Chapter 2

Overview of the Australian video game industry

2.1 Australia has been home to a video game development community for decades, with the origin of an established industry traceable to 1980.[1] As with many industries, since that time the video game development industry experienced periods of growth and significant setbacks. The industry is also subject to strong competition from studios in other countries.

2.2 This chapter provides key background information about the state of the video game industry in Australia and globally.[2] In particular, available data about the size of the industry and the people who play video games are presented. Developments in the industry following the global financial crisis of 2007–08 are also discussed. Finally, the chapter outlines some other factors that are relevant when assessing the industry.

Types of games and Australia's video game playing population

2.3 The results of research and various surveys were provided to the committee indicate that a large number of Australians play video games for entertainment. For example, a study of households in 2015 conducted by Professor Jeffrey Brand and Mr Stewart Todhunter for the Interactive Games and Entertainment Association (IGEA) found that:

- 98 per cent of Australian homes with children under the age of 18 have a device for playing interactive games;
- 68 per cent of Australians play interactive games, and of this game playing population:
  - 78 per cent were aged 18 years or older, 71 per cent were working age (18–64 years), 23 per cent were aged 50 and over, and seven per cent were aged 65 years or older,
  - the average age was 33 years, and

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1 Witnesses advised that the Australian industry began in 1980 with the establishment of Beam Software, which was also produced the first Australian game that sold over a million copies. See Mr Antony Reed, Chief Executive Officer, Game Developers' Association of Australia (GDAA), *Committee Hansard*, 19 February 2016, p. 1 and Ms Fiona Cameron, Chief Operating Officer, Screen Australia, *Committee Hansard*, 18 March 2016, p. 10.

2 This chapter does not provide a comprehensive overview of the history of the industry, or the various successes and failures that have occurred within it. Several submissions to the committee document these matters clearly and eloquently, particularly the submissions from industry organisations and academics. The committee invites readers that are interested in these matters to peruse the written submissions, and relevant research papers attached to them, that the committee has published on its website: www.aph.gov.au/senate_ec.

- 47 per cent were female;
- as part of their normal media usage, Australians spend an average of 88 minutes a day playing interactive games; and
- 27 per cent of players have tried making interactive games using software and nine per cent have studied or plan to study interactive games subjects.[3]

2.4 Another aspect of the video gaming population is the people who use products known as 'serious games'—that is, games intended for non-entertainment purposes. Professor Stuart Smith of the University of the Sunshine Coast provided the following definition of a serious game:

> …a mental contest, played with a computer in accordance with specific rules, that uses entertainment to further government or corporate training, education, health, public policy, and strategic learning objectives.[4]

2.5 Professor Smith explained that serious games are used in a variety of sectors, including health, education, defence, emergency planning, politics, engineering, urban planning, manufacturing and service delivery. He added:

> Application areas are as diverse as engaging a person recovering from stroke in repetitive rehabilitation arm movements, to delivering critical incident response training to emergency personnel through to educating a child living with cancer about the impact of chemotherapy on their health or another about the impact of genocide in Darfur.[5]

2.6 IGEA also addressed the social contributions that serious games can make by highlighting research undertaken by Neuroscience Research Australia involving 'a games-based stepping exercise designed for people with [multiple schlerosis], to help improve their balance and their mental skills'. IGEA submitted that the research 'is an excellent example of how games-based technologies have real world applications, and can improve people's lives'.[6]

2.7 Mr Ron Curry, the Chief Executive Officer of IGEA provided additional examples of health-related serious games, including games used to assist in dementia care and *Sound Scouts*, a game that helps to identify hearing problems in pre-school aged children. Mr Curry added that the hearing game is a successful diagnostic tool

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3 Interactive Games and Entertainment Association (IGEA), *Submission 9*, p. 5; J Brand and S Todhunter (2015), *Digital Australia 2016*, IGEA, www.igea.net/wp-content/uploads/2015/07/Digital-Australia-2016-DA16-Final.pdf (accessed 16 December 2015), p. 9.

4 M Zyda (2005), 'From visual simulation to virtual reality to games', *Computer*, vol. 38, no. 90, pp. 25–32; cited in Professor Stuart Smith, *Submission 80*, p. 4.

5 Professor Stuart Smith, *Submission 80*, p. 4.

6 IGEA, *Submission 9*, p. 22. Professor Jeffrey Brand, a Professor of Communication and Creative Media at Bond University, discussed this project in detail. See *Committee Hansard*, 10 March 2016, pp. 8, 12.

because the children 'enjoy playing it'. He argued that the game 'drives a targeted, cost-effective health sector outcome'.[7]

2.8 The use of games for education was also highlighted. The Game Developers' Association of Australia (GDAA) suggested that games 'will become more prevalent in Australian classrooms with the rollout of the digital technology curriculum into primary and secondary school'. The GDAA noted that this occurred followed similar initiatives in the United Kingdom and Estonia.[8] The Brisbane Chapter of the International Game Developers Association (BrIGDA) noted that educational games can be designed for use 'off the shelf' for matters such as history, or can be designed for specific purposes, such as 'to teach students about core curriculum topics'.[9]

