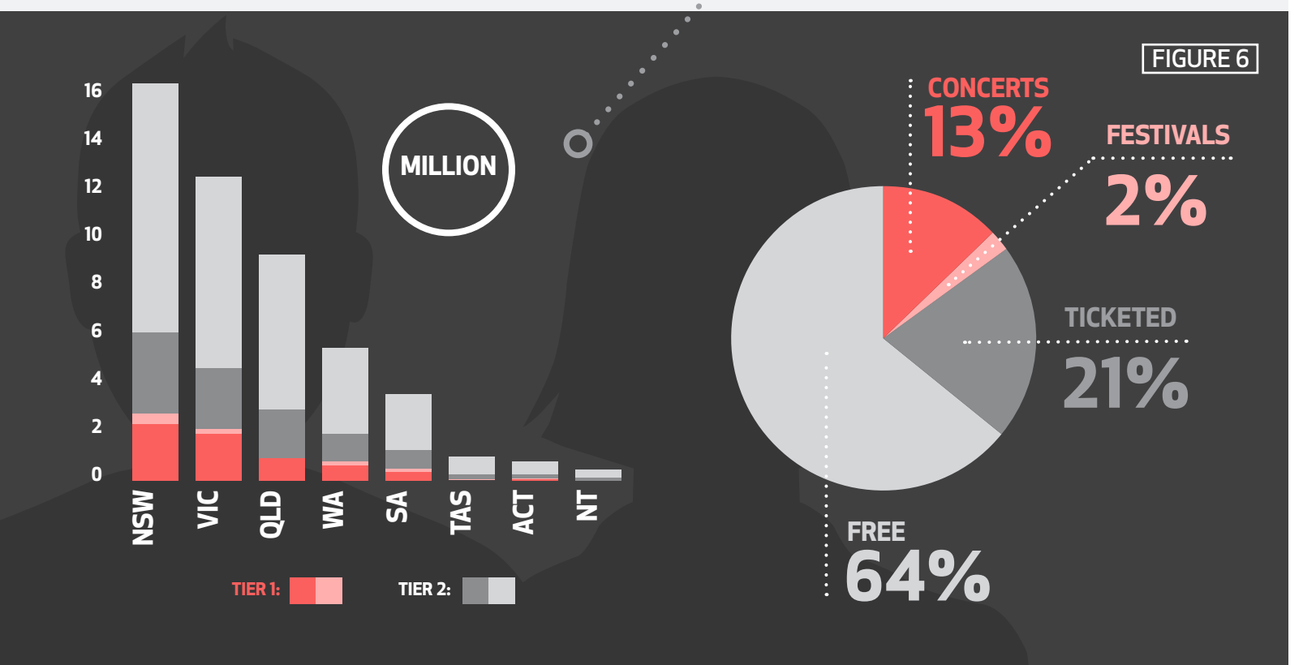


FIGURE 6



Major ticketing companies, a number of larger self-ticketing venues and promoters, together with the Australian Council for the Arts contribute ticketing data to Live Performance Australia's (LPA) annual Ticket Attendance Survey and Review. In 2013, it was reported that there were 6.3 million tickets sold to contemporary music concerts at established venues, and another 1.1 million in tickets sales at single category (predominantly live music) festivals (Ernst & Young, 2014). These could be described as Tier 1 live music venues / events (Hearn, Ninan, Rogers, Cunningham, & Luckman, 2004).

The second Ernst & Young (2011) report on the Australasian Performing Right Association (APRA AMCOS) venue based live music industry revealed a total of 42.0 million live music attendances at, "…pubs / bars, clubs, restaurants / cafes and nightclubs," licensed by APRA AMCOS to host live music, or Tier 2 live music venues. Of these, 10.2 million were ticketed attendances, with the balance being un-ticketed (presumably free to enter / attend).

We recognise that some tickets sales may be captured in both the LPA and APRA AMCOS reports, giving rise to the risk of double counting. This risk is slight, however, as the average Tier 1 ticket price is over $100; whereas Tier 2 tickets are variably valued by Ernst & Young (2011) at between $10 and $23 per unit.

Figure 5 and Figure 6 therefore give us a conservative reference point for live music attendance from the best currently available national data; although we cannot let this pass without reiterating the urgent need for a more complete and robust census of the live music sector in Australia.

Due to their own limitations of method and scope, it is not suggested that the source reports used in our estimation (either in isolation or collectively) are perfectly representative of the sum of live-music attendance in Australia. After all, neither study purports to capture attendance at informal venues such as warehouses, house parties, school concerts or pop-up performances. As previously noted, the report prepared for APRA AMCOS (Ernst & Young, 2011) was found to potentially under-represent the volume of live music activity in Melbourne (Newton, 2012).

Given the composition of our consumer sample, we have also self-imposed a conservative constraint to our inquiry, limiting it to contemporary music. Thus excluded are other ticketed and non-ticketed live music forms such as classical, opera, musical theatre, other festivals, and special events.

Therefore, despite this report assigning a much larger value to the live music industry in Australia than those that have gone before it, we nonetheless **significantly under-represent** the entirety of live music making in Australia. To give an indication as to the impact of this understatement, the LPA figure of 7.3 million we use excludes over four million other potentially relevant ticket sales, as well as sales that went unreported.

5.

COSTS

Inputs that enable and facilitate live music making in Australia and their related outputs come at a cost. Labour, materials and infrastructure are either directly purchased or donated to that end. Furthermore, given the scarce resources of consumers, the diversion of money to live music implies that other opportunities to improve individual welfare are denied—another social cost that must be considered.

The total social and economic cost of live music making in Australia and its related enterprises in 2014 is estimated to be **$5.0 billion**. This includes direct costs of $4.98 billion and opportunities 'lost' to individuals, investors and the community of $55.8 million.

Direct costs

The direct costs cited here estimate the change in final demand attributable to live music making in Australia in 2014. These are the costs borne by individuals in the support of live music consumption and associated activities.

To avoid double counts, intermediate inputs such as the costs of production are incorporated and not counted separately. In other words, the costs of staging live music events are assumed in the final purchase price. Similarly, the equipment, labour and utility overheads of the related merchandise providers are assumed to be fully recovered by sales.

Continuing the methodology introduced in the previous section, the sum of relevant live music tickets sales is estimated in Figure 7 to be *$958.1 million*.

Using our basic satellite account of consumption (Figure 4), which suggests that ticket sales represent 19.2 percent of total live music expenditure, we can extrapolate to estimate that in 2014 individuals directly spent **$5.0 billion** on live music in Australia.

It should be noted that these costs are significantly broader in their coverage and greater than previous estimates of the transaction costs attributed to live music making in Australia. These departures are reasonably explained by the differences in methodology.

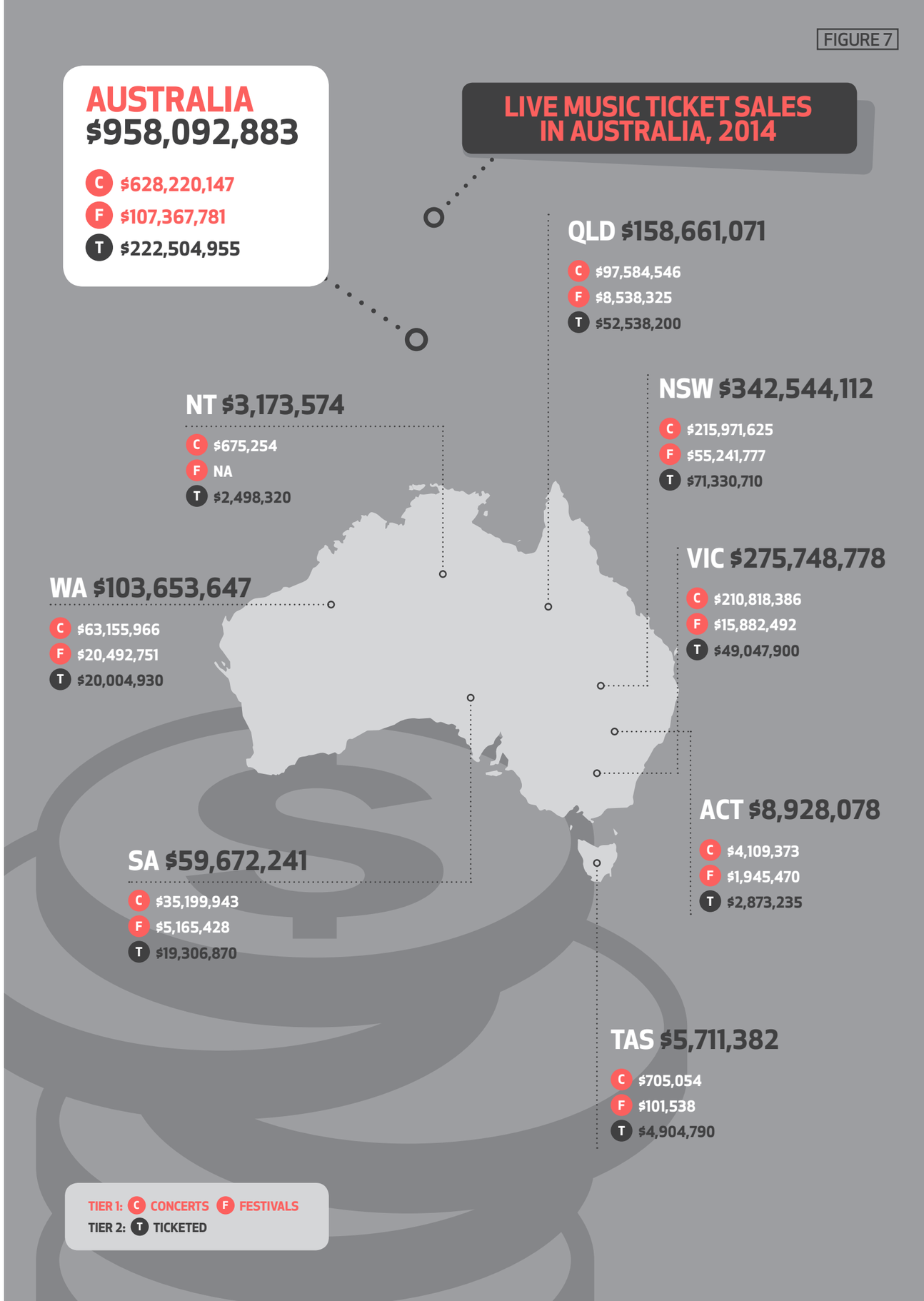
Importantly, our method implicitly accommodates **all forms of live music making**—and not just formal, venue-based production—by assuming that consumers account for this in their relative expressions of (satellite) expenditure.

The other (hopefully obvious) point to make is that these transactions are **a cost**, *not a benefit*. Studies that treat the volume of live music sales otherwise—as the majority of the ones we reviewed do—are particularly unlikely to influence the economic gatekeepers to policy reform.

It should finally be noted that this is not yet a complete accounting of costs. Live music making is subsidised by individuals, businesses and various levels of government through other venue revenue, volunteering, sponsorships, grants programs, free concerts *et cetera*. The sum of these investments is what is known in economics as the shadow price of, in this instance, live music production (McKean, 1968). This shadow price has the net effect of either enlarging producer profits or reducing the cost to consumers.

As such, it is a real stimulus to live music production in Australia and relevant to the scope of our enquiry. Unfortunately it was beyond our means in this instance to gather the necessary data, and the development of a more comprehensive live music satellite account is recommended as a direction for future research.

FIGURE 7



Opportunity costs

An opportunity cost is the value lost (or forgone) as a result of making a decision between mutually exclusive choices. Thus, before assessing the economic benefits of live music making in Australia, it is useful to consider what we might have gained by using the allocated resources to their 'next best' ends. In order to resolve the opportunity cost conundrum, this study supposes that there is no live music making in Australia, and that the assets presently devoted to it are put to alternate productive ends.

In other words, an assumption is made with respect to the opportunity cost of these investments: if individual purchases were withheld because no value was placed on live music by the community, then the value of that contribution could be invested in long term capital growth—the supposed next best alternative use.

Therefore the value of the live music to its stakeholders is at least equal to the interest revenue forgone on the investment.

Live music opportunity cost = $I \times r$

I = investment

r = rate of return on investment

The rate of return is determined from the 10 year bond rate of 3.49 per cent, as at 1 October, 2014 (RBA, 2014). An estimate of 2.8 per cent is further identified as the long-run inflation rate, based on the final year projection of the percentage change in consumer price index (ABS, 2014b).

$$r = i - \pi$$

r = real discount rate (or cost of investment)

i = nominal long-run interest rate (3.49 per cent)

π = long-run inflation forecast (2.3 per cent)

The long-run cost of investment thus applied is 1.12 per cent. To that end, we estimate that the gross cost of the opportunities diverted to live music making in Australia in 2014 is approximately **$55.8 million.**

6.

THE LIVE MUSIC ECOSYSTEM

The investment of money, time and opportunity described above are realised in the activity of live music making. Drawing on the data collected for this research we are able to provide a more detailed account of this activity. This goes beyond previous economic characterisations, giving a more complete account of the complex ecosystem of financial and social transactions associated with live music.

Venues

Of the thirty-eight venues interviewed for this research, fourteen self-identified as primary use music venues; eighteen as pubs and clubs that hosted live music; one as a nightclub and five as 'other' spaces that typically ran as rooms for hire or multi-use spaces. Table 2 shows the median capacity, events per month and venue age by city and by type. These figures give some sense of typical venues interviewed for this research. Importantly, they also describe the size and the type of venue that most respondents to our consumer survey identified attending to experience live music (see Figure 8).

TABLE 2 **MEDIAN VENUE CAPACITY, EVENTS AND AGE.**

	Median Live Music Capacity	Median Venue Capacity	Median Events per month	Median Venue Age (years)
CITY				
Sydney	194	350	17	6
Melbourne	190	273	18	4.75
Adelaide	150	280	16	10.5
Hobart	190	200	11	4
TYPE				
Bar / Pub	150	220	18	8.5
Live Performance Venue	298	298	18	6.5
Nightclub	260	260	13	10
Other	194	350	18	4

Most venues remunerated performers with some combination of door deals, guarantees and riders (typically food and beverages supplied to the performers). A very small number of these also offered some artists a share of the bar or other earned income. Six of the venues interviewed operated as a space for hire available to independent promoters who were responsible for paying performers. Half of the venues interviewed reported having workers in their venue that they didn't pay for; including technicians, security, door staff, promoters, merchandise vendors and kitchen staff. These staff typically sub-contracted to performers and promoters, or ran as independent businesses within and by the permission / licence of the venues themselves.

Audience Patterns of Attendance

The consumers we surveyed attended music across a range of venues from house shows to stadium concerts and festivals. Figure 8 shows the percentage of respondents that reported attending live music in each type of venue by state and territory. Figures for the Northern Territory should be treated cautiously as only 0.7 per cent of respondents identified as living there.

The patterns of attendance are reasonably consistent across the data, with the bulk of consumers reporting they attended live music in small venues, pubs and clubs. A very small number (<0.06 per cent) identified attending live music at 'other' venues, including markets and classical venues. Of particular interest is the number of respondents that reported attending house shows, as these are ignored by many accounts of live music making in Australia. Notably absent, perhaps due to concerns over their legality or because they are conflated with other categories, are warehouses and other informal venues that are known to be a part of Sydney's live music scene (Gibson & Homan, 2004).

