Protecting designs



Australian Government

IP Australia



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Contents

Executive summary	4
<mark>Introduction</mark> What design rights are for Evidence for how well design rights are working	6 6
About the surveys Industries represented in the responses	<mark>8</mark>
Design protection in Australia Industry is divided on whether to protect designs at all Design rights are the preferred way to protect designs However, awareness of design rights is still relatively low Businesses typically use design rights alongside informal protection methods Technology-intensive businesses may be using informal methods instead of design rights	9 9 10 10 10
Motivations for seeking to protect designs Safeguarding revenues is the most important motive Design protection and marketing motives are often connected Higher value designs are more likely to have a design right Design rights are often associated with at least one patent	11 11 12 12
The scale of design copying and barriers to enforcement Industry respondents see more copying than applicants do Most respondents attribute copying to larger organisations with a presence in Australia	13 13 13
The main reason for not taking action against copying is high enforcement costs There is limited success from taking action Pursuing copiers is likely to cost more than the loss from being copied	14 15 15
Qualitative comments and consumer views Comments from survey respondents Findings from media case study	16 16 17
Conclusion	18
Appendix 1: Details of the surveys The applicant survey The industry survey	19 19 19
Appendix 2: Industry coverage	20
Appendix 3: Estimated private value of designs	21
Appendix 4: Design right application data	22
References	24
Acknowledgements	25

IP Australia's Designs Review Project is a holistic review of Australia's design ecosystem. As part of this project, between January and March 2020 we ran two surveys of Australian designers and inventors to understand their methods and motives for protecting designs, experiences of design copying, and any barriers to effective intellectual property (IP) enforcement.

The *applicant survey* was a survey of recent applicants for design rights and patents. The *industry survey* was a survey of design-focussed businesses, distributed in partnership with peak design industry bodies. All together in the two surveys we received responses relating to 1,355 unique designs from 114 applicants and 140 industry respondents, providing a 6 percentage point margin of error for both the applicant survey respondents and the industry survey respondents.

The surveys yielded a range of responses on whether businesses seek to protect their designs and how they do so.

Nearly half (47%) of the industry respondents indicated they *do not* typically seek protection for their designs (through either registered IP rights or informal protection methods).

A significant proportion of survey respondents, especially industry respondents, reported they had not heard of design rights. However, those who did seek protection saw design rights as the most important form of protection, typically in combination with other methods. The survey results suggest that technology-intensive businesses often rely on informal protection methods – e.g. lead time advantage, secrecy and design complexity – rather than registered design rights. The most common reason applicants gave for seeking to protect their designs was to safeguard revenues by preventing others from copying the design. The next most common was to prevent others from attempting to obtain rights over related designs. Industry respondents more often reported motives such as increasing the organisation's ability to attract and retain customers, improve its image and support the marketing of its products and services.

The survey results support the view that innovators in some industries with a global focus are using design rights successfully. From survey data, we estimated the private value – the value to its owner – of a new design. By this measure, designs for which the owner had applied for design rights had more value (mean and median values of \$3.7 million and \$675,000 respectively) than designs without design rights (mean and median values of \$678,227 and \$78,000), and were also more likely to be associated with a patent. Designs protected by design rights overseas had even greater value (mean and median values of \$5.8 million and \$1.5 million).

We found that 27% of design right applicants thought that a third party had copied their design.¹ This correlates with the perceived rate of copying of inventions which had an Australian patent application (Weatherall and Webster, 2011). The reported incidence of copying was significantly higher in the industry survey (55%).

Across both surveys, respondents most often believed the alleged copier to be a larger organisation with a presence in Australia.

Of those who thought that someone had copied their design, 23% of applicant respondents and 34% of industry respondents had taken no action to enforce their rights. The high cost of enforcement was the most common reason they gave for this. Those who had attempted to take action reported minimal success. The most frequent action was sending a letter to the other party; the least common was issuing a court claim. The most common outcome, reported by about half of all who had tried to take action, was no response from the other party.

The median amount businesses estimated having spent on enforcing design rights was in the \$5,000 to \$10,000 range. The estimated median financial loss from any particular design being copied was in the \$50,000 to \$100,000 range.

Despite the evident concerns of the design industry, qualitative research from the Designs Review Project indicates that the issue of copying has not significantly filtered into broader public conversations about design.

This report presents the results of two surveys exploring:

- how important Australia's design industry considers design protection to be
- Australians' motives in seeking to protect their designs
- perceptions of how often Australian designs are copied
- steps businesses take if they see copying in the marketplace.

