**Understanding Attitudes towards Intellectual Property from the Perspective of Design Professionals**

**Abstract:** Intellectual Property Rights (IPR) is meant to protect and promote creativity and innovation. Regardless of the increasing role of IPR in advancing innovations, the corresponding IPR system in the creative industries is still underdeveloped and facing many challenges in China. To facilitate the development of IPR in the creative industries in China, it is important to first understand what factors may determine design professionals’ attitudes towards IPR. A qualitative contextual interview study, conducted with 49 Chinese designers and design managers, revealed different levels of IPR awareness (e.g. what constitutes IPR and how IPR can be protected) and the perceived effectiveness of IPR law enforcement (i.e. weak law enforcement vs strong law enforcement), and how different ethical beliefs and ethical climates can have a distinctive impact on our participants’ attitudes towards IPR. Moreover, our study finds that Chinese design professional exhibit different motivations for their design work. Such motivations in design can stimulate different levels of IPR awareness and could have an indirect impact on their attitudes towards IPR.. Based on these findings, a theoretical model is proposed which incorporates a number of factors identified from the contextual interview study. Our theoretical model can serve as a baseline model and provide theoretical foundations for future empirical studies on people’s attitudes towards IPR.

**Keywords:** Intellectual property rights; Attitudes towards IPR Designers; Awareness of IPR; Image retrieval application

1. **Introduction**

Intellectual Property Rights (IPR) is playing an increasingly important role in today’s society, and it has long been considered to be conducive to the creative industries [1]. IPR is meant to protect and promote creativity and innovation. Regardless of the increasing role of IPR, the corresponding IPR system in the creative industries is still underdeveloped and facing many challenges in China. For example, as the concepts of IPR found their origins in the West and were developed mainly by those advanced economies, it is a challenge to apply Western concepts of IPR directly or uniformly in China without encountering strong resistance. There is a noticeable discrepancy in economic and technological development between developed and developing countries, both in terms of culture and traditions. Furthermore, countries also differ widely, notably in terms of moral values, social norms, and the level of economic development and legal systems [2]. The underdeveloped and under regulated creative industry also presents new challenges to the further development of IPR regimes, and even intensifies any conflicts (benefits and losses) brought by IPR between the stakeholders in the industry. The creative industry plays a general role in driving and facilitating the process of change across an entire economy [3]. It is deemed to be part of the innovation system of an economy, of which technological and artistic innovation are two distinctive categories. Artistic innovation, however, because of its stereotypical image of lacking any practical use, is easy to underestimate and overlooked, even during the boom in the creative industry. In China, owing to internal impetus and external pressure, giant strides and substantial progress have been made in the protection of technological innovations. The transformations in the government’s economic, social, and education policies have shown its determination to expand the innovation and creativity of science and technology to other domains [4]. However, there is still a relatively strong tendency in the government, and in society in general, to prioritise technological innovation over artistic innovation [5]. This phenomenon may be ascribed as one of the main reasons for the existing defects, both in the legislation and in the IPR law enforcement in creative industry in China.

On examining existing literature on IPR, it is evident that the majority of the IPR related studies have examined the impact of culture (Hofstede cultural dimension scores – e.g. [6]), economics (total GDP or GDP per capita – e.g. [7]) and legal systems (e.g. [8]), on IPR, using either firm level or country level data. However, very few papers on IPR have reported the related issues on an individual level, especially for those working in creative industries, such as designers and design managers. A review of IPR [9] highlights that research into the role of IPR protection in the design industry has been largely neglected, although it is recognised as an important contributory branch of the creative industries.

Despite a growth in the research into IPR for innovation management, there is still a need to “develop coherent constructs and conceptual frameworks that would strengthen the theoretical basis of the research” [10], and to expand the IPR studies in China. In 2011, China overtook the U.S. as the country filing the largest number of patent applications [11], while the broader topic of innovation in China has attracted attention from a growing number of researchers (e.g. [11,12]). Designers in China form a large group of individuals working in the creative industries, so their attitudes towards IPR may play a vital role in strengthening the IPR regime in China’s creative industry.

The aim of this research is to explore what factors can influence Chinese design professionals’ attitudes towards IPR, both in terms of protecting the designers’ own creations and preventing plagiarism. Furthermore, the overall objective is to construct a theoretical model based on a review of existing literature and findings from the contextual interview study. This theoretical model will provide a baseline model and theoretical foundations for future empirical studies on people’s attitudes towards IPR.