2.9 In addition to games being used in primary and secondary education, the potential for games in tertiary education was noted. Professor Jeffrey Brand from Bond University informed the committee that an economics course at the University of Queensland uses a game to 'help model microeconomic processes'.[10]

2.10 Other uses for serious games include games designed to promote safety, such as road safety games that encourage careful driving, or relate to problems in the community, such as games about bullying.[11] An example of a game designed to identify 'talent and personality capabilities of a potential employee' during recruitment was also provided.[12]

2.11 The committee was also advised that the potential for serious games and other applications of game technology is likely to increase significantly with developments in virtual and augmented reality technology, and the mainstream deployment of this technology.[13] Mr Curry stated that augmented reality and virtual reality 'are the next big steps in the industry'. He provided the following example of the potential benefits associated with the technology:

> Imagine if you were a doctor studying surgery and you could put on a mask and look like you were performing surgery. For all intents and purposes, that is what you are doing but, thankfully, it is not on a human; it is on a digital human being.[14]

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7 Mr Ron Curry, Chief Executive Officer, IGEA, *Committee Hansard*, 18 March 2016, p. 2.

8 GDAA, *Submission 55*, p. 6.

9 Brisbane Chapter of the International Game Developers Association (BrIGDA), *Submission 71*, p. 3.

10 Professor Jeffrey Brand, *Committee Hansard*, 10 March 2016, p. 9.

11 See BrIGDA, *Submission 71*, p. 3; Mr Ron Curry, IGEA, *Committee Hansard*, 18 March 2016, p. 1.

12 Professor Jeffrey Brand, *Committee Hansard*, 10 March 2016, p. 9.

13 See Mr Nathan Anderson, Executive Producer, Start VR, *Committee Hansard*, 18 March 2016, p. 18.

14 Mr Ron Curry, IGEA, *Committee Hansard*, 18 March 2016, p. 8.

Industry statistics

2.12 To demonstrate the economic potential associated with video game development, submissions emphasised the increasing number of people who play video games both in Australia and globally, as well as the growth in the size of the global video game industry.

The global industry

2.13 IGEA cited an estimate that placed the global value of the interactive game industry in 2014 at approximately US$77 billion. According to IGEA, the same research forecasted that the value of the industry would grow to US$96 billion by 2018. Mr Tony Reed, Chief Executive Officer, GDAA, stated that the compound annual growth rate for the industry 'is almost 10 per cent'. Mr Reed observed that the growth rate of the industry:

> …is certainly significantly higher than any other creative sector, but it is higher than most manufacturing industries as well. Our audience grows daily. There are billions of people playing games and new people joining that fray every day.[15]

2.14 IGEA submitted that the value and growth of the global video game industry compares favourably to both:

- the film industry, which has an estimated value of US$107 billion and a 4.4 per cent annual growth rate;[16] and
- the music industry, which IGEA advised is estimated to account for US$52 billion by 2019, with an annual growth rate of 0.8 per cent.[17]

2.15 The size of the global industry is not widely understood. Mr Curry make the following observation:

> When we are talking about games that are being released that are bigger than all box office hits, I guess it is a bit mind-boggling for those who are not engaged in the industry to understand how big it is.[18]

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15 Mr Antony Reed, Chief Executive Officer, GDAA, *Committee Hansard*, 19 February 2016, pp. 4–5.

16 This figure includes box office, home entertainment, sell-through, video on demand and rental, but excludes actual advertising and rental.

17 IGEA, *Submission 9*, p. 4. The figures cited by IGEA are from PricewaterhouseCoopers, *The Australian Entertainment and Media Outlook 2015-2019*, 14th Edition, 2015.

18 Mr Ron Curry, IGEA, *Committee Hansard*, 18 March 2016, p. 6.

2.16 The anticipated widespread utilisation of virtual reality technology is also expected to boost economic activity in video game and related industries. The committee was informed that the industry for virtual reality and augmented reality 'is estimated to be worth $150 billion by 2020', a significant increase on the current industry revenue of $2 billion to $3 billion. Mr Nathan Anderson, a cofounder and the Chief Executive Officer of Start VR, commented that the expectation is that virtual reality 'will be as transformative and ubiquitous as the internet or smart phones'.[19]

2.17 Professor Brand added that the market 'for interactive games products in a knowledge economy is mind-boggling in size and scope, particularly as the game industry, compared to other media and technology industries, 'is in its infancy today'.[20]

Australian industry statistics

2.18 In Australia, retail sales in the interactive game industry were approximately $2.46 billion in 2014, an increase of 20 per cent from 2013.[21] Sales were essentially divided between traditional retail sales ($1.214 billion) and digital sales ($1.248 billion). The value of digital sales is growing significantly, with the 2014 figure constituting a 39 per cent increase on digital sales in 2013 (in particular, downloads of mobile games increased by 56 per cent).[22]

2.19 Although the market for video games in Australia is growing, the size of the domestic video game development industry in Australia has decreased. The following tables use the most recently available Australian Bureau of Statistics (ABS) data (2006–07 and 2011–12) to provide an insight into the income, expenses, production and overall employment in Australia's video games industry. In particular, Table 2.1 indicates that although the number of businesses increased between the two years surveyed by the ABS, those businesses generated less overall income and employed fewer people.