What design rights are for

Design rights are a form of registered IP that protects the overall visual appearance of new and distinctive products. In Australia, design rights are intended to stimulate innovation by enabling creators to protect their designs from copying. *Defining design*, the first report in the Designs Review Project research series, discusses this 'incentive' view of IP (IP Australia, 2020a).

From an economics perspective, ideas are a 'public good'. It is difficult to exclude others from using them, and their use by any one person does not preclude their use by others. This view assumes that any new idea (such as a new design) has the potential to provide greater economic benefit to society than the original creator could generate. However, when the social value of an idea exceeds its private value to the originator, the creator may not have enough incentive to generate new ideas that would benefit society.

Legal IP rights are an economic trade-off society makes to address this by providing exclusive rights for the designer when a new idea is brought to the market.

This provides incentives to create and commercialise new ideas but it can also have adverse effects.

Strong IP rights can lead to excessive concentration of market power, which carries the 'risk of damaging the productive use of new ideas' (Productivity Commission, 2016, pp. 4-5).²

On the other hand, IP rights that are too weak do not protect creators from the risk of their ideas being copied. Infringement of IP – and copying of ideas that do not have IP protection – has potentially damaging effects: not only revenue loss to creators but also wider impacts such as undermining trust in IP systems and confusing consumers (Fink et al., 2015).

2 Stronger IP protections can also lead to price inflation that creates affordability barriers for consumers (Raustiala and Sprigman, 2012).

6

Evidence for how well design rights are working

Talking design, the second report in this research series, summarises what people told us in interviews about whether design rights have served their purpose of encouraging design innovation in Australia. We heard strong but diverse views on what incentivises businesses to invest in design, on copying and its impacts, on the different forms of protection that businesses are using, and on the role design rights should play in the future. Many people talked about their experiences of being copied and their unsuccessful efforts to stop others from copying (IP Australia, 2020b).

Economic evidence and academic literature provide mixed answers on the impacts of copying.

For example, positive impacts from copying have been observed in the software market, where copies help to spread awareness by word of mouth and potentially increase sales of original products (Givon et al., 1995). Researchers have puzzled over why the fashion industry produces high levels of innovation despite the occurrence of design copying. Some researchers have concluded that copying is important to the fashion industry's swift cycle of innovation (Raustiala and Sprigman, 2006).

There is a variety of evidence from other countries in different circumstances (e.g. Qian, 2014) that suggests copying can lead to further innovation in high-end markets, as original designers upgrade the quality of their products in response. However, there is limited evidence in relation to Australia and the Australian design system.

The surveys we conducted for the Designs Review Project address a lack of existing data on the experiences of industries in Australia.

Between January and March 2020, IP Australia ran two surveys: an *applicant survey* and an *industry survey*.

We sent the applicant survey (by email where possible or by post) to Australian designers and inventors who had applied for IP rights. The aim of this survey was to gain insight into how people are using IP rights to protect designs.

We distributed the industry survey through design industry associations to a broader range of Australian businesses in the design sector. The aim of this survey was to gain a wider view of approaches to design protection (not necessarily IP rights).

From the applicant survey we received completed questionnaires relating to 183 unique designs and 30 unique inventions. From the industry survey we received responses relating to 1,172 unique designs, with around 200 answers in response to each substantive question.³

Appendix 1 and Appendix 4 provide more detail on the survey methodologies and breakdowns of responses.

We note the varied impacts of running these surveys during a challenging time for Australian business.

For example, we had to exclude businesses in areas where bushfires prevented postal deliveries; and the COVID-19 pandemic may have prevented some businesses from contributing to the survey.

Industries represented in the responses

Valuing designs, the economic study in our research series, identifies 45 'design rights-intensive' industries in Australia. For businesses in design rights-intensive industries, holding a design right is a forward indicator of higher productivity (sales per employee, minus materials and equipment). Most of these are in manufacturing (e.g. electronics, polymer and medical product manufacturing) and wholesale trade (IP Australia, 2020c). The wholesale trade industry classification includes businesses that design products in Australia (e.g. plumbing, clothing and other goods) and then contract others (including overseas companies) to manufacture or assemble the final products.⁵

Responses to the applicant survey reflected what the economic study showed about the concentration of design rights activity in particular industry sectors. As expected, the industry survey covered a broader range of industries. Both surveys had the highest levels of response from manufacturing industries, followed by professional, scientific and technical services (which is not a design rights-intensive industry). Where the two surveys most notably differed was in the proportion of wholesale trade respondents: 8% for the applicant survey but only 1% for the industry survey.

Appendix 2 provides more detailed breakdowns of responses by industry across the surveys.