The remainder of the paper is structured as follows. The literature review presents an overview of the research background and outlines the theories which have guided the research. This is followed by the methodology which discusses the research methods, research activities and data analysis. Next, we present our empirical results and the conceptual model for attitudes towards IPR. The implications of our findings are proposed in the conclusions section, in addition to suggestions for future research.

1. **Literature review**

*Development of IPR in China*

In the early development of the Chinese IPR system, proponents of a stringent IPR system recognized the need to effectively protect intellectual property to benefit China from the transfer of quality foreign technologies to China. In the two decades following the introduction of its ‘Open Door’ policy, China joined most of the international treaties for the protection of IP and introduced number of pieces of IP related legislation. For example, the Trademark Law was passed in 1982, the Patent Law in 1984 and the Copyright Law in 1990 [13]. The IPR trial division of the Chinese People’s courts has exclusive jurisdiction over all IP disputes, excluding those involving administrative or criminal law.

From the historical perspective, and the current trends in IPR being observed in China, China is gradually adopting and implementing legislation which is in favour of strong IPR protection. However, it could take China long to reach the level of IPR protection observed in South Korea or Singapore, because China’s size alone already poses immense challenges to the further developments in IPR. Many emerging economies were in favour of weak IPR protection to stimulate the rapid dissemination of IP, but once their domestic IPR production and revenues reached a certain level, strong levels of IPR protection were then endorsed [14]. Recent studies have noted that among those countries which have passed a certain economic development stage, rising wealth is found to reduce the level of digital piracy (e.g. [15] [16]). As China is currently moving from a labour intensive and low skill-based economy to a service oriented, innovation driven and knowledge-based economy, it is gradually losing its low-cost-advantage in manufacturing to neighbouring countries, such as Vietnam and India. Since a knowledge-based economy requires intensive intellectual input, China will need to introduce more stringent IPR policies to reward innovation and to support the transition to an innovation driven and knowledge-based economy.

*IPR and the creative industry*

The term creative industries encompass a broad range of activities. These include the necessity that a product/service contains a substantial artistic/creative element, while also including activities such as industrial design, architecture and advertising [17]. China’s improving economic situation and the growth of urban populations are creating a favourable situation for the development of the creative industries [18]. Over the last decade, the revenue of the Chinese creative industry has enjoyed a 60-fold increase, contributing approximately 4% to China’s GDP [19]. Advances in technology have a strong impact on the consumption of, and provide access to, creative content through the internet and mobile devices [19]. The consumption pattern has changed dramatically alongside the advances in technology, and families are now willing to commit more of their overall spending on creative products and services than they were 10 years ago [20].

The development of the creative industry is heavily influenced by the level of protection offered by IPR. Previous studies suggest that IPR is both an internal asset and an external force to creative industries [21]. Strengthening IPR protection can encourage more creativity and innovation by assuring innovators that their labour will be rewarded and that their intellectual output will be properly protected. It also encourages the dissemination of IP and also encourages investors to put their money into creative industries [22]. [23] examines the role of IPR, with a focus on copyright in the creative industry. The author concludes that IPR is a secondary external force in shaping business models. In addition, [24] discusses the role of IPR as a possible barrier to entry, and as a means to reducing competition in the creative industry. Hence, they conclude that too much protection of IPR can lead to monopoly situations, So the relationship between the creative industry and IPR protection remains a contentious issue.

*IPR and Chinese culture*

Previous studies have highlighted that Chinese culture can have a significant impact on IPR policies (e.g. [25]). As the widely accepted concept of IPR was introduced and developed mainly in the developed countries, it may not be compatible with Chinese culture (e.g. collectivism vs. individualism) and traditions. Some fundamental cultural differences between the developed countries and China are considered to be responsible for many of the failures in attempts by developed countries to push the Chinese to comply with their intellectual property rights [26]. Traditional Chinese thought views knowledge simply as the “rediscovery of the ways of ancient sages” [26], while traditions were highly esteemed in Confucian society, as a consequence of which “no one dared to claim that they had created something new and of sufficient value to bother identifying it as their own” [27]. However, it has also been noted that retaining the integrity of the original information and respecting other people’s work is also strongly emphasized in Confucianism. Confucianism is considered as a route through which to understand Chinese culture and traditions, and is considered the single most significant ethical and philosophical system in China, by teaching and promoting higher moral standards for socio-political life and interpersonal relationships [28]. Confucianism considers that it is important for an individual to “transmit what was taught to [him/her] without making up anything of [his/her] own”. However, there is still a lack of empirical evidence in respect of the impact of Chinese culture on IPR and people’s attitudes towards IPR. In addition, in the study of cultural impacts on IPR related issues, there is a need for theoretical frameworks which incorporate the cultural dimensions.