Although there is no robust national-, state- or even city-based attendance data for this third tier of venues, our consumer-centric methodology implicitly accommodates expenditure on and the subsequent economic impacts of this category of venue; even if we do not have sufficient confidence in the representativeness of the data to draw categorical conclusions about tier-level attendances.

Travel

A related observation from the data is that people are willing to travel for their live music consumption. Approximately half of the survey respondents reported travelling inter- and intra-state to attend live music, with one in five travelling overseas. Figure 9 shows this travel as a percentage of the total volume of attendance reported by respondents. As can be seen, even though the bulk of live music consumption is local, our respondents were willing to undertake significant travel to attend live music events. This suggests that live music is a significant source of regional competitive advantage. On this basis alone the investment of public funds into live music making is generally justified.

FIGURE 8

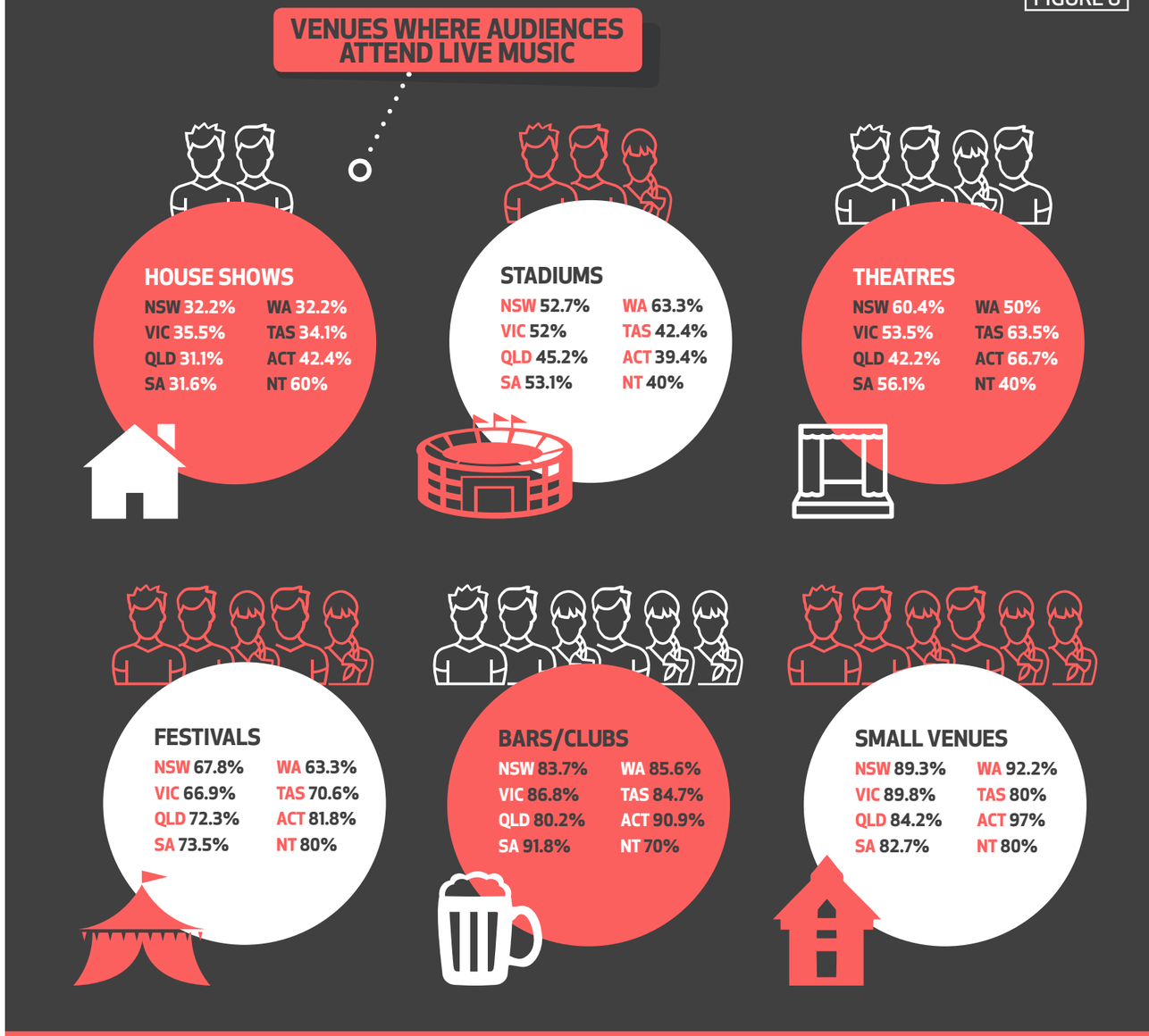
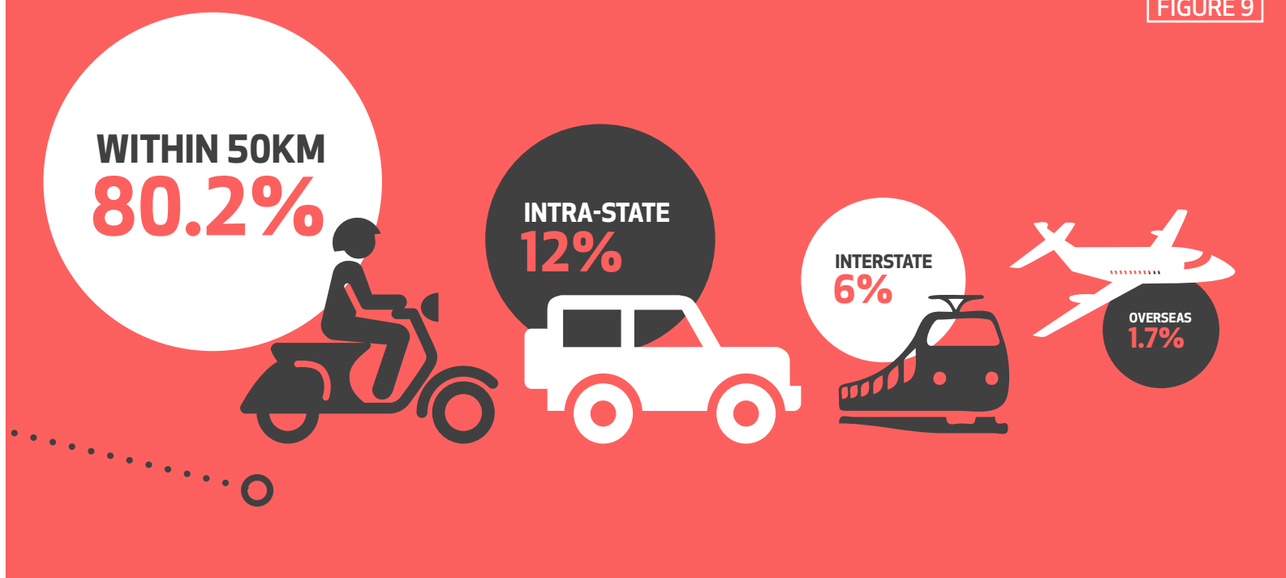


FIGURE 9



Motivation and benefits

To better understand the reasons people participate in live music, we asked producers and consumers why they hosted and attended live music, and what impact they believed live music attendance had on the wider community. Both groups attributed improvements to health, wellbeing and social capital, as well as commercial and cultural benefits, to their live music engagement. Unsurprisingly, most consumers also reported enjoyment as an important motivator for attending live performances.

Improved social capital was, by a large margin, the most commonly identified impact that live music had on the wider community. Consumers expressed feeling more personally connected, happy and engaged as a result of attending live music, and suggested that live music encouraged and enabled a sense of community.

> Live music is the best community engagement tool. It promotes health & wellbeing, participation & collaboration, plus access & equality. (RESPONDENT 532)

> [Live Music] creates wellbeing, goodwill, excitement, aesthetic, intellectual and emotional stimulation. … Time set aside purely for focussed, extended listening in company of others creates social cohesion. (SURVEY RESPONDENT 1483)

> Live music adds to the fabric of our community. People form groups, friendships, do things together. Relationships are built through making and listening to music. (SURVEY RESPONDENT 1383)

Venues also observed that live music served as a focal point for communities and that they could foster this by providing a safe environment. One venue owner observed, "live music is the community, we just provide the space" (VENUE OWNER 3).

In addition to improved social capital, consumers also associated improved physical and psychological welfare as a result of experiencing live music, which was also described as a distinct benefit. Respondents reported, for example, that attending live music made them feel healthy; optimistic; inspired and enabled to achieve goals (improved self-efficacy); and helped them manage anxiety and depression.

> Music gives me a reason to live, makes me think, makes me feel, inspires and challenges me to keep singing my own song. (SURVEY RESPONDENT 1441)

> It is uplifting to get away from the work sleep work sleep cycle. Great mental health benefits for me and my friends who struggle with anxiety and depression. (SURVEY RESPONDENT 986)

> It keeps me healthy, if it weren't for music I would be a recluse. (SURVEY RESPONDENT 1021)

The commercial benefits associated with live music included acknowledgement of the obvious profit motive of venues; although interestingly, less than half of the producers interviewed identified commercial benefit as their motivation for hosting live music.

When asked what constituted a successful event, the 'vibe' of the show was mentioned almost as many times as turnover from bar or ticket sales. Vibe might appear an ambiguous term, but it is in fact quite clearly explained in research, particularly in relation to dance music audiences. In this context vibe refers to interaction within and between audiences and performers associated with feelings of collective experience (Fikentscher, 2000). Vibe may help explain why increased social capital was mentioned so frequently as a benefit of live music attendance. Among the producers interviewed, vibe was often cited as more important than audience size or profit. Describing vibe, one venue owner explained:

> if the band was great and the audience loved it then we consider we have had a good night. [It] can be a small audience, but a cracker of an evening. (VENUE OPERATOR 32)

Both producers and consumers also believed live music had an impact on local and national economies through jobs creation, sales and tourism. A number of consumers further reported benefitting professionally from their attendance at live music events. Although this may reflect the number of performing musicians and industry professionals who took part in the survey, it was typically associated with increased social capital, as well as gains in what might have been described in literature as 'knowledge capital' (Hiser, 1998).

Cultural benefits associated with live music were primarily described in terms of the exposure and promotion. Producers and consumers both identified venues' roles in nurturing and breaking new talent as well as providing access to established and acclaimed performers.

Factors impacting Audience Attendance

We asked a series of questions to gauge what factors, if any, positively and negatively impacted audience attendance. Firstly we asked if consumers were more or less likely to be attending live music in three years' time, and why. We followed this by asking consumers to identify reasons why *other people* might not attend live music and what might encourage them to do so.

These questions were designed to elicit consumer sentiment and factors influencing their own and others' live music attendance. We asked producers a corresponding set of questions to have them identify what factors they believed impacted attendance, whether they would be more or less likely to host live music in three years' time, and why.

TABLE 3 **ARE PRODUCERS AND CONSUMERS MORE OR LESS LIKELY TO PROMOTE OR ATTEND LIVE MUSIC IN THREE YEARS?**

	MUCH LESS	LESS	ABOUT THE SAME	MORE	MUCH MORE
PRODUCERS	-	2.6%	36.8%	44.7%	15.8%
CONSUMERS	1.3%	7.2%	55.5%	23.7%	12.3%

Both producer and consumer sentiment, signalled by their three year outlook, was largely positive, with a majority of venues and 36 per cent of consumers expecting to be more or much more engaged with live music. Only one venue reported that it was expecting to be less likely to be hosting live music in three years' time, due to issues associated with regulation and enforcement (discussed further below). Venues that believed they would be more likely to host live music typically cited emerging venue reputation, market growth, investment, and improvements to their venue's environment for their optimism.

Among consumers less likely to attend live music in the future, the main reasons were related to their stage of life and access to venues. These two issues appear to be related and represent a section of consumers who are aging out of the market and whose ability to attend live music is impacted by family responsibilities. Many of those who identified stage of life as a factor related that they are no longer able to attend live music events with late start times or in locations requiring significant travel due to having children. A smaller number of consumers felt they would be less likely to attend live music in the future due to constraints on their time and income, as well as declining interest. A very small number (<1.0 per cent of total respondents) expressed concerns for their safety and negative impacts on health and wellbeing.

Respondents who were more likely attend live music in the future also listed stage of life as a factor as, for example, they moved from a period of study to paid employment or were at an age where they had fewer family or work responsibilities. A similar number identified an increase in available income and time as likely to result in increased attendance, and these appear to be related. About a quarter of respondents cited professional or personal involvement for increased live music attendance, indicative again perhaps of the high number of performing musicians and industry professionals who took part in the survey.

These same themes recurred when we asked consumers what they felt encouraged or inhibited other people attending live music. In both cases, access was identified as a major factor; as was cost, interest, awareness, and the positive and/or negative impact of other entertainment options. In particular respondents felt that poor public transport options, limited parking, and the limited availability and cost of taxis and event times was constraining the

number of people attending live music. A number of respondents also identified government activity as a factor that might enable more live music attendance through changes to licensing, regulation and enforcement, improved infrastructure and the provision of grants.

Examined collectively, the most commonly identified factors influencing live music attendance among respondents were access, then cost and interest. Producers, on the other hand, most commonly identified programming as influencing attendance, followed by some combination of band draw; cost; promotion; venue reputation; venue environment; and the weather. Programming and the ability of a band to draw a crowd are clearly related and could be combined, however some venues identified both as distinct factors influencing attendance.

Producers appear to have only identified factors that can be directly observed and, at least to a degree, controlled or allowed for in planning live music events. For example, access was not identified by venues suggesting this is either unobserved or wasn't commented on as it was outside of venues' direct control. This discrepancy suggest access to venues may be an important consideration for policy makers and a beneficial area for future research, particularly given our findings that audiences appear willing to travel to experience live music.

Promotion and engagement

As part of the producer interviews we asked how much time and money was spent promoting live music across several categories (mainstream media; community media; street and online music press; social media; email databases; posters and flyers; other online media; and other). By volume, the greatest expenditure of time and money was apportioned to social media, street press, posters / flyers and other. The most time (41.2 per cent) was spent on social media, and most money on 'other' (37.3 per cent). Only two venues reported advertising their live music offerings in mainstream media but both had a monthly spend of more than $2,000. This likely reflects a diversity of audiences, profile and business models at play among venues. By contrast consumers reported relying mostly on word of mouth for information on live music events, followed closely by social media, with other online sources more important than traditional media. 'Other' spending mostly comprised out-sourcing promotional activity to a third party and, alongside producer responses to other questions, suggests much of the promotion of live music is not handled by venues. Where a third party is not directly employed, some or all the responsibility, and costs, of promoting live music typically fell on bands and promoters.

Barriers to venue operation

We also asked producers what they perceived as barriers to success for live music venues in their area. Venues in Sydney, Melbourne and Adelaide most frequently identified issues relating to government regulation and enforcement. While the specifics varied between cities, these included concerns over restricted opening hours, licensing conditions, sound abatement and the costs associated with compliance.

Costs, particularly rents were also identified by several venues in Sydney as significant barriers to success. Venues in Melbourne, by comparison, were more concerned with competition, market saturation, location and gentrification. Venues in Adelaide were most concerned with gentrification.

In Hobart, venues identified location and market saturation as the main barriers to success, commenting on its smaller population, relative isolation and difficulties in attracting touring artists.