4 Survey respondents identified their main line of business using the Australian and New Zealand Standard Industrial Classification (ANZSIC) codes. There are more than 500 ANZSIC classification codes. The 45 considered to be design rights-intensive comprise approximately 5% of all Australian businesses.

5 Australian wholesale trade industry businesses with the most design right applications include those known for clothing, scientific, hardware, electronic, motor vehicle, plumbing and other products (Kollmann et al., 2020, Appendix B).

Protecting designs – About the surveys

³ Based on the number of survey respondents, the general rule for the statistical precision of the results in both surveys is that the standard error margin is within plus or minus 6 percentage points at the 90% confidence level. For example, a result of 50% for a survey question indicates that, if we were to repeat the survey 100 times, the result would be between 44% and 56% in 90 of these repeated surveys. The statistical precision typically improves where the results are closer to 0% or 100%, and reduces where only a subset of respondents answer a question.

Design protection in Australia

Design rights play a niche role in the Australian economy. Relatively few businesses use them – only one in every 297 held a design right in 2017 – but they have significant benefit for the industries that most intensively use them.

In the design rights-intensive industries, one in 21 businesses held a design right in 2017. In these industries, having design rights is a leading indicator of higher productivity, more research and development (R&D), and more exports (IP Australia, 2020c).

The surveys asked respondents whether their business had typically sought to protect its designs and how important it perceived different forms of design protection to be. This went beyond just design rights: the survey asked about a range of design protection options, both formal (legal IP rights) and informal (such as keeping an idea secret and using lead-time advantage).⁶

"As a sole trader I cannot afford the cost of protecting the design of my product that I sell within my art practice. I am just hoping no-one rips it off."

- Industry respondent

The surveys presumably have some selection bias, as people with experiences related to design protection and those with a preference for and knowledge of design rights would have been more likely to participate. Despite this, the results suggest that design protection, even when considered more broadly than just design rights, still has only a niche role in the economy – making design rights a niche within a niche.

Industry is divided on whether to protect designs at all

In the applicant survey, approximately a quarter of respondents (26%) indicated they had *not typically sought to protect their designs*. It is worth underlining here that we only sent this survey to people who had applied for at least one formal IP right and that most of these people had design rights. So the relatively high proportion of respondents who did not typically seek design protection may support what several businesses said in interviews: even if they protect designs, they only do so for a small proportion of what they design (IP Australia, 2020b).

In the industry survey, which had wider coverage, nearly half of the respondents (47%) indicated they had *not typically sought to protect their designs*. Fifty-four per cent of small businesses (annual revenues less than \$500,000) and 27% of larger businesses (revenues between \$500,000 and \$250 million) gave this response.

"It took years to get the product off the ground, and when it was accepted in the market it was too late to register IP to protect."

– Applicant respondent

Design rights are the preferred way to protect designs

In both the applicant and industry surveys, most of those who had sought to protect their designs chose design rights as their favoured protection method. Eighty-one per cent reported that design rights were either very important or extremely important for protecting their designs in the last five years, followed by copyright (70%), trade marks (61%) and patents (57%). In both surveys, design rights were also ahead of all informal protection methods.

However, awareness of design rights is still relatively low

Despite the *perception* of design rights as a more important form of protection than

copyright, trade marks or patents, both surveys found that *awareness* of design rights was the lowest of all these IP rights. For example, in the industry survey, 66% reported being aware of design rights, compared with 100% for copyright, 99% for trade marks and 98% for patents. Figure 1 shows the averages across both surveys.

The presumption that people who were aware of design rights were more likely to participate in the surveys makes the relative lack of awareness of design rights even more stark. This aligns with what we learned from interviews with members of the design community (IP Australia, 2020b) and goes some way towards explaining the weak adoption of design rights documented in our economic study (IP Australia, 2020c).

Figure 1: Awareness of different types of IP

Note: The question asked 'Which of the following have you NOT heard of before?' but the figure displays the reverse – the types of IP that respondents HAD heard of before.

Businesses typically use design rights alongside informal protection methods

Businesses that seek to protect their designs consider design rights to be an important tool. But they normally use design rights together with other protection methods, rarely in isolation.

Across the two surveys, four in every five respondents (79% to 82%) who had sought to protect their designs saw at least one informal method as highly important. Informal methods, in order of their perceived importance, include lead-time advantage (favoured by 63%), secrecy (62%), design complexity (61%), and building complementary capabilities⁷ such as superior services or sales expertise (50%).

Technology-intensive businesses may be using informal methods instead of design rights

In certain contexts, businesses may be using informal design protections as a substitute for design rights. *Talking design* presents qualitative evidence of businesses choosing informal methods instead of registered design rights, especially businesses that use product design to draw attention to technological advancements (e.g. in consumer electronics). Businesses in newer industries and those with a focus on cutting-edge technology typically told us that visual design was critically important but they placed less or no emphasis on the design rights system (IP Australia, 2020b).