*Studies on attitudes towards IPR*

A recent survey shows that that the general public’s understanding of IP has increased in European countries, although it has decreased within their younger generations, and in general, the concept of IPR is considered to be rather abstract by many [29]. The general public tend to believe that the main beneficiaries of IPR come from society’s ‘elite’ (e.g. large companies, people with a high level of education) rather than themselves.

[30] conducted an empirical study with Chinese participants to investigate the impact of the social cost of piracy, the social benefits of dissemination, anti-big business attitudes, and ethical beliefs on people’s attitudes toward piracy. Piracy behaviour is a commonly visited topic in the creative industries, as it may cause a critical drain on revenues and retard the continued growth of the industry. The social cost of piracy is the level of perceived social cost accompanying such activities; the social benefits of dissemination measures people’s perception of the social benefits of IP infringement; an anti-big business attitude refers to an unfavourable attitude towards large companies with high profits; ethical beliefs are not limited to legality or morality, but are also rather closely related to perceptions of ‘rightness’, even in daily life, as it will impact upon the ethical behaviour of consumers. Kwong et al’s model incorporates some keys variables that are positively or negatively related to people’s attitudes towards piracy behaviour, which offer specific implications for reducing piracy in the creative industries.

1. **Research methods and activities**

**Methods.** The study employed a qualitative contextual interview. The contextual interview is a particular method of research used to gather field data [31]. It is a semi-structured real-world interview, conducted with as little interference from the interviewer as possible. This interview method allows researchers to ask interviewees questions on various issues in a familiar context while carrying out their tasks. Traditional interviews are arranged to take place at a specific time, exclusively for the purposes of conducting the interview. This has become increasingly unfeasible and many interview invitations have been turned down because of the interviewees’ availability issues. A contextual interview does not ‘steal’ much time from an interviewee as the main part of the interview actually consists of observing them conducting their work (where there are no privacy or confidentiality issues) and interactions with colleagues. This provides interviewees with sufficient flexibility to accommodate an interview. A contextual interview can also contribute to a deeper understanding of interviewees and their attitudes in a working context. As interviews are conducted in a familiar working context, their ongoing design works provide natural and relevant IP context for the discussion of IPR issues. This is a key strength of the contextual interview, because it provides a more natural means than a traditional interview with which to collect data on IPR related issues.

The semi-open interview questions were developed based on a literature review, and they incorporated the following four aspects:

1. Demographics (e.g. job title, job function, job content, areas of the creative industry).

2. Awareness of IPR (the participants were asked to describe their understanding of IPR in the context of their work).

3. Attitudes towards IPR (based on the model from Kwong et al. [30] consisting of four components: the social cost of piracy, anti-big business attitudes, the social benefits of dissemination, and ethical beliefs)

4. Current IP practice (e.g. the participants were asked to provide examples of how they protect their design work)

 **Table 1** Demographic information

|  |  |
| --- | --- |
| **Working area** | **Number** |
| Product & Industrial Design | 39 |
| Animation & Media Design | 6 |
| Software & Interaction Design | 4 |
| **Work Experience** |  |
| 1-4 Years | 21 |
| 5-9 Years | 15 |
| Over 10 Years | 13 |
| **Job Titles** |  |
| Designers | 26 |
| Managers | 23 |

**Participants.** The recruitment criteria included considerations of working experience, geographic location and job title. Participants were required to have at least one year’s experience of working in the creative industry; they should represent a well-balanced geographic distribution across the different regions of China to accommodate China’s regional differences; and they should include both designers (working in design companies as employees) and managers of design companies, to allow for an understanding of the role of IPR from different job perspectives.