A small number of venues also identified issues relating to the management and operation of venues as barriers to success, though these were typically more to do with new venue owners' actions and experience, rather than market imposed constraints.

Investment and risk mitigation

Finally, we asked producers about how they managed external factors outside of their direct control, such as regulation and enforcement, and where they intended to invest in their business over the next twelve months. These questions were intended to provide a sense of how venues planned for the future and what they did to respond to change.

Producers most often identified equipment, infrastructure and related maintenance as important for investment in the next twelve months. Food and beverage offerings, promotion, performers, staff and stakeholder engagement were also reported. Some of this investment was related to noise abatement and other concerns over regulation and enforcement. Several producers noted that they could only afford to reinvest into the day-to-day running of their business and did not have available funds for capital expenditure.

Based on their responses, producers appear proactive in anticipating and responding to external factors affecting their business. Particularly in relation to changes in licensing regulations, many venues identified actively engaging stakeholders and putting in place preventative measures as effective strategies. A similar number of venues identified they would adapt, diversify and underwrite losses to keep operating; although this was often framed in a way that suggests they were resigned to having little control or influence. A small number of venues acknowledged they did nothing to manage external factors.

7.

LIVE MUSIC CAPITAL

The various benefits described by consumers and producers in relation to live music have a clear intrinsic value. These benefits can also be related to various forms of 'capital', being outcomes of (and therefore motivators to) live music engagement.

In neo-classical economics, capital and labour are theorised as the most common inputs in the production of goods and services. In economic analysis the term capital is used to understand the work of the tools and machines that produce these goods and services. This allows economists to price the work of these tools and machines in aggregate. This is useful for economic analysis and modelling but is also a potential weakness, as it assumes the various machines and tools employed can be directly compared to one another.

For example, the capital stored in a live music venue might be quantified by its potential to produce a given number of live music shows in a year. Theoretically the more live music venues there are, the higher this production potential would be and the greater the capital. Measuring capital in this way assumes it is stored or conserved in the tools used to produce it (in this case live music venues) and that this value remains mostly static.

This study departs from the neo-classical use of the term and instead views capital as an *output* of the production process. The concept of capital as a 'stored potential' is not rejected by this approach, but is seen as less significant for the purpose of valuing live music production than how that potential is ultimately expressed. It is only when citizens collectively *express* their capital that its effect can be measured and reconciled with costs to arrive at estimates of value.

For example the capital stored in a live music venue might be expressed as profits generated for producers or jobs created. The effect of these expressions of capital can be measured and compared with the venue's costs to calculate an estimate of economic value. This valuation will depend on a significant number of environmental variables, including, among other things: the quality of raw inputs (performers, equipment, food and beverage offerings); operator skill; and wear and tear

This more accurately describes the realities of live music production and is consistent with recent attempts to understand capital as more than just skills and tools.

For example, contemporary economic theory abounds with models claiming to illustrate different aspects and interpretations of capital including, but not limited to:

- *Aesthetic capital* (Anderson, Grunert, Katz, & Lovascio, 2010)
- *Cultural capital* (Bourdieu, 1993; L. Johnson, 2006)
- *Economic capital* (Laeven & Goovaerts, 2004)
- *Social capital* (R. D. Putnam, 2000; Woolcock, 1998)
- *Symbolic capital* (De Clercq & Voronov, 2009; DiMaggio & Useem, 1978)
- *Erotic / sexual capital* (Hakim, 2010; Michael, 2004)
- *Human capital* (Marx, 1859; Smith, 1828)
- *Intellectual capital* (Stewart & Ruckdeschel, 1998; Teece & Teece, 2000)
- *Knowledge capital* (Carr, Markusen, & Maskus, 1998; Lööf & Heshmati, 2002)
- *Natural capital* (Costanza et al., 2007; Ress & Wackernagel, 1996)
- *Psychological capital* (Luthans, Youssef, & Avolio, 2007)
- *Spiritual capital* (Finke, 2003; Iannaccone & Klick, 2003)

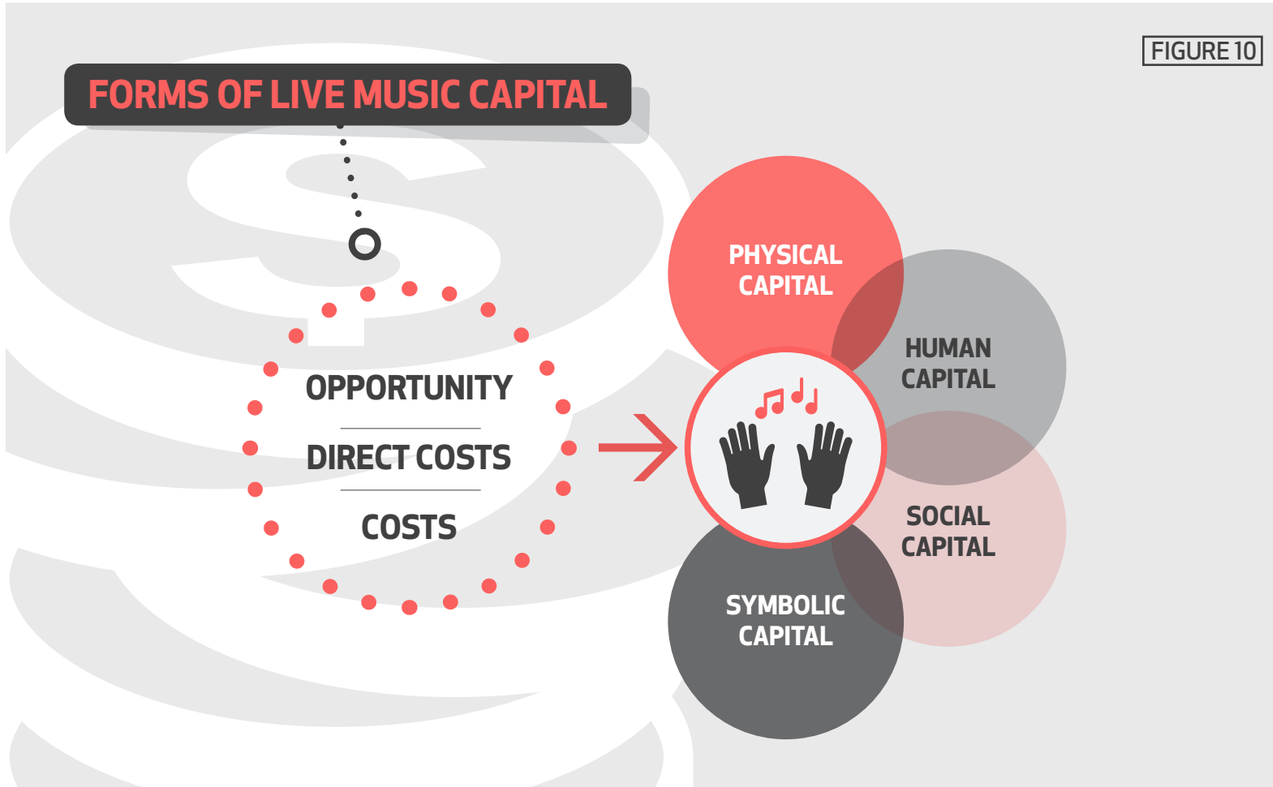
A rigorous valuation of live music in Australia requires that we account for the various forms of capital that can be attributed to the activities live music enables. Because capital is viewed as an output of the production process in this study, we have focussed on forms of capital that identify discrete outcomes which can be traced back to live music production and the costs involved.

Live music capital, therefore, lies at the nexus between inputs (costs) and outputs and is understood to be a non-substitutable attribute that accrues discretely within individuals, and collectively in firms and the community. This capital can, theoretically at least, be expressed positively—for example, to promote social inclusion (Gibson & Homan, 2004; Sedita, 2008; Thornton, 2013)—or negatively—for example, to promote harmful or offensive ideals (Armstrong, 2001; Binder, 1993; Phillipov, 2011). Economic expressions of this capital will be unique to the social setting (in this case, Australia), even though the potential for good or bad within it is theoretically uniform. All things being equal, the more widespread and/or intense the participation of the community, the greater the impact live music making in Australia will have on these factors.

The definition of capital used here is not intended to rebut alternative descriptions of live music capital; for examples, see Stempel (2006) and Lee, Cornwell, and Babiak (2013). Instead of trying to *distinguish* the value of live music production from the traditional economic forms of capital, this study *integrates* all definitions to embrace and capture a holistic spectrum of value. Because we are concerned with measuring the way capital is expressed, rather than its stored potential, the value of this capital *per se* is irrelevant and no attempt is made to quantify it. Nevertheless, articulating live music capital in this way serves to identify the different ways it might be expressed and the forms of input that contribute to these activities.

Drawing on the body of literature outlined in the introduction and qualitative data presented in the previous section we have identified four domains of capital in the context of live music making in Australia.

FIGURE 10



Physical capital

The physical assets and infrastructure generated by Australia's live music scene are more wide-reaching and substantial than what might be assumed at a glance. They extend beyond where music is performed, to include rehearsal spaces; performance training institutions; staging, production and hire companies; logistics and touring companies; the business premises of promotion and management companies; sound reinforcement and acoustic treatment manufacturing; and the media where live music is promoted and broadcast.

The vibrant social dynamic of the music industry means that infrastructure also includes the neighbourhoods where musicians and other creative individuals choose to live; the 'cultural clusters' (Pratt, 2008; Shaw, 2013; Watson, 2008) that house the bars, clubs and cafes they frequent; and the specific atmosphere of a city that fosters and nurtures a contemporary creative environment and, consequentially, a vibrant live music scene (Watson, Hoyler, & Mager, 2009). Despite their absence from most economic accounts of live music, our research has already demonstrated that informal performance spaces including house-shows and warehouses appear economically significant, if socially ambiguous.

Human capital

Human capital is derived from the competences, tacit knowledge, skills, education and training of people. The OECD consider it to be critical to the well-being of communities and define it as, "the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (Côté & Healy, 2001). Human capital has often been defined and measured with reference to acquired cognitive skills and explicit knowledge. A broader notion of human capital more adequately reflects how various non-cognitive skills and other attributes contribute to well-being.

In context of the benefits producers and consumers have identified they receive from engaging with live music, human capital encompasses physical and mental health and wellbeing as well as the knowledge and experiences gained from attending and producing live music. To that end, we can more fully appreciate human capital as the sum of:

- psychological capital
- knowledge capital, and
- physical health.

Psychological Capital

Psychological capital is a recent construct arguing that the states (as opposed to dispositional traits) of self-efficacy, hope, optimism and resilience can be amassed in the individual and converted into commercial gain (Luthans, Avolio, & Youseff, 2007). The exploratory work on psychological capital done thus far suggests that in positive iterations it can enhance workplace performance, individual commitment and satisfaction, and—as a contagion—effect constructive organisational change (Luthans & Youssef, 2004).

The descriptions of psychological capital align closely with benefits of live music attendance identified by consumers.

Knowledge Capital

The presence of knowledge capital in the live music industries is evidenced in the high number of consumers reporting a commercial benefit from attending live music, as well as literature outlining the importance of tacit knowledge to technical work around music (Horning, 2004).

Knowledge capital comprises two forms, technological and experiential (Hiser, 1998). The technical skills gained from live music production are broad and can be transferred and adapted to many other professional pursuits. The successful production of a live music event involves a variety of individuals with specific skill-sets working together in order to achieve something beyond their combined experience. Similarly, the organisational and managerial skills gained from live music production are also transferable to other professional and personal aspects of life. As many local-level acts lack the financial capital to employ professional (or even semi-professional) management, the responsibility of booking, organising, promoting and executing successful live music events often falls on the artists themselves.

The basic organisational and managerial skills required for the successful production of live music events are beneficially transferrable to many other professional arenas. Therefore, involvement in live music production provides technical and experiential training that has wide-ranging applications.

Physical health

Physical health is defined here as the embodiment of the health, wellbeing, cognitive and other physical benefits associated with live music production or attendance. It is well described by consumers and existing literature, and we do not revisit these arguments here.

Evidence of negative health outcomes directly attributable to live music attendance were absent from our data, and the body of research we consulted in preparing this report. There is nevertheless an anecdotal correlation between live music and excess alcohol consumption, tobacco, illicit drug use and exposure to noise. The extent to which these are causal or even population attributable risks is encouraged as a direction for the future research, with an emphasis on decoupling live music from other night-time or creative industries.

Social capital

Social capital is defined by the OECD as 'the norms and social relations embedded in the social structures of societies that enable people to co-ordinate action to achieve desired goals' (Grootaert, 1998). Both qualitative and quantitative instruments used to measure social capital generally cluster their enquiry into the operationalisation of individuals' trust, happiness, inter-personal networks and civic engagement (Dudwick, Kuehnast, Jones, & Woolcock, 2006; Grootaert & Basterlaer, 2002; R. Putnam, 2002).

Improved social capital was the most frequently identified benefit associated with live music by both producers and consumers participating in this research. Consumers identified feeling more connected, happy and engaged while producers spoke of the role venues played in facilitating community. The relationship between social capital and commercial success is well established in literature, and contemporary music scenes thrive on social, economic and "subcultural capital" (Thornton, 1996) sustained and maintained by social networks of like-minded enthusiasts, musicians and music industry professionals (Gibson & Homan, 2004).

Symbolic capital

Symbolic capital describes the value derived from being known and recognised—a concept synonymous with standing, good name, honour, fame, prestige and reputation. Symbolic capital need not necessarily be confined to the elite domain—there is a limited form of symbolic capital observable in all hierarchies. In the live music context, symbolic capital can attach to regions, cities, venues and performers.

Melbourne, for example, has an actively self-promoted reputation for being the live music 'Capital' of Australia due to its multitude of venues, its calibre and concentration of local acts, and its history and legacy of producing world-class artists and musicians (Homan, 2011; Lobato, 2006; Shaw, 2005, 2009, 2013; Walker, 2012). It is argued that such place-based symbolic capital encourages migration of consumers and producers, as the appeal of Melbourne's vibrant live music scene draws creative individuals and music lovers from other regional and urban centres.

Artists, too, enjoy and exploit their own form of symbolic capital. Australian musicians like Nick Cave and Paul Kelly have inspired not just musicians, but many other creative individuals such as writers, filmmakers and documentarians (Walker, 2012). Bruce Springsteen and Bono have been the focal point of both inspiration and aspiration for musicians and politicians alike. In addition, one cannot ignore the well documented (at least anecdotally) phenomenon of 'groupies' (Darwin, 2010; Howe & Friedman, 2014; Passanisi, 2010) —unique evidence of the existence and potential of symbolic capital in live music cultures.

8.

BENEFITS

So if live music making in Australia alters the states of physical, human, social and symbolic capital in individuals, firms and communities, how is this economically expressed? The economically valuable outputs of live music that impact on the welfare of all Australians is considered in this next section.

Ultimately, it is estimated that in 2014 live music making in Australia enabled at least **$15.7 billion** worth of such benefits across the community.

Commercial benefits

Using the Australian Regional Input-Output Matrix (RIOM) model, it is estimated that the impact of consumers' expenditure on live music was to increase output in the Australian economy by $9.7 billion. The increase in wages, rents, profits and taxes associated with the increase in production is estimated to have delivered *$1.2 billion* of additional value, or profit, to all Australian producers (compared to an alternative case in which all the expenditure enabled by live music ceased).