The survey results support these findings. They show that technological innovators who use patents (not design rights) lean particularly heavily on lead-time advantage and secrecy, compared to other businesses.

7 In some settings, competitors are prevented from copying designs by the need for specific know-how, such as in R&D or production. Some companies can safeguard their returns from innovation through access to superior retail or sales networks, or other service or sales capabilities.

Motivations for seeking to protect designs

Defining design, the first report in this research series, discusses the economic rationales for protecting designs using formal IP rights. It outlines the 'incentive view' (typically associated with patents) and the 'informational view' (typically associated with trade marks).

The incentive view, which is currently the basis for designs law in Australia, is that design rights exist to provide an incentive for designers to invest in original design. There is also the possibility of taking an informational view of design rights: that they could exist to help consumers distinguish between products. From the informational viewpoint, design rights need not be considered as a direct investment incentive. The economic evidence for each view is mixed (IP Australia, 2020a).

To understand the issue from the view of current or prospective users of the design rights system, we asked survey respondents about their motivations in seeking to protect their designs.

We then assessed how these motivations align with the commonly understood motivations of patent and trade mark applicants, drawing on the work of Block et al. (2015).

As well as learning from survey respondents' direct answers about their motivations, we can draw some inferences about motivation from the findings that higher value designs and designs that also have a patent are more likely to have a design right.

Safeguarding revenues is the most important motive

Both surveys found that the most common motive for protecting a design was to safeguard revenues by preventing others from copying it. In particular, 88% in the applicant survey saw this motive as very important.

It is equivalent to the protection motive often given as the main reason for filing patent applications (Cohen et al., 2000). In the applicant survey, the second most common motive was to prevent others from attempting to obtain rights over the design or idea (seen as important by 80%). This is equivalent to the blocking motive reported as important for patent applicants (Block et al., 2015).

Design protection and marketing motives are often connected

A large proportion of respondents, particularly in the industry survey, answered that an important reason for protecting their designs was to attract and retain customers. This is consistent with the primary drivers for many trade mark applications: marketing motives. Such motives include the desire to strengthen the company's image and increase customer loyalty (Block et al., 2015). Another significant reason to protect designs – also rated more highly in the industry survey – was to support the marketing of products or services.

These results suggest that for many in industry, protection and marketing are interconnected motives. They also highlight the unique space design protection, especially design rights, appears to occupy between incentive-based rights (patents) and informationbased rights (trade marks).

Figure 2: Motivations for protecting designs

Question: How important to vou/vour organisation were the following reasons for protecting this design? Note: the figure shows the percentages of respondents who answered that the factor was 'very important' or 'extremely important'.

Higher value designs are more likely to have a design right

Valuing designs analyses the productivity benefits to Australian businesses of holding registered design rights, using data on 1.1 million Australian businesses. For a business operating in a design rights-intensive industry, increasing its number of design rights from one to two can be expected to increase its annual revenue by 0.44% (IP Australia, 2020c).

We used the data from survey responses to estimate the private value of designs. Appendix 3 contains details on the methodology for this and how it aligns with previous studies.

The private value of designs appears to be highly skewed, with a small number reporting a very high value. This is clear from the finding that the mean (average) estimated private value of a design is \$4.7 million but the median is much lower, at \$537,000.

Based on our estimates, designs that are protected by design rights have, on average, higher value than designs without design rights protection. We found:

- Designs without a design right in Australia or overseas have a mean estimated value of \$678,227 and a median value of \$78,000 (though these values are from a small sample).
- Designs with a design right in Australia value of \$3.7 million and a median value of \$675,000.
- Designs with a design right overseas have a mean estimated value of \$5.8 million and a median value of \$1.5 million.

While there may be some value attributed to the design right here, on the whole, the higher private value of designs with a design right is less likely to reflect the value of a design right seek formal, registered protection for designs that are more economically valuable.

Design rights are often associated with at least one patent

Designs with a design right are more likely to at least one domestic patent (56% of designs with a design right were in products with an Australian patent, compared to 34% of designs without a design right). Designs protected by design rights are also more likely to be in products with at least one patent outside Australia (49% of designs with a design right compared to 26% of designs without a design right).

As with the results on value (discussed above), the relationship between design rights and patents supports the view put forward in Valuing designs that design rights currently benefit innovators in particular industries, especially those with a global focus. There are indications that more economically valuable designs are selected for formal protection domestically, and that the most valuable designs are selected for export and protected overseas using a bundle of different IP rights - not just design rights.