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19 Mr Nathan Anderson, Executive Producer, Start VR, *Committee Hansard*, 18 March 2016, p. 17.

20 Professor Jeffrey Brand, *Committee Hansard*, 10 March 2016, p. 8.

21 This figure excludes revenue generated from interactive game development or exports.

22 IGEA, *Submission 9*, pp. 4–5.

Table 2.1: Digital game developers in Australia, assorted statistics for 2006–07 and 2011–12

	2006–07	*2011–12*
Businesses at end June	45	84
Employment at end June (1)	1431	581
Total income	$136.9m	$89.4m
End-to-end digital game development income	n/a	$44.4m
Income from game development services	$116.9m	$43.4m
Income from government funding	$1.7m	n/a
Total expenses	$128.5m	$80.1m
Operating profit or loss before tax (2)	$8.5m	$9.3m
Operating profit margin (2)	6.2%	10.5%
Industry value added (2)	$98.2m	$71.6m

(1) Includes working proprietors and partners of unincorporated businesses

(2) The ABS noted that for (a) operating profit before tax, (b) operating profit margin, and (c) industry value added categories, estimates can include positive and negative values, reflecting the financial performance of individual businesses. In this case, the aggregated estimate can be small relative to the contribution of individual businesses.

Source: ABS, *Film, television and digital games 2011–12*, cat. 8679.0, June 2013, www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/E612C796E7A5461FCA257BA50012F64A/$File/86790_2011-12.pdf (accessed 23 September 2015); Digital Game Development Services, Australia, 2006–07, cat. 8515.0, April 2008, www.abs.gov.au/ausstats/abs@.nsf/mf/8515.0 (accessed 23 September 2015).

Table 2.2: Production of digital games, 2011–12

Platform	*Productions*	*Production costs ($m)*	*Average cost per production ($'000)*
Consoles (including handheld consoles)	14	17.1	1217.1
Mobile and web platforms	188	13.9	74.0
PC and Mac	27	5.0	186.0
Multiple platform	16	13.9	845.8
Total	245	49.9	203.4

Source: ABS, *Film, television and digital games 2011–12*, cat. 8679.0, June 2013, www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/E612C796E7A5461FCA257BA50012F64A/$File/86790_2011-12.pdf (accessed 23 September 2015).

Table 2.3: Digital games developers' sources of income, 2011–12

Category of income	*Income* $m	*Income* %
End-to-end digital game development income		
Consoles (including handheld consoles), PC and Mac	6.7	7.5
Mobile and web platforms	37.7	42.2
Total	44.4	49.6
Digital game development services income		
Consoles (including handheld consoles), PC and Mac	24.0	26.8
Mobile and web platforms	19.4	21.7
Total	43.4	48.5
Royalties income for digital games	0.6	0.7
Other income	1.0	1.1
Total	89.4	100.0

Source: ABS, *Film, television and digital games 2011–12*, cat. 8679.0, June 2013, www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/E612C796E7A5461FCA257BA50012F64A/$File/86790_2011-12.pdf (accessed 23 September 2015).

2.20 Other data about the size of the industry based on research and surveys were provided to the committee. The GDAA advised that it is aware of 225 businesses in Australia's game development industry.[23] The GDAA added that the results of a 2014 industry survey indicated that:

- at least 827 people were employed in full-time, part-time, casual and contract positions; and
- industry revenue from local companies in 2013 totalled approximately $64.5 million, an increase of around 14 per cent from the previous year's figure of approximately $56.5 million.[24]

2.21 Victoria has the largest share of Australia's video game development industry, with an estimated 48 per cent of the national industry located in that state. Outside of Victoria, sizeable segments of the industry can be found in Queensland and New South Wales; these states are reported to account for 19 per cent and 18 per cent of the national industry respectively. South Australia (eight per cent of the national

23 GDAA, *Submission 55*, p. 6. The GDAA explained that this figure is based on its database of game development and supporting companies that only records companies registered with the Australian Securities and Investments Commission.

24 This figure excludes the revenue of multinational studios that were based in Australia, as these studios did not provide revenue results as part of the survey. GDAA, *Submission 55*, p. 4.

industry) and Western Australia (seven per cent) have smaller, but nonetheless active, video game development communities.[25]

Australia's industry compared to industries elsewhere

2.22 Overall, Australia's video game development industry is small compared to the world's largest industries, which, in order of size, are located in the United States of America, Japan and Canada.