Taken together with an employer enjoyed productivity premium of *$884.3 million*, the sum of benefits returned to businesses as a result of live music making in Australia in 2014 was estimated to be **$2.1 billion**.

Civic benefits

The expenditure associated with live music making in Australia is also estimated to have enabled in the order of nearly 65,000 full-time and part-time jobs to the value of **$2.2 billion**, and taxation revenue to all tiers of government of **$950.6 million**.

Civic benefits acknowledged but not quantified by this study include the significant levels of volunteering that occur within live music making in Australia, as well as the costs potentially avoided by our civil systems of health, criminal and social justice.

Individual benefits

Patrons of live music making in Australia revealed through statements the value of their satisfaction with their purchases to be worth **$10.4 billion**.

The extent to which non-consumers identify a level of well-being with having live music making in Australia, even though they may are not actually engaging with it, is commended a direction for future research.

Commercial benefits

When the physical artefacts of live music making are exploited by human endeavour, a significant suite of commercial benefits accrue. Our analysis reveals the change in final demand of $5.0 billion brought about by the live music expenditure of consumers (Direct Costs) increases output in the Australian economy by $9.7 billion. This enables **$1.2 billion** in profits for producers across a wide range of industries.

The efficiency with which this process occurs is known as productivity. The financial return that live music dependent enterprises receive on their investments of capital, labour, energy, materials and services is therefore estimated to be **12.7 per cent**.

Of more interest is a relatively under-explored and un-quantified benefit: the productivity benefits consumers of live music receive, enabling them to be more effective and efficient in their chosen employment. In this report, it is conservatively estimated that consumers enjoyed **$884.3 million** in net productivity benefits as a result of their engagement with and consumption of live music. Although accrued by individuals, this benefit was actually realised by their employers, and as such is represented here as a commercial benefit.

Therefore, the sum of benefits returned to businesses as a result of live music making in Australia in 2014 was estimated to be **$2.1 billion**.

Input / output modelling

The value of expenditure associated with live music making in Australia can be understood in two contexts. Firstly, the amounts spent by individuals, businesses or government on live music making in Australia reveal a value that the community perceives in the activity. Secondly, expenditure on live music making creates a change in final demand that has an economic impact on employment, output and gross national product. The economic impact includes the impact on intermediate goods and the 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.

Broadly speaking, I/O modelling examines how different industries interact to produce final demand. For example, a grain farmer (as part of the Agriculture industry) may sell some of his or her grain to a brewer (part of the Manufacturing industry), who uses it as an ingredient in his or her beer. This company in turn sells some of its output to a liquor wholesaler (part of the Wholesale Trade industry), who sells some of it to a live music festival, who passes it on to a patron.

The same 50 grams of grain has been sold several times, but only the last transaction represents final demand. Thus, the inputs required by one industry form part of the demand for the products of another.

There are two major types of I/O models: open and closed models. In open models, the labour and wages of employees and the gross operating surplus of companies are treated as primary inputs in the production of goods and services. Therefore, if you want to produce more widgets, you must employ more widget makers. This type of model captures the direct and indirect effects of changes in demand in one industry on the other industries in the economy.

By contrast, RIOM is a closed model that includes the household sector as a separate industry. This enables the consideration of induced effects of changes in demand. Induced impacts reflect the changes in consumer spending resulting from changes in economic activity and therefore in employment. The household sector is considered as an 'industry' whose outputs are labour, and whose inputs consist of consumer spending—if you create more employment, you also create an increase in demand from the household sector for consumer goods like food, accommodation, entertainment and so on.

RIOM applies the ABS Australian 2008-09 transaction tables (ABS, 2012) 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 57 industries across 17 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. The Leontief multiplier is given here as:

$$(1\text{-}X\text{-}C)\text{-}1_E = \Delta O$$

LM_E = vector of live music expenditure

ΔO = change in total output

X = transaction table of intermediate demand

C = table of induced consumption demand

As previously noted, the producers and consumers of live music making in Australia spent at least $5.0 billion in 2014. This figure represents final demand in five main industry categories:

- Accommodation and Food Services
- Communication services
- Creative and performing arts
- Retail Trade, and
- Road transport.

The expenditure on live music making in Australia has an economic impact that includes a combination of increased output by industries directly subject to increased live music related demand, increased output by suppliers to those industries and their suppliers, as well as increased output by all industries that have a role in supplying the demand of increased expenditure by households generated by increased wages.

Changes in employment and gross state product (GSP) are proportional to changes in output following the constant return to scale assumption inherent in I/O models. A number of the assumptions that underpin the analysis are disclosed here:

- The motivating expenditure for the analysis is the estimated expenditure in 2014. Unless explicitly stated and adjusted for, all data is sourced from that period.
- Financial multipliers are calculated using the Australian Regional Input-Output Matrix (RIOM) model. This model is derived from the 2008-09 Australian Input-Output Table adjusted for each State and Territory's demand and employment data. Financial multipliers are assumed to be consistent between 2014 and 2008-09.
- Employment impacts are estimated using RIOM, with expenditure adjusted for CPI movement between 2008-09 and 2014.
- Live music activities were fully-realised within Australia in 2014.
- Impacts are calculated based on direct, indirect (intermediate inputs) and household consumption effects. Increases in gross operating surplus or taxation revenue are not assumed to directly result in increased expenditure in the Australian economy (the government sector is not closed).
- Where demand results in importation of goods or services from outside of Australia (interstate or overseas) no further impact is assumed on the economy.

An in-depth explanation of the RIOM modelling method can be found at Appendix 3.

The estimated economic impact of direct live music making in Australia related and motivated expenditure is shown in Table 4a The total expenditures used to motivate the analysis are shown in column A and sum to just under $5.0 billion.

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 Australian economy by $9.7 million (column B). This includes the production of intermediate goods as well as imports of $1.9 billion.

The Gross Value Added (GVA) to the Australian economy is therefore **$4.4 billion**, or **1.1 %** of Australia's Gross Domestic Product (GDP) of $396.8 billion (ABS, 2014a). This figure is broadly consistent with similar research in Iceland, valuing the contributions that live music making to GDP at approximately 1.2 per cent (Einarsson, 2005). In the UK, official government estimates place the GVA of the creative industries (of which music is a part) at 5.2 per cent of GDP (Department of Culture, Media and Sport, 2014).

TABLE 4A

THE ECONOMIC IMPACT OF LIVE MUSIC MAKING IN AUSTRALIA, 2014 PART 1

$m	Demand Expenditure (A)	Output Impact (B)	Gross Value Added (C)	Producers' surplus (D)
NSW	$1,780.0	$3,538.6	$ 1,618.3	$425.9
VIC	$ 1,432.9	$2,873.1	$ 1,284.5	$352.9
QLD	$824.5	$1,573.6	$723.3	$152.0
WA	$538.6	$1,012.9	$470.0	$95.8
SA	$310.1	$ 591.4	$263.7	$57.7
TAS	$29.7	$51.3	$22.5	$4.8
ACT	$46.4	$59.5	$28.1	$6.4
NT	$16.5	$22.8	$ 11.8	$2.3
AUST	**$4,978.8**	**$9,723.1**	**$4,222.2**	**$1,230.2**

Australian firms also enjoy a net commercial benefit that is attributable to live music making. Known as the producers' surplus, this is an economic measure of the difference between the amount that a producer of a good receives and the minimum amount that he or she would be willing to accept for the good. The difference, or surplus amount, is the benefit that the producer receives for selling the good in the market. An alternative, if theoretically imperfect, description of this is net profit.

As material inputs are already allowed for, and the assumption is that the infrastructure would exist regardless of live music making, if GVA is discounted by the cost of labour and taxes (Table 4b Columns G and H) we are left with a theoretical surplus to firms of **$1.2 billion** (Table 4a, Column D).

In equilibrium, this surplus represents the fair return to providers of capital sufficient to cover the cost of investment and the opportunity cost of the use of land or buildings for other purposes. It should be noted that this is fundamentally a short-run concept in competitive markets. In the long-run, economic profits (profits in excess of the cost of capital) would generate new entrants that reduce profitability to normal.

Note that the nature of the modelling means that this $1.2 billion is distributed amongst all Australian firms who contribute intermediate or final goods and/or services that are consumed as a result of live music making in Australia, and not just live music producers.

Productivity benefits

A review of the productivity literature reveals that there are many different measures of productivity. The choice between the measures depends either on the purpose of the productivity measurement and/or the amount of data that is available (OECD, 2001). In this report, two distinct expressions of productivity enabled by live music making in Australia are identified.

The first is a traditional measure of input productivity. This is the financial return to producers that live music making in Australia generates on the investments of capital, labour, energy, materials and services. It is estimated in the previous section that this was equal to $1.2 billion in 2014, or a return of **12.7 per cent** on the $9.7 billion invested in total. To avoid double counting, however, we only report this figure once.

Of more interest is a relatively under-explored and un-quantified benefit: the productivity benefits live music making in Australia deliver to individuals, enabling them to be more effective and efficient in their work. This is the second dimension explored in the following estimation of a productivity premium.

The productivity premium

Productivity is often defined as the ratio of a volume measure of output to a volume measure of input. In other words, if a business purchases a quantity of paint, brushes and canvases for $X amount of dollars to produce a work of art to sell for $Y amount of dollars, then the difference (or relationship) between X and Y is productivity.

Links between music and increased productivity in the workplace have been observed for some time (Blood & Ferriss, 1993; Huang & Shih, 2011; Newman Jr, Hunt, & Rhodes, 1966). Music is often used as a mood manipulator by advertisers and retailers (North et al., 1999), and people frequently use music for 'emotional self-regulation' (DeNora, 2000). Active engagement with music has been shown to increase positive perceptions of self, which in turn leads to greater motivation, manifesting in turn in enhanced self-perceptions of ability, self-efficacy and aspirations (Hallam, 2005, 2010).

An important question overlooked by the productivity literature is, "How does act of engaging with an activity (for example, live music) change and/or enhance a consumer's productivity?" In other words, if I attend a concert to satisfy what are essentially my leisure (or well-being) needs; to what extent is that satisfaction observable in my work performance? Does my employer receive a consequent productivity bonus?

Although not quantified in existing literature, a productivity premium associated with live music is intuitive and observable. As noted above, survey respondents routinely linked their live music consumption with a greater sense optimism and inspiration as well as improved and self-efficacy. These might reasonably translate into greater motivation and effectiveness at work. With no previous studies to assist in this regard, we applied an iteration of the contingent valuation method (CVM).

Live music consumers were surveyed about the relationship between their attendance and immediately subsequent work performance. Respondents were asked, "To what extent do you think your live music interest impacts—positively or negatively—on your work performance?" As a follow up, they were asked to quantify this impact (in percentage terms).

A total of 81.2 per cent of respondents felt that live music consumption had an average 11.6 per cent positive impact on their productivity; whereas 3.3 per cent felt that it had an average 3.9 per cent negative impact. Although previous studies have suggested that the productivity impact of attendance at live events can last over 12.3 working hours (or one-and-a-half working days) (Muller et al., 2014), we have conservatively assumed that the productivity multiplier for live music attendance is one working day.

Productivity premium = $\hat{w} \times m_p \times v \times r$

$\hat{w}$ = median hourly wage

m_p = productivity multiplier

v = number of live music attendances

r = discount rate

Thus the extent to which attendance live music making in Australia improved the productivity of individuals in 2014 (a benefit enjoyed by their employers) is estimated to be **$884.3 million.**

This is the sum of positive impacts of $1.3 billion and negative impacts of $436.3 million. The negative impacts are noted here as a dis-benefit—rather than a cost—as they are not an input into live music making, but a negative outcome.

There is much need for additional research in this regard. For example, the conservative assumption is made that consumers only receive an increase in productivity from live music making in Australia through attendance at gigs; however, it is also likely that those who don't attend events but take advantage of the live music culture may also experience productivity benefits. Further empirical research into the effects of live music on productivity would thus be well received.

Civic benefits

For the purposes of this study, a civic benefit is a contribution made by having live music making in Australia that would otherwise have to be provided (presumably by the state) if the same community-wide standard of living were to be enjoyed. In other words, it typically represents a cost avoided by government.

Input / output modelling

Two instances of civic benefit are easily and immediately identified. As shown in Table 4b, the expenditure associated with live music making in Australia is estimated to generate in the order of 64,747 jobs, 37,652 of which are full-time. This is a benefit of $2.2 billion directly returned to households, with an equivalent welfare cost avoided by government. It is also observed that the estimate of taxes generated by live music-related or motivated expenditure is $950.6 million. Note that the taxation receipts may not be directly proportional to the relevant investment of each tier of government. Nevertheless, as it is unlikely that the live music industry receives an equivalent quantum of re-investment from government; it could be argued that the direct tax returns from live music making are used to finance other policy and social investments, such as hospitals and schools.

Civic benefits acknowledged but not quantified by this study include the significant levels of volunteering that occur within live music making in Australia, as well as the costs potentially avoided by our civil systems of health, criminal and social justice.

TABLE 4B

THE ECONOMIC IMPACT OF LIVE MUSIC MAKING IN AUSTRALIA, 2014 PART 2

MILLION	FT Employment (E)	PT Employment (F)	Wages Impact (G)	Taxes Impact (H)
NSW	13,832	9,375	$838.7	$353.6
VIC	11,117	7,979	$653.6	$278.0
QLD	5,945	4,507	$357.8	$152.0
WA	3,926	2,991	$224.5	$95.8
SA	2,263	1,839	$135.0	$57.7
TAS	199	165	$11.0	$4.8
ACT	265	192	$15.2	$6.4
NT	104	46	$5.5	$2.3
AUST	**37,652**	**27,095**	**$2,241.3**	**$950.6**

Other civic benefits

There are a number of formal systems of care that are paid for by society through taxes and personal expenditure. These include all private and public, recurrent and capital expenditure on health, criminal and social justice. The discussion on Capital describes how these are realised through live music. Our survey of producers also revealed significant levels of volunteering in the live music community; the replacement cost of that labour being another that effectively subsidises the activity and is avoided by the community.

Furthermore, every time that Australia is internationally associated with a live music event or activity, event or individual, it 'brands' the country—all be it temporarily—in the wider public consciousness. Such links are known to influence related purchase behaviour (Balabanis & Diamantopoulos, 2011; Kang & Yang, 2010). For regions or the nation as a whole, this means that people make tourism, export or even migration decisions that are founded on the strong and positive associations they have with the live music brand.

Research conducted by Dobos (2011) for Tourism Tasmania, for example, found that Art and Island Culture was a key factor in motivating and attracting tourists. As a significant player in the nation's cultural economy, it is reasonable to suggest that live music has a prominent role to play in this associative dynamic.

Philosophers from Aristotle to Dworkin (2006) have also argued that a robust democracy depends on the active participation of its citizens. The logic has been that for a government to be truly representative, as many constituents as possible must be connected and contributing to the social discourse. Putnam (2000) proposes that social capital is the mechanism that facilitates this, and research in this field strongly connects Arts participation—of which live music is a notable subset—with a willingness to vote and engage in formal political membership (ISSP, 2001).

At a more fundamental level, live music and its expressions are regularly used as a 'meeting point' in water-cooler discourse. The shared recognition of the characters and symbols in live music facilitates conversation and acts as a focal point for social debate, which in turn informs policy. It is further acknowledged that live music can act as a gateway for those marginalised to either contribute toward a political cause, draw strength from, or generate ideas that bring about political change (Caruso, 2005).