The scale of design copying and barriers to enforcement

An IP system can perform its public role of stimulating innovation only to the extent that its users can enforce their rights. On the other hand, weak enforcement has the flow-on impact of weakening IP rights (Seuba, 2015).

The surveys examined the perceived extent and scale of design copying, both among users of design rights who may have had those rights infringed and across industry more broadly. Surveying industry allowed us to explore copying threats that the design rights system may not address and to gain insights into how businesses respond to perceived copying.

"The breach looked like a duck, guacked like a duck, waddled like a duck, flew like a duck and clearly was a duck, however we were told it was not a duck because the infringing product only had one eye."

– Applicant respondent

Industry respondents see more copying than applicants do

After weighting the data⁸ we found that 27% of design right applicants thought that a third party had copied their design. Among those, 23% took no action to enforce their rights. These figures are remarkably consistent with estimates from a representative survey of patent applicants by Weatherall and Webster. They found that 28% of inventors who submitted a patent application between 1986 and 2005 were aware of copying on some level, and that half of these took no enforcement action. However, they considered a narrower range of potential enforcement actions than we did in this study (Weatherall and Webster, 2011).

The reported incidence of copying was significantly higher in the industry survey than in the applicant survey, at 55%. Of the respondents who alleged that non-trivial copying had occurred, 34% took no action. The higher reported incidence of copying among industry respondents is unexpected. Given evidence that more economically valuable designs are both more likely to be registered for IP rights and more likely to be copied (Weatherall and Webster, 2011), it would have been reasonable to expect the applicant group – by definition users of the IP registration system - to report more copying.

Applicant survey respondents were more likely to believe that the copying had infringed a design right (64%, compared with 51% of industry respondents). Industry survey respondents were more likely to believe that the copying had infringed copyright (39%, compared with only 6% of applicant respondents).

Most respondents attribute copying to larger organisations with a presence in Australia

While all sizes of businesses reported similar rates of copying, both the industry and applicant groups believed that in the majority of cases the copier was a larger organisation (in 56% to 59% of cases), rarely a smaller one (11% to 12% of cases).

"I would say the cost of defending IP is extremely high for small companies and that we need financial support to pursue this otherwise large companies just beat you down with their financial strength."

- Applicant respondent

We weighted the survey data to reflect characteristics of the full population of design right applications submitted between 2005 and 2018 8 Without weighting, the reported incidence of copying was 34% among design right applicants, with 32% taking no action.

In both surveys, the majority reported that the alleged copier operated in Australia (including those that operated both in Australia and overseas): 66% and 78% respectively of applicant and industry respondents who had been copied). More applicant respondents reported being copied by businesses operating exclusively overseas (28%, compared to 15% of industry respondents). Industry respondents were predominantly in manufacturing. The sector comprised 34% of the industry sample and accounted for 64% of those exposed to copying overseas. The businesses in the industry sample most commonly indicated that copying had taken place in China (47% of businesses that indicated being copied overseas). Applicant respondents most commonly indicated that the copying had occurred in the United States (50%).

Figure 3: Perceived copying in Australia and overseas

Question: (If indicated that design copying had occurred) Was the other party operating in Australia or overseas?'

The main reason for not taking action against copying is high enforcement costs

Around half of the businesses that had refrained from taking action against copying said it was because the enforcement costs were too high. Approximately a third felt that the other party was too big; and a substantial proportion felt that copying would be too difficult to prove (35% of industry respondents and 25% of applicants).

"Much of the frustration of the current system is that extent of protection for small creative industries is beyond the financial means of small independent designers, and the cost of pursuing anyone even if protected is prohibitive."

Industry respondent

Another strong factor for industry respondents was uncertainty about the validity of their rights, whether specifically IP rights or more general legal rights (31%). This was of less concern for applicants (9%), who seem to have more confidence in their rights. In the industry survey, nearly one in five reported concern about damaging business partnerships (actual or perceived) as a reason to take no action in response to copying. No applicants reported this as a factor. Figure 4: Reasons for not taking action against perceived copying

Applicant survey respondents

Industry survey respondents

There is limited success from taking action

In both surveys, the most common action taken in response to copying was to send a letter to the other party (42% of applicants and 52% of industry). Issuing a court claim was the least frequent course of action in both surveys.

Industry respondents were more likely to seek legal advice to discuss next steps (43%, compared with 28% of applicants) and more likely to create public awareness of the alleged copying through social media (24%, compared with 11% of applicants). This closely aligns with the findings from interviews summarised in *Talking design* (IP Australia, 2020b).