The recruitment contact information for the participants was provided by several industrial design associations in China. In our recruiting emails, we informed potential participants about the purpose of our study and what would be involved. Ultimately, 49 designers and design managers from different regions of China were recruited. The cities of Xi’an, Taiyuan and Tianjin are located in the Northern part of China, while the cities of Shanghai and Guangzhou are located in the South. The demographic information of all interviewees is summarized below:

**Procedure.** Before the interview, each participant was briefed about the research project, the purpose and the background of the study. Each participant was interviewed in his or her own environment, such as a meeting room. The interview revolved around questions developed based on a literature review. The questions were covered in all the interviews, but not in any specific order. Each interview lasted for approximately 30 minutes. The interviews were audio-recorded and notes were taken.

**Data Analysis**. All interview records were transcribed into text, and Nvivo 11. An Emergent Themes Analysis [e.g. 32, 33, and 34] was conducted to understand the data. In our data analysis, the first step was to find a structure, a means of setting up the different interviews for the analysis; the second step was to remove any non-essential data from the texts; the third step was to code and categorise the data according to themes. The transcriptions of the interviews with managers and designers were separated for comparison purposes.

1. **Results**

The themes which emerged during the analysis were broadly grouped into five groups, namely 1) motivation in design; 2) current IP protection practice; 3) IP awareness; 4) perceived effectiveness of IP law enforcement; and 5) ethical beliefs and ethical climate. Each of these themes was examined in turn and were used to inform a model depicting people’s attitudes towards IPR in the context of the creative industry in China.

**4.1 Factors influencing attitudes towards IPR**

**4.1.1 Motivation in Design**

**External motivation.** There are two main aspects to external motivation. The first external motivation is: working in a design company, designers have to design products that can satisfy customers’ requirements and the demands of the market, as explained by participants:

*‘It was the requirement of our customers; they wanted us to design [it] in this way. ‘(Manager 9-GZ)*

*‘My job is to satisfy my customers; every product I make is to satisfy them.’ (Manager 1-SX)*

The second external motivation is: designers work under the supervision of their superiors, and they consider their work is to finish the tasks assigned by their superiors:

*‘My boss assigned these tasks to me and I have to finish them. Sometimes I’m not so interested in the design project, but I have to motivate myself [to finish the work]’ (Participant 6 -SH Designer)*

**Intrinsic motivation.** Compared to external motivation, more designers expressed their intrinsic motivation for design.

To solve a problem or enhance people’s lives: *‘I hope I can always find some new innovations, and use my designs to help people to better address problems in their daily lives’*. (Designer 7-Tianjin)

To express individual/personal ideas on design: ‘*I was tired with designing under supervision in a company, and now I want to design some products to express my own ideas*.’ (Manager 10-GZ)

To be passionate about design: *‘I choose to be a designer because I love it, and my dream is to become a freelance designer*’. (Designer 2-XA)

Some differences in motivation were identified between designers and managers. Compared with the designers, the managers were more concerned with external motivation rather than intrinsic motivation. It is understandable that economic wellbeing may play a role in this. Unlike the managers, designers have to first make their own living in society, before they can focus on their intrinsic motivation, as explained by one manager:

‘*Actually, as a designer in my company, you must first prove your value to the company, then you can further think about salary or promotion […] my answer to motivation is that before you think about your [own] designs, you need to survive in society, and this requires you to adapt your way of thinking and how you design to your personal circumstances*’. (Manager 8, Guangzhou)

* + 1. **IP practices in design**

*Among managers*

Some managers considered current IPR protection in design to be ineffective in China today, as a consequence of which, they did not implement any measures to protect their designs. ‘*I don’t think you can protect your work from being infringed by others, no matter what measures you take*’. (Manager 2, Shanghai)

Other managers considered IPR protection in China to be improving over the years, and they actively seek ways to protect their designs. They protect their designs to gain maximum economic benefit from their intellectual property assets. This are commonly done in the following two ways. The first option is to register designs with the IP Property Office. Although some managers complained that they were not satisfied with their IPR protection experience, they still considered it to be a necessary and important step to take to protect their work. The second option which some managers find effective in protecting their design is to exercise strict controls during the design process. For example, they sign non-disclosure contracts with their employees before beginning a design project, and they also pay close attention to preventing clients from receiving any design information before they have paid the agreed fee (e.g. preventing them from taking photographs of any design schemes, and never providing copies of design schemes).