Due to the scope of this report, an attempt has not been made to locate and assign an economic value to these additional live music benefits; no doubt many more could also be identified. This is recommended as a direction for future research.

Individual benefits

When consumers engage with live music through the purchase of a good or service they are assumed to derive some benefit from the decision. A rational economic framework imposes the assumption that decision-makers are acting to maximise utility in some fashion and do not intentionally make decisions that reduce this. Therefore, for each act of participation or consumption, there is assumed to be a gross benefit (or gross consumer surplus) attached to that action or consumption.

At the very least, the gross benefit is equal to their expenditure on the items concerned. The revealed preference framework can therefore be applied to identify the minimum benefits associated with consumer expenditure. In this case, this is the $5.0 billion households spend on tickets, food and beverages, and other activity motivated purchases. Yet how much would consumers be willing to pay above and beyond this amount for the full set of benefits that might accrue from their live music experience?

Determining the benefits to individuals associated with their engagement involves adding their revealed preferences to the contingent value of their of live music consumption. In this section it is found that consumers recognise a well-being surplus of **$10.4 billion** that was directly attributable to having live music making in Australia in 2014.

The extent to which non-consumers identify a level of satisfaction with having live music making in the community is recommended as a direction for future research.

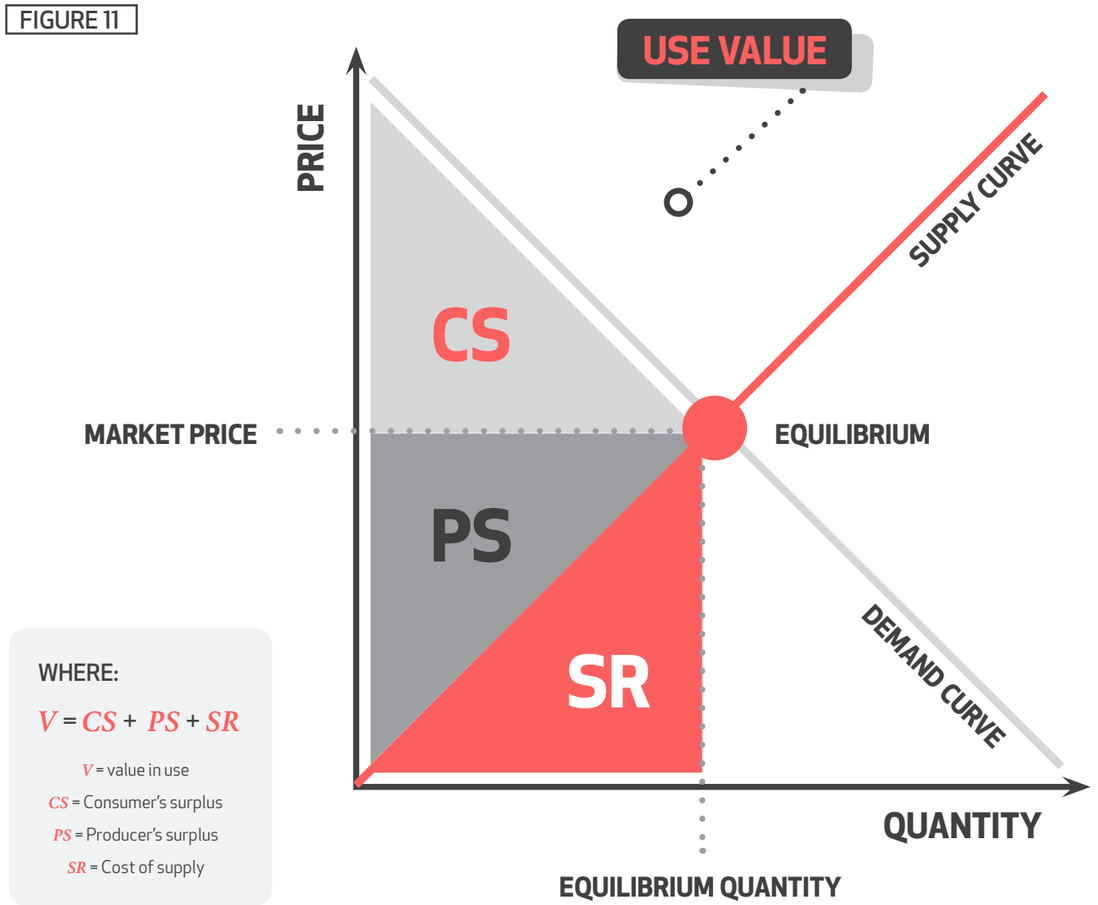
Use value

It is argued that the places where transactions occur (markets) are a social good because the exchange will only occur when both buyer and seller perceive value in their end of the deal. For the vendor, this means making a profit that exceeds their costs of production. This profit is also known as the producers' surplus, and its value is estimated in the Commercial Benefits section of this report. For the purchaser, though, value means achieving a 'bargain', in that they would have been willing to pay more than they actually did for the article to satisfy their need. The welfare of both parties is thus improved, and goods and services that do not meet this twin threshold are naturally selected out of the market.

Thus the net consumer surplus is the net benefit or additional utility an individual receives in excess of the cost associated with an activity or act of consumption. In many cases, 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 (or value-in-use) is what a person would be willing to pay for their purchase / consumption of a good or service, and includes the ultimate satisfaction (or utility) they derive from it. As such, it is the sum of the purchase (or market) price and consumer surplus.

It is known from the survey of live music consumers that the market price for live music related goods and services consumed in Australia in 2014 was $5.0 billion. Figure 11 shows that market price is the sum of the producer's surplus and the cost of supply.

FIGURE 11



WHERE:

$V = CS + PS + SR$

V = value in use

CS = Consumer's surplus

PS = Producer's surplus

SR = Cost of supply

Survey respondents were then asked if they would be hypothetically willing to pay (WTP) to support live music; and, if so, what the value this contribution might be worth over 12 months. WTP is essentially a quantification of an individual's satisfaction with an entity, in this case live music.

However, there was evidence to suggest some respondents to the live music survey misrepresented their preferences in reporting their WTP. Of the 1488 survey respondents, 19 reported a WTP greater than their annual income; four of which reported WTP in excess of $1010. Without controlling for misrepresented preferences analysis, results will overestimate the real WTP of consumers of live music.

To control for respondents attempting to influence analysis results, as well as the potential bias of our sample, WTP was capped at 10 per cent of an individual's reported annual income. Although WTP should not be confused with an individual's capacity to pay (as it is a measure of gross satisfaction), this allowed for WTP to vary within cohorts while removing the influence of misrepresented preferences. Capping WTP in this way affected 120 responses, or 8.1 per cent of the sample.

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. Among the 30.3 percent of the population aged 15 years and over who attended a live music event in 2014 (ABS, 2010a), this allows for a gross national consumer surplus of $5.4 billion, or 108.8% of their actual expenditure (not including shadow costs).

The gross value-in-use of live music making in Australia, being the sum of market price and consumer surplus, is therefore estimated to be **$10.4 billion**.

A cautionary note

Expressions of willingness to pay essentially measure satisfaction, and should not be confused with a desire on the part of consumers to pay more. In terms of value, increasing prices would result in a zero sum for current live music patrons, as the consumers' surplus would be converted into producers' surplus for no net gain.

Even though it is also known that ticket prices of live events are relatively inelastic; anecdotally, at least, non-consumers are highly price sensitive. Therefore, non-users would be alienated by price rises that were not linked to new value, and this would reflect in their adjusted WTP. As it is assumed that the greatest community benefit can be realised by converting non-consumers of live music into patrons, deliberating exploiting the presently high levels of the community's WTP—by either increasing prices or withdrawing subsidies—is likely to be counter-productive.

Non-use value

To this point, the methods described have exclusively considered the value that purchasers or consumers of live music might ascribe to their use. It is also recognised, however, that *non-users* (the other 70 per cent) might value live music, even if they do not purchase or otherwise engage with it.

The concept of **non-use value** is often used in economics as means of locating the benefits of environmental resources which are difficult to quantify through the market (Hanemann, 1993). In terms of this project, the non-use value of live music making comes from individuals who do not directly engage with the activity, but who recognise its benefits against possible alternatives.

Why, then, might someone place a value on something they never use? There are four alternative responses to this conundrum recognised in the academic literature:

1. *Option value*—reservation of the right to use the resource at some time in the future (Brookshire, Eubanks, & Randall, 1983; Weisbrod, 1964)
2. *Bequest value*—maintenance of a resource for future generations (McConnell, 1983; Walsh, Loomis, & Gillman, 1984)
3. *Existence value*—the satisfaction people receive from knowing that something exists (Edwards, 1992; Larson, 1993), and
4. *Altruistic value*—appreciation of the right of others to use the resource (McConnell, 1997; Milgrom, 1993).

To this, a *fifth category* of non-use value can be added that is an intuitive extension of how people assign value to public goods. This is the value placed on individual willingness to pay for maintaining an asset or resource that is used exclusively by others to create a benefit that is enjoyed by the whole community. In this study it is designated as **shared value**.

To illustrate shared value: I may be willing to pay to enable a live music festival in my home town—even though I have no intention of attending it—because I know it will create trade and employment opportunities for others, promote social inclusion, and beautify the streetscape.

This is distinct from option value, as I may have no intention of ever attending the festival; and bequest value, as the festival may only be a one-off event. To some extent shared value may clarify existence value; although, the satisfaction that people get from seeing an endangered species preserved in the wild may not be a shared value at all, as the species is designated to never be a consumable resource. In the same way, altruism implies no benefit to the donor; whereas, shared value recognises the internalising of a real (albeit indirect) welfare return.

It is beyond the scope of this research to quantify the non-use value of live-music making in Australia. Nevertheless, numerous studies in this space suggest that the non-use value of otherwise valuable public goods is anywhere between 5-50 per cent of its use value for individuals. This would suggest a theoretical minimum in the live music context of $600 million of non-use value; although, we stop short of asserting that here.

So what?

The particular benefits that individuals and the community receive from live music making in Australia are not unique. Viewed in isolation, they may not even be that efficient. For example, people might equally improve their social capital by going to church; and, as a 'luxury' purchase, the relative inelasticity ticket prices might be seen as justification for increasing the tax revenue gained from such events. Perhaps then users (and potentially non-users) are valuing the ability of live music to originally combine and distribute these otherwise discrete contributions to welfare.

Well controlled WTP studies suggest that the easier it is to replace a benefit, the less people are willing to pay for its preservation. In this case, there are a number of competing leisure alternatives in Australia. Although a comparative WTP study with these options has not been performed here, the fact that the community of users are theoretically willing to defend live music making to the extent described is an original and significant finding.

9.

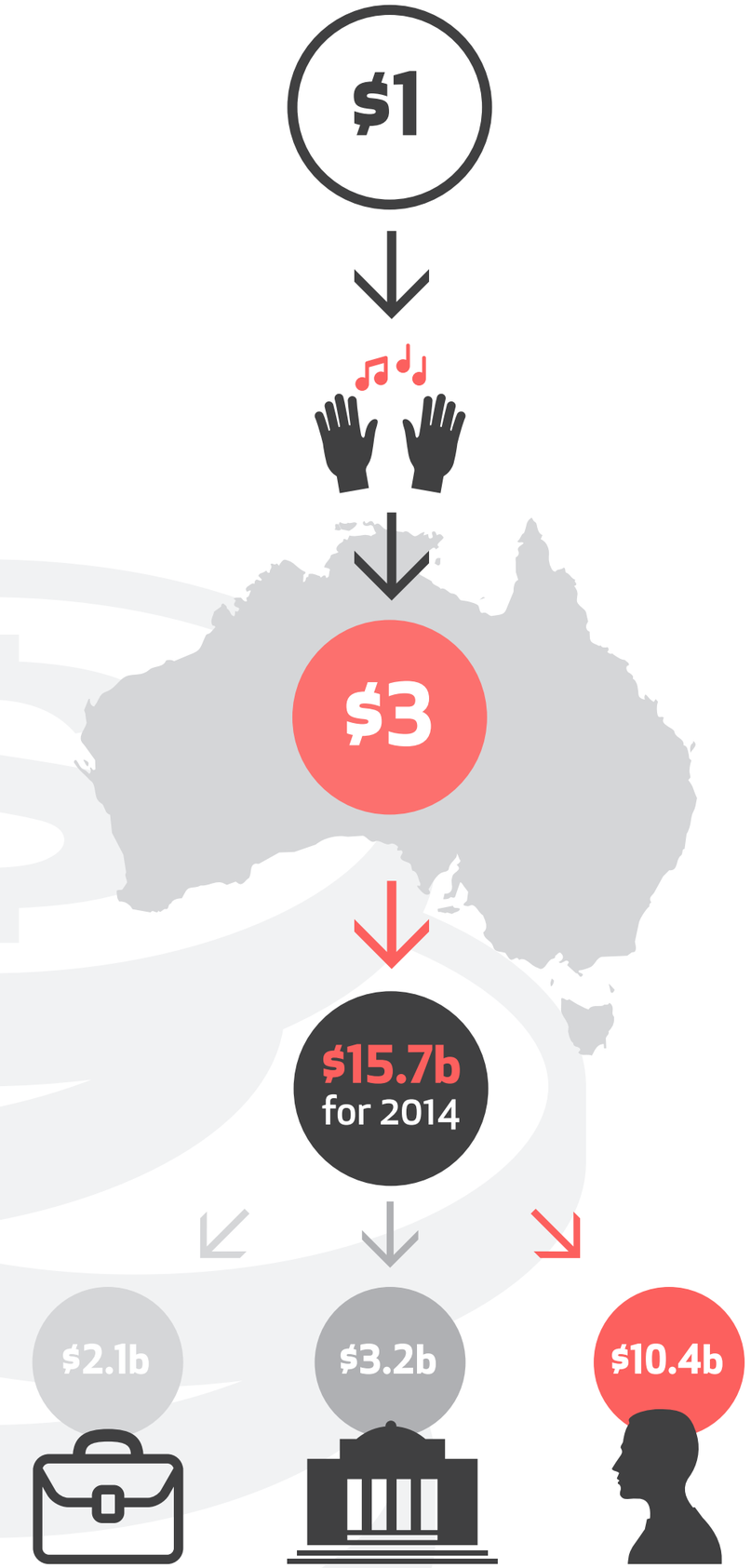
THE VALUE OF LIVE MUSIC MAKING IN AUSTRALIA, 2014

The value of live music making in Australia to the entire community is the sum of the benefits enabled. This study estimates these to be worth **$15.7 billion** in 2014.

This figure is significantly greater than previous estimates based on price or economic impact; however, it is likely to be an underestimation given the limitations of the available data and forensic techniques.

TABLE 5 **THE VALUE OF LIVE MUSIC MAKING IN AUSTRALIA, 2014** $m

COSTS			
Direct		$4,978.8	
Opportunity		$55.8	$5,034.5
BENEFITS			
Commercial			
Producers' surplus	$1,230.2		
Productivity premium	$884.3	$2,114.5	
Civic			
Employment	$2,241.3		
Taxation revenue	$950.6	$3,191.9	
Individual			
Patrons	$10,393.9		
Others	*Unknown*	$10,393.9	**$15,700.4**
Net benefit			$10,665.9
Benefit : cost ratio	**3.1 : 1**		



On its own, $15.7 billion is a fairly meaningless sum. The power of numbers lies in their ability to provide a standardised basis for comparison, and—short of performing the same exercise for every other human activity—a top-line valuation of every human endeavour is impractical, if not impossible.