2.23 The GDAA submitted that, in 2012, the video game industry contributed nearly US$6.2 billion to the gross domestic product of the United States and employed 'more than 146,000 people in 36 states'.[26]

2.24 In Canada, which features the third largest industry, there are 329 interactive game development studios and approximately 16,500 people employed in the industry.[27]

2.25 The United Kingdom is another example of a country with a sizeable video game industry. The GDAA advised that, in 2013, the total economic contribution of UK-made video games[28] included £1.4 billion in gross value added and support for 23,900 full-time equivalent jobs. The industry also contributed £429 million to government revenue.[29]

2.26 Despite the significant difference in overall population, the size of New Zealand's video games industry appears to be similar to Australia's. According to the New Zealand Game Developers Association, 568 full-time employees are employed in the industry, with industry revenue of NZ$78.7 million in 2014–15 (also, revenue in 2014–15 was three per cent higher than the previous year).[30]

2.27 In addition to the comparisons that can be made about the overall size of Australia's industry relative to those in other countries, it also appears that the size of the studios in Australia are, on average, smaller than those found elsewhere. Mr Benjamin Britten, who represented the Melbourne Chapter of the IGDA (IGDA Melbourne) and is the Technical Director of the Melbourne-based studio Mighty Games Group, commented on this issue. Mr Britten observed that globally,

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25 GDAA, *Submission 55*, p. 6; Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 3.

26 GDAA, *Submission 55*, p. 4.

27 IGEA, *Submission 9*, p. 12.

28 Including multiplier and spillover effects.

29 GDAA, *Submission 55*, p. 4.

30 New Zealand Game Developers Association, 'Jobs in NZ Games Industry Grow in FY2015', http://nzgda.com/news/survey2015/ (accessed 2 November 2015); cited in IGEA, *Submission 9*, p. 16.

small studios employ between 50 and 100 people, whereas Mighty Games employs only 14 people and is 'considered quite large' in terms of the domestic industry.[31]

2.28 Despite the statistics about the small size of the overall Australian industry and Australian firms, Australian-based developers have had astounding successes, particularly in games for mobile phones and tablets. For example, the committee was informed that in October 2015, 'five of the top 10 games in the App Store were Australian made'.[32] The game *Crossy Road* released by Melbourne-based Hipster Whale has over 120 million players globally or, as Mr Reed from the GDAA put it, 'almost four times the Australian population'.[33] Another staggering result is the game *Fruit Ninja* by Halfbrick, which has been downloaded over one billion times.[34]

Developments in Australia's video game industry

2.29 As the above paragraphs indicate, Australia's video game development industry decreased in size between 2006–07 and 2011–12 despite growth in the Australian games market and the global video game industry. During this period, and for some time after it, major developers in Australia announced job losses and/or business closures. By 2012, studios that had closed or downsized include Krome, Pandemic, THQ StudioOz, BlueTongue, Team Bondi, SEGA Creative Assembly, Tantalus Media Brisbane[35], the Australian studio of EA Games' Visceral Games[36] and KMM Brisbane.[37] The last AAA game[38] developer in Australia, the Canberra-based 2K Australia, closed in 2015.[39]

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31 Mr Benjamin Britten, Member, Melbourne Chapter of the International Game Developers Association (IGDA Melbourne); Technical Director, Mighty Games Group, *Committee Hansard*, 19 February 2016, p. 14.

32 Ms Giselle Rosman, Chapter Leader, IGDA Melbourne, *Committee Hansard*, 19 February 2016, p. 12.

33 Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 5.

34 Ms Kate Hynes, Chief Legal Officer, Halfbrick Studios, *Committee Hansard*, 10 March 2016, p. 17.

35 Queensland University of Technology (QUT) Digital Media Research Centre, *Submission 26*, p. 3.

36 Mr Adric Polkinghorne, *Submission 24*, p. 2.

37 Daniel Miller, 'Australian video game studios face obliteration', *ABC News*, www.abc.net.au/news/2011-10-17/australian-game-dev-studios-shutting-down/3575196 (accessed 2 November 2015).

38 A AAA game (or triple-A game), is generally a title developed by a large studio utilising large development and marketing budgets, and is expected to yield high sales.

39 Henry Belot, 'Game developer 2K Australia closes Canberra studio', *Canberra Times*, 16 April 2015, www.smh.com.au/digital-life/games/game-developer-2k-australia-closes-canberra-studio-20150416-1mmg3l.html (accessed 2 November 2015).