*Among designers*

Based on the data collected during the interviews with designers, we identified three IP practices. The first is that some of the designers showed no intention to seek any legal protection for their designs. Failure to seek protection for their designs was mainly attributed to their motivation (e.g. lacking a sense of ownership for their designs) and low levels of IPR awareness, rather than having a distrust of the IP legal system or doubts about the effectiveness of IPR law enforcement in China.

The second IP practice among Chinese designers is that they acknowledge the importance of protecting their designs, however, they are not well-informed about how their designs should be protected. As a result, such designers tend to use their own methods to protect their designs. For example, they will avoid uploading their designs to the Internet, encrypt their documented design schemes with a password to prevent unauthorized accesses, and keep their design ideas to themselves.

Of the Chinese designers we interviewed, few have registered patents or copyrights to protect their work, however, these designers pointed out that they are reluctant to pursue this option considering the relatively high cost of a patent, and the IPR application policy within their companies. For example, some design firms encourage employees to apply for patents and would pay the application fees, but not all design firms following suit.

Our findings suggest that different IP practices among the designers and managers are also subject to their understanding of imitation. Many design managers and designers have a high regard for the value of imitation in enabling their designs, especially in the early stages of a project. At the outset, they will first analyse any good designs which are available on the market to help with the conception of their own design ideas. They argue that there is a clear difference between imitation and plagiarism, and between imitation and infringement. They consider that imitating others’ designs in terms of materials used, colours being applied, or manufacturing methods employed to produce such designs, is not the same as plagiarising others’ designs, which is to simply mimic almost everything about a product. Many Chinese designers we interviewed considered plagiarism to be an ethical issue. ‘*Plagiarising is unethical, but if you build some of your own ideas on the basis of an existing product, it is innovation’*, argued one product designer.

**4.1.3 IPR Awareness**

Our findings suggest that managers and designers possess very different levels of IPR awareness. All managers considered IPR as a very important factor in promoting innovation, however, they also complained about the current weak IPR environment in China:

‘*I’m kind of a bit pessimistic about IPR today in our society’*. (Manager 1, Guangzhou)

‘*I think IPR is very important, but the protection of IPR is really too weak so far’*. (Manager 2; Guangzhou)

‘*The weak IP environment mainly involves the widespread phenomenon of plagiarising in the market, and the weak enforcement of current laws. Once I designed a good product, and it was plagiarized immediately by someone. Although we have an association to investigate existing plagiarism in the market, it seems the results [of any investigations] are not so satisfactory. There are still too many companies which are taking the risk of plagiarizing, even if they are finally prosecuted. But you know, they have already made enough profit’*. (Manager 2, Tianjin)

In view of these concerns, all managers interviewed confirmed that they would apply for a patent for their designs, both to protect the product, and to protect themselves from being sued by others: ‘*I would like to say that IP for my company is seen more like a tool to protect ourselves from being prosecuted by others*.’ (Manager 8, Guangzhou).

However, among the interviewed designers, there were very different opinions on the IPR and IPR environment in China. Approximately 50% of the designers were sufficiently informed about IPR, and considered IPR to be both relevant and important, but they complained about the current weak IPR environment in China. Meanwhile, the remaining 50% exhibited a low level of awareness of IPR, which was partly due to the fact that they did not need to care too much about IPR issues as their clients claimed ownership of the IPR of their designs. For such designers, the primary concern was how to meet their clients’ design requirements, rather than how to protect their designs.

IPR awareness varies significantly across the different design professions. For example, compared to industrial designers, graphic designers in China care less about IPR issues. A graphic designer mentioned that he never encountered any IPR issues, even after he once designed a logo that looked quite similar to an existing one, as it is quite difficult in graphic design to argue that this would be an infringement of IP. An architectural designer could not recall any practical IPR related issues during his six years’ work experience, as architectural design ideas are all shared. He also mentioned that IPR was a vague concept in the area of architectural design. Similarly, a fashion designer, with four years of work experience, claimed that in her professional area, IPR is not given as much emphasis as it is for industrial designs.