For that reason 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 three dollars are returned.

Cost benefit analyses of this type within the live music landscape are rare, yet the findings of this study speak for themselves. If you could guarantee a minimum annual return of 300 per cent on every dollar commercially invested, then there would be a run on the banks tomorrow.

It is beyond the brief of this project to make recommendations as to how government investment in live music making in Australia can be made more efficient. That would require the application of the model to specific programs and policy contingencies. The results reported nevertheless reveal a number of outcomes that should be of particular interest to the community.

This analysis has shown that, because the external benefits of live music making in Australia 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 Australia are supporting the common good. Hopefully this report can educate readers to the economically real and significant value of live music making in Australia.

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.

Opportunities for Future Research

This study has identified a number of gaps in our understanding of the empirical impacts of live music making in Australia. Future research is therefore encouraged in the following areas:

- Future research into the value of live music making should source data from:
  - a representative national sample of the consumer population(s) under consideration, and
  - shadow-market investors, including volunteers, businesses and government.
- The development of a live music satellite account will comprehensively resolve the extent to which live music making directly impacts on the Australian economy.
  - Incidental expenses recommended for inclusion in a satellite account include included baby-sitting, car parking, hearing protection, cameras and multimedia devices, and recreational drugs; as is the inclusion where relevant of the instruments of live music production.
- The input / output model used in this study made significant State-wide generalisations, particularly about imports, that may or may not have accurately reflected the actual flow of transactions in live music making in Australia micro-economy. Although collation and integration of the level of detail required to customise the model was beyond the means of this study, larger applications of the I/O method should consider this.
- The impact of live music on the productivity of consumers and any employer-enjoyed surpluses they carry forward into their work.
- Quantification of the full-suite of live music costs and benefits attributable to civil society, including:
  - volunteering
  - health
  - criminal and social justice
  - brand impacts on exports (such as tourism), and
  - civic engagement.
- An examination of the indirect benefits non-users of live music might experience and the value that they place on these. This study assumed, by omission, that non-users of live music in the survey period received zero well-being benefits or satisfaction from it. Our survey method was not sensitive to this, and future studies should consider locating this value.
- Greater sensitivity analysis and the modelling of various efficiency-based scenarios to better inform policy makers at all levels on the costs and benefits of future live music investment in Australia.

LIVE MUSIC

IN AUSTRALIA 2014

APPENDIX 1:
STATE TABLES

These State tables assume a constant WTP for all persons regardless of residence, a limitation of our data that explains the variances in the benefit cost ratios of each jurisdiction. Rounding errors may also be observable in sub-totals.

TABLE 5A — THE VALUE OF LIVE MUSIC MAKING IN NSW, 2014 — $m

COSTS			
Direct		$1,780.0	
Opportunity		$19.9	$1,800.0
BENEFITS			
Commercial			
Producers' surplus	$425.9		
Productivity premium	$290.6	$716.5	
Civic			
Employment	$838.7		
Taxation revenue	$353.6	$1,192.3	
Individual			
Patrons	$3,514.6		
Others	*Unknown*	$3,514.6	**$5,423.5**
Net benefit			$3,623.5

TABLE 5B — THE VALUE OF LIVE MUSIC MAKING IN VIC, 2014 — $m

COSTS			
Direct		$1,432.9	
Opportunity		$16.0	$1449.0
BENEFITS			
Commercial			
Producers' surplus	$352.9		
Productivity premium	$214.1	$567.0	
Civic			
Employment	$653.6		
Taxation revenue	$278.0	$931.6	
Individual			
Patrons	$2,788.8		
Others	*Unknown*	$2,788.8	**$4,287.3**
Net benefit			$2,838.3

TABLE 5C — THE VALUE OF LIVE MUSIC MAKING IN QLD, 2014 — $m

COSTS			
Direct		$824.5	
Opportunity		$9.2	$833.7
BENEFITS			
Commercial			
Producers' surplus	$213.5		
Productivity premium	$166.7	$380.2	
Civic			
Employment	$357.8		
Taxation revenue	$152.0	$509.8	
Individual			
Patrons	$1,900.2		
Others	*Unknown*	$1,900.2	**$2,790.1**
Net benefit			$1,956.4

TABLE 5D THE VALUE OF LIVE MUSIC MAKING IN WA, 2014

$m

COSTS			
Direct		$538.6	
Opportunity		$6.0	$544.7
BENEFITS			
Commercial			
Producers' surplus	$149.7		
Productivity premium	$108.6	$258.3	
Civic			
Employment	$224.5		
Taxation revenue	$95.8	$320.3	
Individual			
Patrons	$1,130.7		
Others	*Unknown*	$1,130.7	**$1,709.3**
Net benefit			$1,164.6

TABLE 5E THE VALUE OF LIVE MUSIC MAKING IN SA, 2014

$m

COSTS			
Direct		$310.1	
Opportunity		$3.5	$313.6
BENEFITS			
Commercial			
Producers' surplus	$71.0		
Productivity premium	$58.6	$129.6	
Civic			
Employment	$135.0		
Taxation revenue	$57.7	$192.7	
Individual			
Patrons	$704.3		
Others	*Unknown*	$704.3	**$1,026.7**
Net benefit			$713.1

TABLE 5F THE VALUE OF LIVE MUSIC MAKING IN TAS, 2014

$m

COSTS			
Direct		$29.7	
Opportunity		$0.3	$30.0
BENEFITS			
Commercial			
Producers' surplus	$6.6		
Productivity premium	$14.4	$21.0	
Civic			
Employment	$11.0		
Taxation revenue	$4.8	$15.8	
Individual			
Patrons	$148.9		
Others	*Unknown*	$148.9	**$185.8**
Net benefit			$155.8

TABLE 5G THE VALUE OF LIVE MUSIC MAKING IN ACT, 2014

$m

COSTS			
Direct		$46.4	
Opportunity		$0.5	$46.9
BENEFITS			
Commercial			
Producers' surplus	$6.6		
Productivity premium	$23.6	$30.1	
Civic			
Employment	$15.2		
Taxation revenue	$6.4	$21.5	
Individual			
Patrons	$135.9		
Others	*Unknown*	$135.9	**$187.6**
Net benefit			$140.7

TABLE 5H

THE VALUE OF LIVE MUSIC MAKING IN NT, 2014

$m

COSTS			
Direct		$16.5	
Opportunity		$0.2	$16.7
BENEFITS			
Commercial			
Producers' surplus	$4.0		
Productivity premium	$7.8	$11.8	
Civic			
Employment	$5.5		
Taxation revenue	$2.3	$7.8	
Individual			
Patrons	$70.4		
Others	*Unknown*	$70.4	**$90.1**
Net benefit			$73.4

APPENDIX 2: DATA COLLECTION INSTRUMENTS

Survey of live music consumers

1. **What type of gigs do you attend?** (tick all that apply)

- ☐ House shows
- ☐ Small venues
- ☐ Pubs / clubs
- ☐ Theatre
- ☐ Festivals
- ☐ Arena / stadium
- ☐ Other _____
- ☐ None

2. **Do you identify with particular genres, scenes or subcultures?**

_____

3. **How do you find out about the gigs you attend?**

- ☐ Mainstream media
- ☐ Community media
- ☐ Street press / online gig guides
- ☐ Email / other database mail outs
- ☐ Internet / web page
- ☐ Posters / flyers
- ☐ Word of mouth
- ☐ Social media
- ☐ Other _____

4. Where do you go to gigs?

☐ Within 50km of home %

☐ Somewhere else in my home State %

☐ Somewhere else in Australia %

☐ Overseas %

5. Why do you go to gigs?

6. What do you think live music does for your community?

7. Approximately how much money do you personally spend on your interest in live music each month?

Tickets / entry fees $

Food, beverages and other consumables $

Merchandise (including CDs, programs, memorabilia) $

Clothes and fashion $

Memberships and subscriptions $

Fuel, motor vehicle and travel expenses $

Phone, internet and communication expenses $

Accommodation and related expenses $

Did you have any other out of pocket expenses related to live music not covered in that list?

$ Expense type

8. On average, *how many hours* do you spend on your interest in live music each month:

Please include travel time, attending gigs, and any associated activities.

hours

9. Now think about how the benefits (and costs) of your live music interest impact on your employment.

For example, you might be a happier person, have stronger networks, and have access to certain skills or attributes that all improve on your productivity. On the flip side, you might take a few more days off.

To what extent do you think your live music interest impacts—positively or negatively—on your work performance?

☐ -5%

☐ -2%

☐ -1%

☐ None

☐ +1%

☐ +2%

☐ +5%

☐ Other %

10. In 3 years from now, are you *more* or *less* likely to be attending live music?

☐ Much more

☐ More

☐ About the same

☐ Less

☐ Much less

Why?

11. Why don't people go to (more) gigs?

12. What would make it easier for people to see (more) gigs?

13. Hypothetically, would you be willing to provide additional financial or other assistance (such as a donation of goods, services or time) to encourage more live music in the community?

- ☐ Yes
- ☐ No

14. Over 12 months, what do you think that assistance could be worth?

$ _____

Thank you very much for that. Because we are trying to get a representative picture of live music attendance, we would finally like to know a little more about you.

15. What is your gender?

- ☐ Female
- ☐ Male
- ☐ Other

16. How old are you?

- ☐ 15 to 24
- ☐ 25 to 34
- ☐ 35 to 44
- ☐ 45 to 54
- ☐ 55 to 64
- ☐ 65+

17. What is your usual postcode of residence?

_____

18. Finally, over the last 12 months, what was your approximate gross annual income?

If you live with a partner, please tell us your joint or household income.

- ☐ Under $30,000 per year ($577 per week)
- ☐ $30,000 to $49,999 per year ($577-$962 per week)
- ☐ $50,000 to $69,999 per year ($963-$1,346 per week)
- ☐ $70,000 to $89,999 per year ($1,347-$1,731 per week)
- ☐ $90,000 to $109,999 per year ($1,732-$2,115 per week)
- ☐ Over $110,000 per year ($2,115 per week)

Survey of live music producers

Record where the venue is based

- ☐ Sydney
- ☐ Melbourne
- ☐ Adelaide
- ☐ Hobart

1. Why do you host live music?

_____

_____

2. Do you identify with particular genres, scenes or subcultures?

_____

_____

3. How would you describe your business?

- ☐ Bar / Pub
- ☐ Nightclub
- ☐ Live performance venue
- ☐ DIY
- ☐ Non-traditional transient events
- ☐ Non-traditional permanent venue
- ☐ Other _____

4. What is your licensed audience capacity?

Live music _____ people

Total venue _____ people

5. How long has your venue or business continuously been promoting live music?

_____

_____

6. How often do you host live music?

7. How many separate shows or line-ups would you normally run a night? If more than one, why?

8. What factors do you think influence audience attendance at your venue / gigs?

9. What is your definition of a 'good' night (or event)?

Examples might include audience size, presence of performance, bar sales etc.

10. What do you think are the top contributing factors to whether a night or event is successful?

11. What do you see as the ***barriers*** to the success of venues promoting live music in your region?

12. How do you manage external factors that affect your venue or business?

13. In the next twelve months what aspects of your business or venue do you plan to invest in?

14. What was your ***total venue income*** over the last 12 months?

(This number will be kept anonymous and won't be individually identifiable)

$

15. What percentage of this income is from live music events?

%

16. What percentage of your ***remaining income*** derives from your live music reputation or operation?

%

17. In an average month, how do you promote live music at your venue or business?

	Time spent (hours)	Cash spent ($)
Mainstream media		
Community media		
Street press / online gig guides		
Email / other database mail outs		
Internet / web page		
Posters / flyers		
Social media		
_____		

18. Has this changed in the last three years? If so, how?

19. In the last 12 months, did you receive any unpaid media impressions in Australia or overseas that relate to your events?

Examples might include live music reviews, news articles, editorials, blogs, artist generated content etc

20. How do you compensate artists?

Examples might include guarantees, door deals, bar cuts, riders etc. Where more than one method is used, describe the mix.

21. In the last twelve months, how much did you spend on artist compensation?

$

22. In the last twelve months what were your other *live music related expenses?*

Ordinary staff $

Security staff $

Consumables (*eg* food & beverages, merchandise) $

Rent $

Venue overheads $

Insurances $

Licences & permits $

Capital / infrastructure $

Other expenses $

23. What percentage of your staff are:

Full-time staff %

Part-time staff %

Contract staff %

Casual staff %

Volunteers %

24. Are there people who work in your venue, but you don't pay directly? What do they do?

Examples might include production crews, merchandisers, promotional staff etc

25. In 3 years from now, do you feel are people *more* or *less* likely to be attending live music at your venue / promoted events? *(Tick only one)*

- ☐ Much more
- ☐ More
- ☐ About the same
- ☐ Less
- ☐ Much less

Why?

26. What do you think are the main contributions that live music makes to your community?

APPENDIX 3:

THE PRINCIPLES OF INPUT / OUTPUT MODELS

The principles of input-output models are described briefly here. The essential feature is that the output of any industry is not entirely sold on a market for the industry's product; some of it will be used by industries associated within the chain of production as an input for production; an example is the output of the sheet metal industry which will be in the large part purchased by motor vehicle and white goods manufacturers as input to the production of motor vehicles and refrigerators. More relevant local examples are the output of the agricultural industries, which provide inputs for the production of food and beverages, dairy production and support the manufacture of confectionary and dairy products; timber harvested by forest companies is sold to timber processors; while mining output is an input to the mineral processing industries. This backward and forward linking structure is an essential feature of an I/O table and defines its set of inter-industry relationships.

The development of an I/O model applied in this analysis is based on a transaction table developed by the ABS with the following structure:

- Each row shows the distribution of one industry to other industries and to final demand, while each column records the industry in questions' acquisition of inputs from other industries in an economy. These are referred to as 'intermediate purchases' to distinguish them from final purchases/sales.
- The table contains four quadrants:
  - The processing sector is shown as Quadrant 1 and records the flow of goods and services between individual industries during a year.
  - The second quadrant records the consumption expenditures of final buyers and the other industry sectors from which they are made. A particular feature of Quadrant 2 is the presence of capital items which are included as part of the total expenditure of the individual industries, however, these capital goods are not used up for production in the current period and so they are shown for the production sector only.
  - Quadrant 3 records payments for the use of primary inputs in particular to labour (wages, recorded as Compensation Of Employees), to corporations as profits or rents (Gross Operating Surplus), to governments in various tiers as indirect taxes and charges and to importers. The value added by each industry to total national income, Gross Domestic or State Product measured at factor (input) cost is the combination of some of these payments as follows:

$$Value\ Added_i = WSS_i + GOS_i + Indirect\ taxes_i - subsidies_i$$

- So the value added by industry i is the sum of wages, salaries and supplements or compensation of employees (COE_i) paid to labour, the gross operating surplus (GOS_i) plus indirect taxes and charges net of subsidies paid by government to industry i. The sum of all the value added by the i industries constituting the economy is the value of Australia's national income, namely GDP (Quadrant 4).

One of the objectives of the modelling is to determine how much GDP increases in response to the expenditure of an XXX project and in response to the increased expenditure by persons in response to XXX project, for example increased tourism.