Both industry and applicants reported that the most common response to any action they attempted was no response from the other party. For applicants the next most likely response was an allegation that their IP right was invalid; for industry respondents it was that the other party would stop copying 'temporarily'. Across both surveys, fewer than one in five reported that their actions had resulted in the other party permanently stopping copying.

We heard in interviews that the success of taking action may depend more on the size and power difference between the parties than on the strength of any legal right (IP Australia, 2020b).

Pursuing copiers is likely to cost more than the loss from being copied

In both the industry and applicant surveys, the median amount businesses reported having spent on enforcing design rights is in the \$5,000 to \$10,000 range. We heard in interviews that after getting initial advice and sending some letters of demand, the quoted costs of further steps (i.e. starting court action) will jump to hundreds of thousands of dollars, at which point many businesses abandon taking further action (IP Australia, 2020b).

"It is the cost of legal enforcement of IP that is a deterrent for small businesses."

– Industry respondent

Where survey respondents were able to assess the financial loss from being copied, the median estimated loss was in the \$50,000 to \$100,000 range.⁹ This seems to support the view of interviewees that further action was not financially worthwhile. This reality left many interviewees questioning the point of registering designs at all (IP Australia, 2020b).

Qualitative comments and consumer views

At the end of the survey, all respondents had the opportunity to provide a comment. Twenty-one respondents to the applicant survey and 31 respondents to the industry survey did so. Their comments mirrored those summarised in *Talking design* (IP Australia, 2020b).

"Design and innovation is an incredibly valuable resource that our country can offer both domestically and internationally. When Australian companies infringe on copyright and IP it erodes the ability for small (valuable) companies to thrive."

– Industry respondent

In parallel with the surveys, we also wanted to understand more about consumer views on design copying. We commissioned iSentia, an Australia-based media intelligence and insights company, to do an exploratory case study analysing traditional and social media.

The aim was to gain some general insight into portrayals of fashion and furniture design in the Australian media and into the surrounding conversation among the general public in relation to design and IP. This provided a complementary perspective to the design industry views we heard through our interviews and surveys.

Comments from survey respondents

Across both surveys, the most common comment was that enforcing design rights was difficult and the costs prohibitive. This was particularly so for smaller businesses struggling to combat copying by larger, better resourced businesses.

Unique to the applicant survey were comments giving feedback about the process of acquiring design rights and expressing a desire for design rights to have a longer term of protection.¹⁰

The industry survey provided broader commentary on Australia's design culture. Respondents commented that consumers and other businesses in Australia do not sufficiently value original design or appreciate the impacts (financial and otherwise) of copying on designers, particularly in fashion and furniture.

"My experience to date has been an unwillingness for companies to see value in Australian based designers and makers, as their investment will be lost when a larger company infringes on the product."

- Industry respondent

Findings from media case study

The case study assessed approximately 6,000 media articles, and online commentary surrounding them, relating to fashion and furniture. Discussion of design copying and infringement made up only a very minor share of conversations. Social media commentary on fashion was dominated by negative public coverage of fast fashion (primarily relating to environmental concerns and price). On the other hand, social media commentary on furniture, which accounted for only 1% of the volume of conversation on fashion, was dominated by positive public coverage of replica furniture (primarily relating to quality and price).

A key takeaway from the case study was the impact of price, which overshadowed any conversations among the general public about copying and infringement. The analysts noted generally favourable leanings towards supporting small businesses as a starting point. However, the sentiment shifted as price gaps between products increased. If products were in the same or a similar price tier, commentary in both traditional and social media was firmly in support of smaller businesses and efforts to stop others copying their designs. If the products were in different market tiers, the commentary shifted away from protecting the original design. There were exceptions in small pockets of likeminded social media followings – e.g. those who follow designers and express support for them in response to reports of copying. The design industries' concerns about copying do not appear to have permeated into the broader public conversation, at least in traditional media and social media channels.

This study concludes a phase of exploratory research for IP Australia's Designs Review Project, aiming to provide a robust evidence base on what drives (or hinders) design innovation, the role of the IP system, and any changes to it that could be made to Australia's benefit.

The previous three reports in the series support the view that design rights have a niche role in Australia's economy, as the Productivity Commission found in its 2016 IP inquiry (Productivity Commission, 2016). The findings from these surveys lend further support to that view, with nearly half of the industry respondents perceiving their reliance on formal or informal design protection to be low.

At the same time, economic research reported in Valuing designs demonstrates that design rights hold economic significance for the 45 industries that most intensively use them: for businesses in these industries, holding at least one design right is a leading indicator of higher productivity, R&D and exports (see the full research report on which Valuing designs is based: Kollmann et al., 2020). Consistent with this, these surveys find that for a large majority of those who do typically seek to protect their designs, design rights are the leading protection method.