2.30 The overall composition of the industry has changed as a result of these developments, with independent game developers now comprising much of the industry. To illustrate this, the GDAA's submission noted that 12.2 per cent of respondents to its 2014 industry survey indicated that their primary business type was 'commercial game developer'—that is, the business generally worked for third parties, including publishers. The largest category was 'independent game developer', which 75.7 per cent of respondents identified with. By contrast, the GDAA suggested that 'almost all of the 45 game development companies' that were identified as part of the 2006–07 ABS survey:

> …would have engaged in contract work or would have identified as 'Commercial Game Developers' based on the work-for-hire paradigm of the sector at that time.[40]

2.31 More recent evident changes in the industry were also highlighted. The GDAA stated that the results of its industry surveys indicate that the number of respondents who described their business as 'self-owned and managed' increased from approximately 77 per cent in 2012 to over 90 per cent in 2014.[41]

2.32 Key factors put forward to explain the changes in Australia's industry were the global financial crisis and the sustained appreciation of the Australian dollar.[42] Other reasons cited include:

- the tax incentives available for game developers in other countries (this is discussed further in Chapter 3); and
- the decline of 'middle-ground' games, with major titles developed by AAA studios and smaller, app-based games developed by small, independent studios comprising a larger share of the overall market.[43]

2.33 One of the consequences of the closures of Australian-based studios has been the departure of skilled developers to other countries. Mr Ben Driehuis, a senior programmer in the industry, submitted that following the studio closures, the 'majority of experienced developers left Australia to find jobs overseas and have not returned'.[44]

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40 GDAA, *Submission 55*, p. 7.

41 GDAA, *Submission 55*, p. 7.

42 The QUT Digital Media Research Centre noted that in 2007, the Australian dollar bought US$0.75; however, in 2012 the Australian dollar bought US$1.02. See *Submission 26*, p. 3.

43 Sebastien Darchen, 'Next level thinking: a way forward for the Australian videogame industry', *The Conversation*, 10 February 2012, https://theconversation.com/next-level-thinking-a-way-forward-for-the-australian-videogame-industry-5280 (accessed 2 November 2015). See also QUT Digital Media Research Centre, *Submission 26*, p. 3; Daniel Miller 'Australian video game studios face obliteration', *ABC News*, 19 October 2011, www.abc.net.au/news/2011-10-17/australian-game-dev-studios-shutting-down/3575196/ (accessed 2 November 2015).

44 This evidence was quantified by Ms Giselle Rosman from IGDA Melbourne. Ms Rosman suggested that approximately 60 per cent of developers left the Australian industry either to pursue their career in another country, such as Canada, or to enter a different industry, such as finance. See *Committee Hansard*, 19 February 2016, p. 13.

He argued that, as a result, the knowledge these developers possess has not been transferred to recently graduated developers.[45] Similarly, Ms Giselle Rosman remarked that, as a result of the 'brain drain that we had as a result of the [global financial crisis]', the developers in the small studios that characterise the industry today are 'probably learning things through mistakes that they could have learnt from someone more senior a lot more easily'.[46]

2.34 IGEA added that the reduction in the size of the Australian industry and the number of people employed in it means there is a 'potential over-supply of graduates in interactive games development'. IGEA explained that graduates face 'fierce competition' for jobs after graduation, with 'many graduates being forced to work as lowly-paid interns'. The lack of jobs also encourages graduates to seek jobs overseas. IGEA commented that Australia's situation 'sits in great contrast to the Canadian interactive games industry's concerns which are focused on the current shortage of available talent and its ability to source talent outside Canada'.[47]

2.35 The above evidence about the gap between the number of graduates and available jobs was quantified. Mr Reed advised that over 5000 students enrol each year in games or game-related course, however, there are only approximately 1000 'active participants in this industry'. He commented:

> So we are effectively graduating five times more students than there are people in this industry. We do not have the ability to cater to those graduates. That is a problem for us. They will either be moved into sectors that they do not necessarily want to be moved into or they will have to go overseas, and we do not want to lose that talent. We have some really incredible graduates.[48]

2.36 Although this section has highlighted several negative developments in the industry, some of changes to the industry's structure over the past few years are arguably positive for many developers. For example, submitters highlighted the potential benefits for developers and the industry as a result of market changes that promote self-publication to distribute a game, rather than the use of a publisher. The submission from the Queensland University of Technology (QUT) Digital Media Research Centre explained:

> Given the degree to which higher end fee-for-service business has dried up, while essentially self-publication on the major digital distribution platforms (Apple's App Store, the Google Play Store, Steam, etc.) has grown

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45 Mr Ben Driehuis, *Submission 19*, p. 2. See also Name withheld, *Submission 8*, p. 1; IGEA, *Submission 9*, p. 16; QUT Digital Media Research Centre, *Submission 26*, p. 22.

46 Ms Giselle Rosman, IGDA Melbourne, *Committee Hansard*, 19 February 2016, pp. 13–14. Ms Sabiene Heindl from SWH Legal and Business Consulting made a similar observation: see *Committee Hansard*, 18 March 2016, p. 7.

47 IGEA, *Submission 9*, p. 16.

48 Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 2.

> exponentially, necessity has become a virtue. Conditions have crafted an industry which is much reduced in terms of turnover and traditional employment, but now operates within a disintermediated value chain which radically forces the pace of innovation. Despite much commentary which treats Apple, for example, as basically yet another global corporation 'taking their (un) fair share of financial profits,' near-to-global dissemination via the digital platforms on a 30/70 split of income derived represents an in-principle better deal than the power asymmetries enshrined in dealing with the major publishers.[49]

What should Australia's video game industry look like?