In our analysis we also included an intermediary Table (with matrix identifier Z) which indicates the proportion of total supply of an industries output is met by a given industry. This is necessary due to the fact that sum industries produce goods that are measured as part of another sector (for example the 'Other Industries' sector producing service that are recorded as 'Personal Services'). At this stage we also exclude the leakage associated with imports. This occurs when demand results in output of a particular sector being imported from overseas.

FIGURE 12 **QUADRANTS OF THE TRANSACTION TABLE**

STRUCTURE OF AUSTRALIAN INPUT-OUTPUT TABLES
Direct allocation of imports, Basic prices, Recording of intra-industry flows

	To / From	Row prefix	Intermediate Uses: Agriculture, etc	Mining	Manufacturing, etc	Construction	Services	Intermediate uses (sub-total)	Final Uses: Final consumption expenditure — household	Final consumption expenditure — government	Gross fixed capital formation — private	Gross fixed capital formation — public enterprises	Gross fixed capital formation — general government	Changes in inventories	Exports of goods and services	Final Uses (sub-total)	Total supply (grand total)
	Column prefix		0101-0400	1100-1500	2101-3701	4101-4102	4501-9601		Q1	Q2	Q3	Q4	Q5	Q 6	Q 7		
Intermediate uses	Agriculture	0101-0400	QUADRANT 1 INTERMEDIATE USE						QUADRANT 2 FINAL USE								
	Mining	1100-1500															
	Manufacturing, etc.	2101-3701															
	Construction	4101-4102															
	Services	4501-9601															
	Intermediate uses (sub-total)																
Primary inputs	Compensation of employees	P1	QUADRANT 3 PRIMARY INPUTS TO PRODUCTION						QUADRANT 4 PRIMARY INPUTS TO FINAL USE								
	Gross operating surplus and mixed income	P2															
	Taxes on products (net)	P3															
	Other taxes on production (net)	P4															
	Imports	P5															
	Australian production																

The shaded areas correspond to aggregates shown in the Gross Domestic Product Account.
corresponds to aggregates shown as the components of gross domestic product, income approach.
corresponds to aggregates shown as the components of gross domestic product, expenditure approach.

The math of I/O modelling

The transaction table may be presented in the following matrix form where X_{ij} is the amount of industry j's output purchased by industry i as an input and D_i is the final demand for industry i's output.

The transaction table above is defined by dividing the elements of the matrix above by the current value of industry i's output. By this definition:

$$a_{ij} = \frac{x_{ij}}{x_j} \tag{1}$$

These a_{ij} are the technical coefficients of production and they represent the amount of industry i's output required to produce a unit of output in industry j.

From (1) we can write:

$$x_{ij} = a_{ij} X_j \tag{2}$$

and the output for industry i is the sum of intermediate sales and purchases plus the final demand for i's output (D_i) as follows:

$$X = AX + D \tag{3}$$

Where X is a vector of industry outputs, D is a vector of final demands and A is an i_{xj} matrix of technical coefficients.

The expression (3) can be solved for X as a function of D:

$$X - AX = D \quad (4)$$

$$X = (1 - A) = D \quad (5)$$

$$X = (1 - A)^{-1} D \quad (6)$$

$$X = BD \quad (7)$$

The solution vector represents the output of industries as some multiple of final demand (D) the multiple is the matrix (I-A)-1=B. This is known as the Leontief inverse after its creator. Now B is structured in the following manner:

$$B = \begin{bmatrix} b_{11} & b_{12} \; K \; K \; b_{ij} \; K \; K \; b_{1n} \\ M & M \\ b_{21} & b_{22} \; K \; K \; b_{2j} \; K \; K \; b_{2n} \\ M & M \\ b_{i1} & b_{i2} \; K \; K \; b_{ij} \; K \; K \; b_{in} \\ M & M \\ b_{n1} & b_{n2} \; K \; K \; b_{nj} \; K \; K \; b_{un} \end{bmatrix} \quad (8)$$

This is referred to as the table of interdependence coefficients and measures the direct, induced and indirect effects of a change in final demand for one of the industry outputs. The columns of this interdependence coefficient table are the output multipliers.

What do I/O output multipliers tell us? I/O output multipliers measure the changes in all industry outputs generated by a change in the final demand for any one output. For example, if the demand for agricultural output in Australia increased by 10%, then I/O output multipliers measure the impact on all industry output including agriculture.

Employment multipliers describe the impact of a change in the final demand for a specific industry's output on employment in the same and all other industries. These I/O employment multipliers are derived from employment equations, which are derived in turn by simply multiplying the output equations for each industry by the employment (E_i)/Output (X_i) ratio for the industry in question. So the employment equation for industry 1 is found by multiplying (1) though by E_i/X_i. Then I/O employment multipliers are found in the same way by inverting the set of employment equations solving for employment in industry i.

Wage multipliers are found in an identical fashion, but on this occasion wage equations are employed to derive these. The wage multiplier measures the change in all industry wage incomes flowing from a change in any of the final demands.

However, there is also a wage-multiplier effect which effectively 'closes' the model with respect to the household sector. The wage-multiplier identifies the extent to which increased household income from wages raises expenditure in the community, thereby generating additional economic activity and employment. To incorporate the impact of increased wages on household final consumption expenditure (a component of final demand D) we derive a matrix C which is parallel to the matrix A. The element of matrix C, cij relate the expected increase in household final consumption expenditure associated with a unit increase in output by industry j.

Therefore final demand D contains a dependent component based on wages and an independent component that with identify as FD. We describe this relationship in equation [0.1].

$$FD = D - CX \quad [0.0]$$

The expression [1.5] can be substituted into [1.4] while maintaining the equality as follows:

$$Y - AX - CX = FD \quad [0.0]$$

The expression [1.6] can then be solved for equilibrium X = Y as a function of FD:

$$Y - AY - CY = FD \quad [0.0]$$

$$Y (1 - A - C) = FD \quad [0.0]$$

$$Y = (1 - A - C)^{-1} FD \quad [0.0]$$

$$Y = (1 - A - C)^{-1} FD \quad [0.0]$$

$$Y = X = L \times FD \quad [0.0]$$

The solution vector B represent the output of industries as some multiple of final demand (FD) the multiple is the matrix $(1 - A - C)^{-1} = L$. The structure of L is a table of interdependence coefficients and measures the direct, indirect and induced (where the model is closed) effects of a change in final demand for one of the industry outputs. The columns of this inter-dependence table are the output multipliers.

Output I/O multipliers measure the change in all industry outputs generated by a change in the final demand for any one output. Wage, value-added and employment multipliers are calculated based on the output multipliers. It is assumed that the relationship between output of a given sector and its wage, value-added and employment are constant (effectively determined by technology and structural parameters in the industry) so that if output in a sector increases by a given amount, then the value-added, wage and employment impacts can be calculated using a constant ratio for each industry.

Gross State Product (GSP) multipliers measure the contribution of a final demand change to each industry's value added or its individual contribution to GSP. GSP multipliers are derived from total income equations which are output equations converted to total income relationships by applying value added/output ratios to each industry's outputs.

All four sets of multipliers are applied to the task of identifying employment, GSP, wage and output effects of the XXXX project not proceeding.

Here, a distinction should be made between Type I and Type II multipliers. Type I income or output multipliers are the ratio of the direct plus indirect income or output change of demand to the direct income change resulting from a dollar increase in final demand for any given industry.

Type II multipliers are those derived mathematically above and can be read off the column of the B matrix in (7). In either case, type I or II, the I/O model is closed with respect to households which is the case here.

The practicality of I/O models depends on certain properties and assumptions. First, a workable I/O model will be mathematically stable which happens if the following holds:

The table of technical coefficients must have at least one column which sums to a number less than one. No column in the table can exceed one in the aggregate (no industry can pay more for its inputs than it receives from the sale of its output).

The following assumptions underpin all practical I/O models:

- A single production function exists for all firms in an industry.
- This production function must be linear and be homogeneous of degree I (Constant Returns to scale applies).
- There is no substitutability between factions of production (labour and capital).

GLOSSARY

ABS	Australian Bureau of Statistics
APRA AMCOS	Australasian Performing Right Association Limited
CBA	Cost Benefit Analysis
CNV	Centre National de la Chanson des Variete et du Jazz
CVM	Contingent Valuation Method
DJ	Disc Jockey
GDP / GSP	Gross Domestic (State) Product
GVA	Gross Value Added
I/O	Input / Output (modelling)
IPM	Institute of Project Management
LPA	Live Performance Australia
OECD	Organisation for Economic Co-operation and Development
RBA	Reserve Bank of Australia
RIOM	(IPM's proprietary) Regional Input / Output Model
UNWTO	(United Nations) World Tourism Organisation
UTAS	University of Tasmania
WTP	Willingness to Pay

REFERENCES

ABS. (2010a). Attendance at Selected Cultural Venues and Events, Australia, 2009-10 *4114.0*. Canberra: Australian Bureau of Statistics.

ABS. (2010b). Australian National Accounts: Input-Output Tables - Electronic Publication, Final release 2006-07 tables *5209.0.55.001*. Canberra: Australian Bureau of Statistics.

ABS. (2012). Australian National Accounts: Input-Output Tables, 2008-09 (Vol. 5209.0.55.001). Canberra: Australian Bureau of Statistics.

ABS. (2014a). Australian National Accounts: National Income, Expenditure and Product, Jun 2014 *5206.0*. Canberra: Australian Bureau of Statistics.

ABS. (2014b). Consumer Price Index, Australia *6401.0*. Canberra: Australian Bureau of Statistics.

Anderson, T. L., Grunert, C., Katz, A., & Lovascio, S. (2010). Aesthetic Capital: A Research Review on Beauty Perks and Penalties. *Sociology Compass, 4*(8), 564.

Ansell, G., & Barnard, H. (2013). Song Lines: Mapping the South African Live Performance Landscape.

Armstrong, E. G. (2001). Gangsta misogyny: A content analysis of the portrayals of violence against women in rap music, 1987–1993. *Journal of Criminal Justice and Popular Culture, 8*(2), 96-126.

Arts Council England. (2014). The value of arts and culture to people and society: an evidence review. London.

Bakhshi, H., Freeman, A., & Higgs, P. (2013). A dynamic mapping of the UK's Creative Industries.

Balabanis, G., & Diamantopoulos, A. (2011). Gains and losses from the misperception of brand origin: The role of brand strength and country-of-origin image. *Journal of International Marketing, 19*(2), 95-116.

Behr, A., Brennan, M., & Cloonan, M. (2014). The cultural value of live music from the pub to the stadium: Getting beyond the numbers.

Binder, A. (1993). Constructing racial rhetoric: Media depictions of harm in heavy metal and rap music. *American Sociological Review*, 753-767.

Black, G. C., Fox, M. A., & Kochanowski, P. (2007). Concert tour success in North America: An examination of the top 100 tours from 1997 to 2005. *Popular Music and society*, 30(2), 149-172.

Blood, D. J., & Ferriss, S. J. (1993). Effects of background music on anxiety, satisfaction with communication, and productivity. *Psychological reports*, 72(1), 171-177.

Bourdieu, P. (1993). *The Field of Cultural Production*. New York: Columbia University Press.

Broh, B. A. (2002). Linking extracurricular programming to academic achievement: Who benefits and why? *Sociology of Education*, 69-95.

Brookshire, D. S., Eubanks, L. S., & Randall, R. A. (1983). Estimating Option Prices and Existence Values in Wildlife Resources. *Land Economics, 69*, 1-15.

Bygren, L. O., Konlaan, B. B., & Johansson, S.-E. (1996). Attendance at cultural events, reading books or periodicals, and making music or singing in a choir as determinants for survival: Swedish interview survey of living conditions. *BMJ: British Medical Journal, 313*(7072), 1577.

Carnwath, J. D., & Brown, A. S. (2014). Understanding the value and impacts of cultural experiences. *Manchester, United Kingdom: Arts Council England. Retrieved July, 27*(2014), 2014-2018.

Carr, D. L., Markusen, J. R., & Maskus, K. E. (1998). Estimating the knowledge-capital model of the multinational enterprise: National Bureau of Economic Research.

Caruso, H. Y. C. (2005). Art as a political act: Expression of cultural identity, self-identity, and gender by Suk Nam Yun and Yong Soon Min. *The Journal of Aesthetic Education, 39*(3), 71-87.

CNV. (2014). Les Entreprises de Spectacle de Variétés en 2012 & Éléments D'évolution 2008-2012: Centre National de la Chanson des Variete et du Jazz.

Cohen, G. D., Perlstein, S., Chapline, J., Kelly, J., Firth, K. M., & Simmens, S. (2006). The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults. *The Gerontologist, 46*(6), 726-734.

Cohen, S. (1999). 'Scenes'. In B. horner & T. Swiss (Eds.), *Key Terms in Popular Music and Culture*. (pp. 239-249). Malden, MA: Blackwell.

Costanza, R., Wilson, M., Troy, A., Voinov, A., Liu, S., & D'Agostino, J. (2007). The value of New Jersey's ecosystem services and natural capital. *The Gund Institute of Ecological Economics, Burlington, VT and The New Jersey Department of Environmental Protection, Trenton, New Jersey*.

Côté, S., & Healy, T. (2001). The well-being of nations: The role of human and social capital. *Paris: Organisation for Economic Co-operation and Development*.

Darwin, C. (2010). Why Does Music Make Sex Better? In H. Witchell (Ed.), *You are what You Hear: How Music and Territory Make Us who We are* (pp. 23): Algora Publishing.

De Clercq, D., & Voronov, M. (2009). The role of cultural and symbolic capital in entrepreneurs' ability to meet expectations about conformity and innovation. *Journal of small business management, 47*(3), 398-420.

Deloitte Access Economics. (2011). The Economic, Social and Cultural Contribution of Venue-Based Live Music in Victoria.

DeNora, T. (2000). *Music in everyday life*: Cambridge University Press.

DiMaggio, P., & Useem, M. (1978). Social class and arts consumption. *Theory and Society, 5*(2), 141-161.

Dobos, V. (2011). Motivations Research: Appeal triggers and motivations for tourism in Tasmania. Tasmania: Tourism Tasmania.

Dudwick, N., Kuehnast, K., Jones, V. N., & Woolcock, M. (2006). Analyzing Social Capital in Context: A Guide to Using Qualitative Methods and Data. Washington DC: World Bank.

Dworkin, R. (2006). *Is Democracy Possible Here?: Principles for a New Political Debate*

Edwards, S. F. (1992). Rethinking existence values. *Land Economics*, 120-122.

Ernst & Young. (2011). Economic contribution of the venue-based live music industry in Australia.

Ernst & Young. (2014). 2013 Ticket Attendance Survey and Review *Live Performance Industry in Australia*: Live Performance Australia.

Fancourt, D., Ockelford, A., & Belai, A. (2014). The psychoneuroimmunological effects of music: A systematic review and a new model. *Brain, Behavior, and Immunity, 36*(0), 15-26. doi: http://dx.doi.org/10.1016/j.bbi.2013.10.014

Fikentscher, K. (2000). You better work! *Underground Dance Music in New York City*.

Finke, R. (2003). Spiritual capital: Definitions, applications, and new frontiers. *Retrieved April, 24*, 2005.

Flew, T. (2008). Music, cities, and cultural and creative industries policy. *Sonic synergies: music, technology, community, identity*, 7-16.