The survey results show some distinctions between applicants (i.e. the most frequent users of the design rights system) and industry more broadly, both in their knowledge of methods and in their motivations for protecting designs.

For example, despite the survey being targeted at design industries, about a third of industry respondents said they were not aware of design rights.

Designs law is based on the incentive view of IP. The surveys highlight the unique space that design protection seems to occupy between information-based rights (like trade marks) and incentive-based rights (like patents), based on respondents' reported motivations for seeking to protect their designs. Among design right applicants, the most common motive for protecting their designs was safeguarding revenues by preventing others from copying – much as with patents. Industry respondents more often reported motivations such as attracting and retaining customers, enhancing the organisation's image and supporting its marketing of products and services – much as with trade marks. This may provide some context for the dissatisfaction and confusion about design rights in the design community, as their expectations of the system may not align with its current operation and niche role in the economy.

Building on previous work (e.g. Jensen et al., 2011), the survey approach allowed us to estimate the private value of a design to its owner, including both past profits and expected future revenue. Designs with design rights are estimated to hold considerably more value than designs without this protection; designs protected with design rights overseas hold even higher value; and more economically valuable designs are more likely to have design rights. These results support the view in Valuing designs that design rights are most used by innovators in certain industries, especially those with a global focus, and are often bundled with patents and informal design protection strategies (IP Australia, 2020c).

Our surveys find that copying is perceived as quite prevalent in the design industries. Respondents were more likely to say that their designs had been copied by a business with higher revenue than their own, and by a business that operated in Australia. Quite often they had taken no substantive action in response to copying. Few of those who had taken action reported a successful outcome. The costs of pursuing copiers appear to exceed what businesses lose from being copied.

Despite this, qualitative inputs, including commentary from survey respondents and media analysis, suggest that the concerns of design industry participants about copying have not permeated out into the broader public's conversations.

Appendix 1: Details of the surveys

The applicant survey

The first survey was of Australian designers and inventors who applied to IP Australia for IP rights between 2005 and 2018. The survey was emailed (where possible) or mailed to:

- all Australian applicants who filed for design rights between 2010 and 2018
- a random selection of Australian applicants who most recently filed for a design right after 2005 and before 2010
- a random selection of Australian patent applicants who had not before filed for a design right.

The survey asked questions about a particular design idea. Specifically, it asked respondents to focus on the idea indicated in one recent IP right (not just design right) application they had made to IP Australia. It asked about their approach to protecting that idea; their experiences of commercialising related products; whether they were aware of third parties copying their design; and their responses to this copying.

In most cases, applications for rights are filed by a single applicant. However, applications may list multiple applicants, and some applicants filed more than one application in the study period.

Excluding applicants for whom a complete address was unavailable, there were 37,541 design right applicant-application pairs in the population, relating to 4,561 unique designs.¹¹

As well as asking respondents to focus on a recent application from their portfolio, the survey invited them to answer questions about up to 10 additional applications. In total, we received completed questionnaires relating to 183 unique designs.

Appendix 4 provides details about the number of applications in the survey sample and the population, by filing year, status of application, and product sector. The more recent the filing year, the higher the response rate. Compared to the population, the sample contains a higher proportion of currently registered designs and a lower share of applications not currently in force. The sample provides a good reflection of the population's sectoral composition, but it skews slightly higher in lighting and apparatus and in leisure and education, and lower in textiles and accessories.

To compare IP users who do not use design rights with IP users who use multiple rights, we included in our sample patent applicants who had not also filed for design rights in the study period. We sent the survey to 640 (standard and innovation) Australian patent applicants, and received responses relating to 30 unique inventions.

The industry survey

The second survey was a non-representative survey of Australian businesses operating in the design sector. We distributed it with the active cooperation and support of design industry associations (listed in the acknowledgments at the end of this report), who shared it with their members.

The industry survey asked respondents to nominate a design idea that best represents their experience of creating and commercialising new designs, and to answer the questionnaire in relation to that idea.

Determining the precise population reached with the industry survey is not possible, as the membership lists of different industry associations are likely to overlap. The survey was sent to a potential maximum of 30,000 businesses. In total, we received responses relating to 1,172 unique designs, with around 200 answers in response to any given substantive question.

11 Complete information on the number of applications that list valid addresses was not available. By way of a guide, Weatherall and Webster (2011) found that 12.6% of patent applications to IP Australia between 1986 and 2005 listed valid addresses

Appendix 2: Industry coverage

Valuing designs, report three in the research series, identifies 45 design rights-intensive industries, of which the majority are in manufacturing and wholesale trade.