2.37 This chapter has outlined some of the transformations that have occurred to the structure of the industry in recent years. Although the next chapter will discuss previous government programs, overall, the remainder of this report will be forward looking with the existing structure and dynamics of the industry as its starting point.

2.38 As the terms of reference for this inquiry indicate (see paragraph 1.1), the committee was asked to examine a range of matters to support growth in the industry, including how support could be provided to local businesses, how international studios could be attracted to establish studios in Australia and employ local staff, and export opportunities. In doing this, consideration should be given to whether types of businesses or activities should receive particular attention and if there are issues facing the industry that need to be addressed before government support can be considered. This section discusses some of these issues.

International investment and local businesses

2.39 Some submissions questioned whether efforts to attract international studios should be made at all. In his submission, Dr Dan Golding outlined a history of international companies that established or invested in game development operations in Australia, which he argued demonstrated 'a long-term pattern in Australia of sporadic foreign investment, followed by on-selling, bankruptcy, and closure'. Dr Golding provided examples of successful Australian studios that were purchased and ultimately closed by international interests, as well as international game development companies that set up studies in Australia for relatively short periods of time.[50]

2.40 Dr Golding argued that, in the long-term, a reliance on international investment in Australian game development is not in the national interest. He submitted:

> By now it is clear that the business model for international companies in Australian games production is to invest when the price is right and to sell or close when business is bad. There is little to suggest that this model

49 QUT Digital Media Research Centre, *Submission 26*, p. 34.

50 Dr Dan Golding, *Submission 31*, p. 17.

> would change into the future. International companies can provide relatively large amounts of jobs in short bursts, but Australian history has proven this to be unstable and volatile. International companies by their nature have little interest in building Australia's videogames industry outside of their own financial benefit and therefore there will always be measures outside of the local industry's control (and indeed, outside of the government's control) when it comes to international investment pulling out.[51]

2.41 Dr Golding concluded that the history of international investment in the Australian video game industry means that future government intervention should focus on 'cultivating and providing infrastructure for Australian-led industry'.[52]

2.42 The developments in the Australian industry over the past decade certainly suggest that foreign investment is responsive to a range of factors, including global economic conditions, exchange rates and comparative taxation and regulatory arrangements. Nevertheless, some submitters were optimistic that Australia could sustain international interest in Australia's video game industry. In his submission, for example, Mr Ben Driehuis suggested that the value of the Australian dollar is 'key' for foreign investment. Nevertheless, he argued that a 'thriving local industry' with talented developers will encourage investment in Australia's industry. Mr Driehuis provided the following reasoning:

> The more talented staff we have and the more intellectual property those teams and studios can produce, the more likely both overseas publishers will invest and fund games made here, but will also look to either purchase those studios or create their own presence to obtain talent.[53]

2.43 When asked about the ideal structure of the industry in terms of large and small studios, Mr Tony Reed from the GDAA envisaged 'a healthy mix of both'. Benefits from the presence of large studios in the domestic video game development industry are evident. Mr Reed advised that the principal advantage is that the large studios 'are great learning platforms for future independent developers'. He explained:

> The one thing that those big studios do very well is provide training, understanding of process and understanding of business. Staff or employees then break off and build their own companies on the back of it. That is exactly how the Australian industry, in its current form, has developed.

2.44 Mr Reed added that industry participants would like large studios to return to Australia 'in the long term'. However, he cautioned that encouraging large studios to return to Australia could crowd out the smaller developers.[54]

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51 Dr Dan Golding, *Submission 31*, p. 18.

52 Dr Dan Golding, *Submission 31*, p. 18.

53 Mr Ben Driehuis, *Submission 19*, p. 2.

54 Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 10.

Workplace conditions

2.45 Working conditions within the video game industry attracted some comment. Mr Alexander Ocias submitted that a 'huge proportion' of the game industry in other countries is 'running unsustainably on unpaid labour'. Accordingly, he argued that 'Australia's strong labour laws should be seen as a point of pride, and not as an impediment'.[55] Despite the rights, responsibilities and entitlements provided under Australian workplace laws, the committee received anecdotes of poor working conditions within Australian game development studios, including examples of firms that provided poor working conditions, had overworked employees and collapsed with unpaid wages.[56]

2.46 Mr Tony Reed acknowledged that, in Australia, concerns about unhealthy and exploitative labour practices were 'definitely true eight to 10 years ago'. Mr Reed went on to state that:

> …in those very large studio environments where pressure was being placed on developers, especially from international publishers and those investors, they were forced to deliver content at speed. The industry did go into a very unhealthy place. It was part of the industrial conversation, a lot of it.[57]

2.47 However, Mr Reed argued that labour practices in the industry have 'changed substantially since the global financial crisis and since the creation of these smaller, dynamic studios'. He stated:

> Does it still exist in Australia? No, not as far as I know, and I am aware of all 225 studios that we have in this country. I have personal relationships with almost every one of them. We do not have those practices anymore. Did it exist? Absolutely. We do not deny that it did. There have been some terrible cases. But, as CEO of an association that is tasked with taking care of this industry, I tend to manage and watch over those companies to ensure that does not happen. It is not something we are proud of at all, but it is something that definitely happened.[58]

2.48 Professor Stuart Cunningham from QUT's Digital Media Research Centre similarly commented that the 'creative destruction' that occurred since the global financial crisis has largely addressed these workplace issues. He explained that, because the firms in the industry are no longer working in a fee-for-service model for overseas publishers, the developers have 'greater control over their working lives'. He added that the reality in the industry now is that developers 'have got to be able to

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55 Mr Alexander Ocias, *Submission 82*, p. 2.

56 See Dr Dan Golding, *Submission 31*, p. 12.

57 Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 5.

58 Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 5.

make their businesses work', but 'their future is to a much greater extent in their own hands'.[59]

Product development and management

2.49 Some submissions commented on the ability of Australian firms to manage the development of a product. It was suggested that Australia has creative talent, but often firms struggle to successfully commercialise the product.

2.50 The submission from QUT's Digital Media Research Centre noted that, along with other factors such as policy fluctuation, the 'industry's reputation for poor management' contributes to the uncertainty and precariousness routinely faced by developers and their employees.[60] The submission's authors provided a paper on structural conditions and the human cost of precarious labour in the Australian industry. A director of a US-based studio surveyed for the paper was reported as commenting that 'the work-for-hire origins of many Australian studios and developers meant that they perhaps had not gained the market discipline of focusing on a core competency or on a core market'. The director added:

> …we've got thousands of game designers in Australia. No problem at all, but we have very, very few experienced product managers, and that's meant most of the attempts have fizzled out, because if you think of the build, measure, learn cycle, we built, we didn't quite know what we were measuring and we learned nothing.[61]

2.51 Game developers were frank about some of the challenges they face in managing a business. One submitter emphasised that there are 'there are many independent game developers…working on amazing games all around Australia'. However, he added:

> Making a good game is not good enough, marketing is incredibly important as is general business management—knowing when to hire more staff, when to cut features to keep within budget, and how much focus should be put on the core game versus bugfixing and polish.
>
> I am fortunate, as I took Economics and Business Studies in high school as an elective, and also happened to have one of the best teachers to grace the education system. Even then, I feel ill-equipped to actually run a business, and will almost certainly be taking an unrelated business management course as I reach a point that I am able to sell my games in a decent capacity. Even still, I wonder how much of the content will be applicable to game development, and how many gaps there will be.[62]

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59 Professor Stuart Cunningham, QUT Digital Media Research Centre, *Committee Hansard*, 10 March 2016, p. 5.

60 QUT Digital Media Research Centre, *Submission 26*, p. 45.

61 QUT Digital Media Research Centre, *Submission 26*, p. 42.

62 Mr Alexander Jeremy, *Submission 17*, p. 3.

2.52 Others recognised limits in their ability to effectively manage the product development process and the marketing often needed for a game to be successful. Mr Daniel Sassen, the manager of Broken Chair Games, was particularly upfront about the strengths and weaknesses of his business. He stated:

> Developing the game is the easy part of the whole process. It is the marketing and promotion that goes on after the release that is well beyond our grasp.[63]

2.53 If some management practices are likely to have had negative consequences for particular firms, employees and the overall industry, it can be reasoned that focusing on improving management practices should greatly assist the industry. The Sydney chapter of the IGDA (SIGDA) submitted that, if many businesses are under-resourced and operated by game professionals with little management experience or training, then the industry 'is poised for rapid growth if the availability of funding and business mentoring are increased'.[64]

Workplace diversity

2.54 Some submissions commented on the composition of the video game development workforce in terms of gender and ethnic background. In particular, the lack of gender diversity in the industry was put forward as an issue that holds back growth in the industry and potentially threatens the legitimacy of its case for public support. According to the ABS, at the end of June 2012 only 8.7 per cent of the digital game developer workforce was female.[65] An estimate provided by the GDAA at a public hearing suggested that the figure is now 12.7 per cent.[66]

2.55 Dr Dan Golding devoted much of his submission to this issue. He argued that there is 'a clear disparity in Australia between the monoculture of those who work in the video games industry, and those who actually constitute the wider communities of people from all walks of life who are interested in video games'. According to Dr Golding, this 'amounts to is an industry in crisis'. He concluded that if gender diversity in the industry is not addressed, it will result in an industry 'that is simply no longer worth supporting in the national interest'.[67]

2.56 Other submitters noted the history of male-dominance of the industry. In a paper attached to the QUT Digital Media Research Centre's submission, Associate Professor John Banks and Professor Stuart Cunningham argued that:

> The industry's still overwhelmingly male-dominated production base needs to change if it is to attract the best talent, improve balance and

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63 Broken Chair Games, *Submission 46*, p. 4.