Forsyth, A., & Cloonan, M. (2008). Alco-pop? The Use of Popular Music in Glasgow Pubs. *Popular Music and society, 31*(1), 57-78.

Gallan, B., & Gibson, C. (2013). Mild-mannered bistro by day, eclectic freak-land at night: memories of an Australian music venue. *Journal of Australian Studies, 37*(2), 174-193.

Garrett, S. (2010). The role of community music in helping disadvantaged young people in South Wales to confront social exclusion. *International Journal of Community Music, 3*(3), 371-377. doi: 10.1386/ijcm.3.3.371_1

Gibson, C., & Homan, S. (2004). Urban redevelopment, live music and public space: Cultural performance and the re-making of Marrickville. *International Journal of Cultural Policy, 10*(1), 67-84.

Giesbrecht, N., Bosma, L. M., Juras, J., & Quadri, M. (2014). Implementing and Sustaining Effective Alcohol-Related Policies at the Local Level: Evidence, Challenges, and Next Steps. *World Medical & Health Policy, 6*(3), 203-230.

Green, J., & Plant, M. A. (2007). Bad bars: a review of risk factors. *Journal of Substance Use, 12*(3), 157-189.

Gretton, P. (2013). On Input-Output Tables: Uses and Abuses: Australian Government Productivity Commission.

Grootaert, C. (1998). Social Capital: the Missing Link? *Glossary of Statistical Terms*. Retrieved 3 July, 2008, from http://stats.oecd.org/glossary/detail.asp?ID=3560

Grootaert, C., & Basterlaer, T. v. (2002). Understanding and measuring social capital: A multidisciplinary tool for practitioners. Washingto DC: World Bank.

Hakim, C. (2010). Erotic capital. *European sociological review, 26*(5), 499-518.

Hallam, S. (2005). *Enhancing motivation and learning throughout the lifespan*: Institute of Education Univeristy of London.

Hallam, S. (2010). The power of music: Its impact on the intellectual, social and personal development of children and young people. *International Journal of Music Education, 28*(3), 269-289.

Hanemann, W. M. (1993). Three approaches to defining" existence" or" non-use" value under certainty.

Harrison, S. (2010). Boys on the Outer: Themes in Male Engagement with Music *Thymos: Journal of Boyhood Studies, 4*(1), 39-53. doi: 10.3149/thy.0401.39

Hearn, G. N., Ninan, A., Rogers, I. K., Cunningham, S. D., & Luckman, S. H. (2004). From the margins to the mainstream: creating value in Queensland's music industry. *Media International Australia Incorporating Culture and Policy: Quarterly Journal of Media Research and Resources*(112), 101-114.

Higgs, P. L., Cunningham, S. D., & Bakhshi, H. (2008). Beyond the creative industries: Mapping the creative economy in the United Kingdom.

Higgs, P. L., Cunningham, S. D., & Pagan, J. D. (2007). Australia's creative economy: Basic evidence on size, growth, income and employment.

Hiser, J. (1998). Understanding the value of your employees' knowledge. *The CPA Journal, 68*(7), 56.

Hoffman, A. R. (2012). Exclusion, engagement and identity construction in a socioeconomically diverse middle school wind band classroom. *Music Education Research, 14*, 209-226. doi: 10.1080/14613808.2012.685452

Holmes, C., Knights, A., Dean, C., Hodkinson, S., & Hopkins, V. (2006). Keep music live: music and the alleviation of apathy in dementia subjects. *International Psychogeriatrics, 18*(04), 623-630.

Holt, F. (2013). Rock Clubs and Gentrification in New York City: The Case of The Bowery Presents. *IASPM@ Journal, 4*(1), 21-41.

Homan, S. (2008). A portrait of the politician as a young pub rocker: live music venue reform in Australia. *Popular music, 27*(02), 243-256.

Homan, S. (2010). Governmental as anything: live music and law and order in Melbourne. *Perfect Beat, 11*(2), 103-118.

Homan, S. (2011). "I Tote and I Vote": Australian live music and cultural policy. *Arts Marketing, 1*(2), 96-107. doi: http://dx.doi.org/10.1108/20442081111180322

Horning, S. S. (2004). Engineering the Performance Recording Engineers, Tacit Knowledge and the Art of Controlling Sound. *Social Studies of Science, 34*(5), 703-731.

Howe, T. R., & Friedman, H. S. (2014). Sex and Gender in the 1980s Heavy Metal Scene: Groupies, Musicians, and Fans Recall Their Experiences. *Sexuality and Culture, 18*(3), 608-629. doi: 10.1007/s12119-013-9218-x

Hracs, B. J., & Leslie, D. (2014). Aesthetic labour in creative industries: the case of independent musicians in Toronto, Canada. *Area, 46*(1), 66-73.

Huang, R.-H., & Shih, Y.-N. (2011). Effects of background music on concentration of workers. *Work: A Journal of Prevention, Assessment and Rehabilitation, 38*(4), 383-387.

Hutton, A., Ranse, J., Verdonk, N., Ullah, S., & Arbon, P. (2014). Understanding the characteristics of patient presentations of young people at outdoor music festivals. *Prehospital and disaster medicine, 29*(02), 160-166.

Iannaccone, L. R., & Klick, J. (2003). Spiritual capital: An introduction and literature review. *Retrieved April, 24*, 2005.

ISSP. (2001). Social Relations and Support Systems (Social Networks II): International Social Survey Program.

Johansson, S. E., Konlaan, B. B., & Bygren, L. O. (2001). Sustaining habits of attending cultural events and maintenance of health: a longitudinal study. *Health promotion international, 16*(3), 229-234.

Johnson, B. K., Mondello, M. J., & Whitehead, J. C. (2007). The Value of Public Goods Generated by a National Football League Team. *Journal of Sport Management, 21*(1), 123-136.

Johnson, L. (2006). Valuing the arts: theorising and realising cultural capital in an Australian city. *Geographical Research, 44*(3), 296-309.

Kang, M., & Yang, S. U. (2010). Comparing effects of country reputation and the overall corporate reputations of a country on international consumers' product attitudes and purchase intentions. *Corporate Reputation Review, 13*(1), 52-62.

Konlaan, B. B., Bygren, L. O., & Johansson, S.-E. (2000). Visiting the cinema, concerts, museums or art exhibitions as determinant of survival: a Swedish fourteen-year cohort follow-up. *Scandinavian Journal of Public Health, 28*(3), 174-178.

Laeven, R. J. A., & Goovaerts, M. J. (2004). An optimization approach to the dynamic allocation of economic capital. *Insurance: Mathematics and Economics, 35*(2), 299-319.

Laing, D. (2012). What's it worth? Calculating the economic value of live music

Larson, D. M. (1993). On measuring existence value. *Land Economics, 69*(4), 377-388.

Lee, S. P., Cornwell, T. B., & Babiak, K. (2013). Developing an Instrument to Measure the Social Impact of Sport: Social Capital, Collective Identities, Health Literacy, Weil-Being and Human Capital. *Journal of Sport Management, 27*(1), 24-42.

Lillemyr, O. F. (1983). Achievement Motivation as a Factor in Self-Perceptions.

Lobato, R. (2006). Gentrification, cultural policy and live music in Melbourne. *Media International Australia, Incorporating Culture & Policy*(120), 63.

Long, P. (2014). Popular music, psychogeography, place identity and tourism: The case of Sheffield. *Tourist Studies, 14*(1), 48-65.

Lööf, H., & Heshmati, A. (2002). Knowledge capital and performance heterogeneity:: A firm-level innovation study. *International Journal of Production Economics, 76*(1), 61-85.

Luthans, F., Avolio, B. J., & Youseff, C. (2007). Psychological Capital: Developing the Human Capital Edge. Oxford, UK: Oxford University Press.

Luthans, F., & Youssef, C. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. Organizational Dynamics, 33(2), 143-160.

Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge*: Oxford University Press, USA.

Marx, K. (1859). The Emancipation Question. *New York Daily Tribune*.

McConnell, K. E. (1983). Existence and bequest value. *Managing air quality and scenic resources at national parks and wilderness areas*, 254-264.

McConnell, K. E. (1997). Does altruism undermine existence value? *Journal of Environmental Economics and Management, 32*(1), 22-37.

McKean, R. N. (1968). The use of shadow prices.

Meyhoff, K. W., Krohn, C. W., & Sjøvold, M. (2014). Musikk i tall 2012.

Michael, R. T. (2004). Sexual capital: an extension of Grossman's concept of health capital. *Journal of health economics, 23*(4), 643-652.

Milgrom, P. (1993). Is sympathy an economic value?: Philosophy, Economics, and the contingent valuation method. *Contributions to Economic Analysis, 220*, 417-441.

Miller, B. A., Byrnes, H. F., Branner, A. C., Voas, R., & Johnson, M. B. (2013). Assessment of club patrons' alcohol and drug use: the use of biological markers. *American journal of preventive medicine, 45*(5), 637-643.

Miller, P., Droste, N., Martino, F., Palmer, D., Tindall, J., Gillham, K., & Wiggers, J. (2014). Illicit drug use and experience of harm in the night-time economy. *Journal of Substance Use*(0), 1-7.

Muller, P., Cameron, N., Jameson, L., Robertson, K., & Grafton, R. (2013). The Economic, Social and Cutlural Value of the Salamance Arts Centre 2011-2012: Salamanca Arts Centre.

Muller, P., Harvey, J., Arthur, D., & McMahon, I. (2014). The Socio-Economic Value of AFL Games in Hobart, 2014. Hobart: Institute of Project Management.

Newman Jr, R. I., Hunt, D. L., & Rhodes, F. (1966). Effects of music on employee attitude and productivity in a skateboard factory. Journal of Applied psychology, 50(6), 493.

Newton, D. (2012). Victorian Live Music Census. Melbourne.

North, A. C., Hargreaves, D. J., & McKendrick, J. (1999). The influence of in-store music on wine selections. *Journal of Applied psychology, 84*(2), 271.

OECD. (2001). Measuring Productivity OECD Manual Measurement of Aggregate and Industry-Level Productivity Growth (pp. 156).

Office of Best Practice Regulation. (2005). Decision rules in regulatory cost-benefit analysis *Best Practice Regulation* Canberra: Department of Finance and Deregulation

Ollman, B. (1976). *Alienation: Marx's conception of man in a capitalist society*: Cambridge University Press.

Page, W. (2010). Counting up the music industry for 2009. London: PRS for Music.

Passanisi, P. J. (2010). *Unveiling the perspectives of folk rock music groupies: the experiences, motivations and perceptions of women following music bands: a project based upon an independent investigation.*

Phillipov, M. (2011). Extreme music for extreme people? *Popular Music History, 6*(1/2), 150-163. doi: 10.1558/pomh.v6i1/2.150

Portnoff, L., Nielsén, T., & Sternö, J. (2013). Music Industry in Figures - 2011.

Pratt, A. C. (2000). New media, the new economy and new spaces. *Geoforum, 31*(4), 425-436.

Pratt, A. C. (2008). Creative cities: the cultural industries and the creative class. *Geografiska Annaler: Series B, Human Geography, 90*(2), 107-117.

Pricewaterhouse Coopers. (2014). Economic contribution of the New Zealand music industry, 2012 and 2013.

Putnam, R. (2002). Social Capital Community Benchmark Survey short form. http://www.hks.harvard.edu/saguaro/pdfs/socialcapitalshortform.pdf

Putnam, R. D. (2000). *Bowling alone*: Simon & Schuster.

RBA. (2014). F2 Capital Market Yields - Government Bonds. Canberra: Reserve Bank of Australia.

Ress, W. E., & Wackernagel, M. (1996). Ecological footprints and appropriated carrying capacity: Measuring the natural capital requirements of the human economy. *Focus, 6*(1), 45-60.

Rogers, J. (2013). *The death and life of the music industry in the digital age*: A&C Black.

Sedita, S. R. (2008). Interpersonal and Inter-organizational Networks in the Performing Arts: The Case of Project-Based Organizations in the Live Music Industry. *Industry and Innovation, 15*(5), 493-511.

SGS Economics. (2011). Music Industry Economic Impact Study.

Shaw, K. (2005). The place of alternative culture and the politics of its protection in Berlin, Amsterdam and Melbourne. *Planning Theory & Practice, 6*(2), 149-169.

Shaw, K. (2009). The Melbourne indie music scene and the inner city blues. *Porter and Shaw (eds), Whose Urban Renaissance*, 149-169.

Shaw, K. (2013). Independent creative subcultures and why they matter. International Journal of Cultural Policy, 19(3), 333-352.

Sigurðardóttir, M. S. (2011). *Towards Creative Iceland: building local, going global*. Paper presented at the Reykjavik: The Consultative Forum of Creative Industries in Iceland.

Smith, A. (1828). *An Inquiry into the Nature and Causes of the Wealth of Nations*: A. and C. Black.

Spahr, W. (2013, 1 October). German Live Music Market Dropped 16% in 2012 (Study). *Billboardbiz*.

Stempel, C. (2006). Gender, Social Class, and the Sporting Capital-Economic Capital Nexus. *Sociology of Sport Journal, 23*(3), 273-292.

Stewart, T., & Ruckdeschel, C. (1998). Intellectual capital: The new wealth of organizations. *Performance Improvement, 37*(7), 56-59.

Sward, R. (1989). Band is a family. *Today's Music Educator*(Winter), 26-27.

Teece, D. J., & Teece. (2000). *Managing intellectual capital: Organizational, strategic, and policy dimensions*: Taylor & Francis.

Thornton, S. (1996). *Club cultures: Music, media, and subcultural capital*: Wesleyan University Press.

Thornton, S. (2013). *Club cultures: Music, media and subcultural capital*: John Wiley & Sons.

Throsby, D., & Zednik, A. (2010). An economic study of professional artists in Australia.

UK Music. (2014). Measuring Music. London.

UNWTO. (2002). Basic Concepts of the Tourism Satellite Account: United Nations World Tourism Organisation.

Walker, C. (2012). History is made at night: live music in Australia| Macquarie University ResearchOnline.

Walsh, R. G., Loomis, J. B., & Gillman, R. A. (1984). Valuing option, existence, and bequest demands for wilderness. *Land Economics*, 14-29.

Watson, A. (2008). Global music city: knowledge and geographical proximity in London's recorded music industry. *Area, 40*(1), 12-23.

Watson, A., Hoyler, M., & Mager, C. (2009). Spaces and networks of musical creativity in the city. *Geography Compass, 3*(2), 856-878.

Weisbrod, B. (1964). Collective Consumption Services of Individual Consumption Goods. *Quarterly Journal of Economics, 78*(3), 471-477.

Welch, G. F., Himonides, E., Saunders, J., Papageorgi, I., Sarazin, M., Aujla, I., & Van Staden, A. (2014). Singing and social inclusion. *Frontiers in Psychology, 5*, 211-222. doi: 10.3389/fpsyg.2014.00803

Williamson, J., Cloonan, M., & Frith, S. (2003). Mapping the music industry in Scotland: A report.

Woolcock, M. (1998). Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework. *Theory and Society., 27*, 151-208.

Worden, M. (2010, 27 October). Italian Biz Slumps. *Billboardbiz*.

Zhao, F., Manchaiah, V. K., French, D., & Price, S. M. (2009). Music exposure and hearing disorders: an overview. *International journal of audiology*, 49(1), 54-64.

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