Responses to the applicant survey reflected this. Of the respondents who reported their main line of business, 39% identified it as manufacturing; 12% as professional, scientific and technical services (which is not a design rights-intensive industry); and 8% as wholesale trade.

Compared to the applicant survey, the industry survey had broader coverage.

Of the respondents who reported their main line of business, 34% identified it as manufacturing; and 21% as professional, scientific and technical services, which includes design services, architecture, advertising, and computer and related services. Only 1% were in wholesale trade, indicating a clear distinction between this group and industrial rights users. High shares of respondents came from construction (14%), retail trade (11%) and arts and recreational services (9%).

Figure 5: Industries represented by respondents

Question: What was your/your organisation's main line of business in the year the design was created? Note: these classifications are from ANZSIC 2006 (ABS, 2006).

Base: All respondents – applicants (n=114) and industry respondents (n=140)

Appendix 3: Estimated private value of designs

Simply using data on total revenue underestimates the value of new designs. Using the survey data, we can estimate the value of designs, including both past profits and expected future revenue.

To enable us to estimate past profits, the surveys asked respondents about the sales and licensing revenues generated to date by their design and any related products. We assume a 30% gross profit margin on sales revenue, following Jensen et al. (2011). In total, 151 respondents answered all three of the relevant questions. We added the three components together to derive an estimate of design value.¹²

The private value of designs appears to be highly skewed: the mean and median design values in our sample are \$4.7 million and \$537,500 respectively (n=102).

These estimates appear reasonable given the evidence in relation to technological innovations. Using survey data on inventions for which inventors had submitted patents in Australia, Jensen et al. (2011) estimated their mean and median values at \$6.6 million and \$800,000 respectively. Based on our estimates, designs that are protected by design rights have higher value, on average, than designs without design rights protection. We estimate that the mean and median values were \$3.7 million and \$675,000 (n=18) for designs with design rights in Australia but not overseas; \$678,227 and \$78,000 for designs without a design right in Australia or overseas (n=11); and \$5.8 million and \$1.5 million for designs in products protected by design rights outside Australia (n=28).

12 The three questions related to design value asked survey respondents to select one of six possible value ranges. Following Jensen at al. (2011), to convert the responses to numerical values, we took the mid-point of each interval. The highest possible value range was 'More than \$10 million'; since this category is unbounded we imposed an upper bound of \$50 million.

Appendix 4: Design right application data

Table A1. Number of design right applications in sample and population by year of filing, 2006–2019

Year of filing	Sample			Population o	fapplications	
			With complete addresses		Total applications	
2006–2009	12	7%	86	2%	10,590	30%
2011–2014	46	25%	2,587	57%	13,936	39%
2015–2019	125	68%	1,874	41%	11,109	31%
Total	183	100%	4,547	100%	35,635	100%

Table A2. Number of design right applications in sample and population by sector, 2006–2019

Sector	Sample of applications		Sample of applications Population of applications				
			With co addro	With complete addresses		Total applications	
Advertising	4	2%	95	2%	509	1%	
Agricultural products and food preparation	1	1%	26	1%	286	1%	
Construction	30	16%	697	15%	6,074	17%	
Electricity and lighting	20	11%	261	6%	2,076	6%	
Furniture and household goods	34	19%	766	17%	5,653	16%	
Health, pharma and cosmetics	1	1%	148	3%	880	2%	
ICT and audiovisual	6	3%	139	3%	762	2%	
Leisure and education	21	11%	393	9%	2,129	6%	
Packaging	12	7%	348	8%	2,192	6%	
Textiles and accessories	24	13%	667	15%	7,804	22%	
Tools and machines	21	11%	663	15%	4,652	13%	
Transport	9	5%	336	7%	2,278	6%	
Other	0	0%	8	0%	255	1%	
Total	183	100%	4,547	100%	35,635	100%	

Table A3. Number of design right applications in sample and population by application status, 2006–2019

Status	Sample of applications			Population o	fapplications	
			With complete addresses		Total applications	
Application pending	0	0%	0	0%	109	0%
Application pending – awaiting formalities	0	0%	0	0%	191	1%
Currently not in force	39	21%	1,427	31%	17,780	50%
Registered	109	60%	2,480	55%	14,318	40%
Registered – certified	31	17%	478	11%	2,340	7%
Registered – examination requested	1	1%	10	0%	85	0%
Registered – under examination	1	1%	3	0%	30	0%
Registered – in grace period	2	1%	149	3%	768	2%
Unpublished	0	0%	0	0%	14	0%
Total	183		4,547	100%	35,635	100%

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