64 IGDA Sydney Chapter (SIGDA), *Submission 34*, p. 4.

65 ABS, *Film, television and digital games 2011–12*, cat. 8679.0, June 2013.

66 Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 11.

67 Dr Dan Golding, *Submission 31*, pp. 9–10.

> sustainability, and capture value in a rapidly evolving consumption environment.[68]

2.57 Mr Reed from the GDAA acknowledged that the statistics about the proportion of female employees in the industry are 'terrible'. Mr Reed added that diversity in its entirety 'is a significant problem…not just on a gender basis'. He advised that the GDAA is concerned about systemic problems and is 'looking at plans to address it in our sector'. However, he stressed that the industry welcomes a diverse workforce. He stated that the industry:

> …is absolutely not just an industry for young people. It is an industry for talent and intelligence. We do not judge people on their age. We do not judge people on their gender. We look at diversity in its entirety. We value new contributors to our sector because the consumers want new, innovative ideas.[69]

2.58 Other industry participants also recognised that the lack of diversity is a problem. Ms Giselle Rosman, the Chapter Leader of IGDA Melbourne, pointed out that with women comprising half the population, a workforce of only 10 per cent women is 'underutilising' the potential that is available.[70]

2.59 Ms Rosman also noted that games are entertainment, but they also tell stories and 'are part of our culture'. After indicating that the stories told through games are predominately stories from the viewpoint of white men, Ms Rosman remarked: 'I do not want to just hear those stories. I want to hear stories from a greater range of people'.[71] Mr Ben Britten from Mighty Games Group made a similar point:

> As an old white dude I have seen all the old white dude stories I need to see, frankly, and I quite enjoy the huge diversity we are seeing now come out of a lot of the indie spaces.[72]

2.60 Mr Britten was also candid about how a development team that did not consist of people from diverse backgrounds will struggle to develop products that appeal to a wide audience. He stated that:

> Even though we try really hard to be diverse and have our ideas and creativity embrace as much as we can, we still find ourselves doing that, because we are basically dudes, even though we are trying really hard not to. If you are a studio of mostly men who are not necessarily aware of it, as you say, that is what you are going to make. It is kind of a problem.[73]

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68 QUT Digital Media Research Centre, *Submission 26*, p. 45.

69 Mr Antony Reed, GDAA, *Committee Hansard*, 19 February 2016, p. 6.

70 Ms Giselle Rosman, IGDA Melbourne, *Committee Hansard*, 19 February 2016, p. 18.

71 Ms Giselle Rosman, IGDA Melbourne, *Committee Hansard*, 19 February 2016, p. 18.

72 Mr Benjamin Britten, IGDA Melbourne; Mighty Games Group, *Committee Hansard*, 19 February 2016, p. 19.

73 Mr Benjamin Britten, *Committee Hansard*, 19 February 2016, p. 19.

2.61 These environments can also facilitate the creation of games that objectify women. Ms Rosman observed that this occurs in other artistic endeavours as well, such as films—Ms Rosman remarked: 'they are all babes there'. Nevertheless, Ms Rosman suggested that there is 'room for improvement' and the video game industry should seek to address this given changes should lead to 'better economic outcomes'.[74]

2.62 There are efforts underway to address some of the diversity issues. For example, the committee was informed of Film Victoria's recently established Women in Games Fellowship that focuses on 'up-skilling so that you have women in some more senior positions in games'.[75]

2.63 Although women are under-represented in the video game development industry, it should be noted that there is a systemic issue with the under-representation of women in science, technology, engineering and mathematics (STEM) fields generally.[76] This was recognised by Dr Golding, who provided the following observations:

> From 2001 about 25 per cent of domestic enrolees in information technology degrees were women. By 2014, which is when the most recent statistics were released, that has dropped to about 16 per cent. So it has actually dropped over the past 10 or 15 years.
>
> Beyond that, there are anecdotal examples. I do not have access to all of the universities, but I have spoken to RMIT, for example. They have a more or less fifty-fifty gender breakdown for people studying games. So, it depends. There are strategies being enacted even at the educational level to combat this.[77]

Conclusion

2.64 This chapter has provided an overview of the industry to give some context for the policy options that the remainder of the report will largely focus on. It is apparent that Australian video game developers face both exciting opportunities and significant challenges. The Australian Government, and state and territory governments, could assist the industry to capitalise on these opportunities and address the challenges. The next chapter focuses on the roles that governments have undertaken and the case for additional government support.

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74 Ms Giselle Rosman, IGDA Melbourne, *Committee Hansard*, 19 February 2016, p. 19.

75 Ms Giselle Rosman, IGDA Melbourne, *Committee Hansard*, 19 February 2016, p. 18.

76 This is widely recognised, including by the Australian Government. See, for example, the Australian Government's 2015 *National Innovation and Science Agenda*.

77 Dr Dan Golding, *Committee Hansard*, 19 February 2016, p. 25.