In addition, we found that managers or designers who had experience of working in large companies exhibited high levels of awareness of IPR. For example, one of the managers, with more than 17 years’ work experience in industrial design, who is now a manger in a large company, showed us a shelf of patents registered by his company in recent years. He also told us that he always encourages his employees to attend IPR workshops organised by the local government. Another manager from a large company told us that he was once very much interested in the design of a humidifier designed by a Korean company, and he almost convinced himself to manufacture the same in China using their design. However, after a careful study of the registered patents of the product, he decided not do so. As he explained:

‘*As the product I liked was designed and patented in Korea, I thought, I could register their design in China, but because respect of IPR is quite an important part of my company’s culture, I decided not to do it, and I would never do it*.’ (Manger 2, Shanghai)

Designers who are working for large firms share a similar level of IP awareness with those managers from large firms. For example, there was one designer who worked in a large company in Shenzhen who clearly showed a high level of IPR awareness. He told us that:

‘*My awareness of IPR was improved significantly when I worked in Rococo in Shenzhen. The IP environment there is quite different from the other companies for which I had worked previously. I developed a strong sense of IP protection. I would apply for patents for my designs*.’ (Designer 4, Shenzhen)

**4.1.4 Perceived effectiveness of IPR policies and law enforcement**

From the managers’ perspective, most argued that IPR policies benefit large companies. However, small design companies found it impossible to establish a legal department to deal with IPR issues. In addition, small design companies design mainly for their clients, hence in most cases, it is the clients’ responsibility to seek IPR protection for their designs.

Both managers and designers agreed that IPR law enforcement in China needs to be strengthened to better protect creative designs. China is a country with noticeable regional differences, and IPR policies can also vary significantly across these different regions. One designer, who now works in Xi’an, in the western part of China, had lived previously in Shenzhen for two years. She mentioned that there is a “green path” in Guangdong Province, which aims to help designers to deal promptly with IPR infringements. However, there is no such service available to designers in the west of China. Another designer, who had worked in west China for four years, reported that it was common practice for designers in his previous company to use other people’s designs, and it seemed to him that the local design firms and designers did not care much about IP infringements. These examples show that the perceived levels of IP law enforcement and the perceived effectiveness of IP policies can lead to very different attitudes towards IPR.

**4.1.5 Ethical beliefs and ethical climate**

We found that the designers’ ethical beliefs defined what they thought to be ethical and what is not. ‘*IPR policy can help to protect my work to some extent, but it can never influence my ethical behaviour’*, argued one of the interviewees. Ethical leadership also has an impact on an employee’s ethical behaviour. The designers all commented that their managers’ attitudes towards IPR would have an influence on their own. ‘*It is just like [how] a teacher in school would have an influence on his students’.* Therefore, the ethical beliefs a person possesses and the ethical climate within their design firms may be important in shaping people’s attitudes towards IPR. It also became evident that Confucianism epitomized the core ethical beliefs among participants ‘*It [Confucianism] emphasizes the significance of guiding and training people in proper ethical behaviour*’. The responses from the interviewees also provided evidence that the ethical climate within large companies promotes IPR and thus leads to a strong influence on their employees’ attitudes towards IPR. However this is not replicated in small creative businesses. Professionals working in small companies were not often exposed to a culture giving emphasis to IPR and would not discuss IPR issues with peer colleagues. Yet, some designers reported that although they would not discuss IPR issues with their colleagues, such colleagues’ applications for patents or copyrights did have an impact on their IPR attitudes and practices. For example, one designer admitted that she did not know how and where to register patents. However, one of her colleagues had applied for several patents in the previous two years, which prompted her to apply for own patents, and now she files patent applications almost every year. Compared with designers, managers’ IPR attitudes are influenced both by the ethical climate within their companies, and by their local IP environment:

One manger explained that: *‘I think it is the whole IP atmosphere in our country which would affect my IPR attitude, rather than individuals’ or group’s attitudes’*. (Manager 2, Shanxi)

**4.2 A conceptual model of attitudes towards IPR**

The findings in Section 4.1 report different levels of IPR awareness (e.g. what is IPR and how IPR can be protected) and the perceived effectiveness of IPR law enforcement (i.e. weak law enforcement vs strong law enforcement), alongside different ethical beliefs and ethical climates within the design professions. Moreover, different motivation in design was found to stimulate different levels of IPR awareness, and could have an indirect impact on attitudes towards IPR through its influence on IPR awareness. The link between those factors identified in Section 4.1 and the concept of attitudes towards IPR is further explored and explained below.

**Motivation in design.** Motivation in design, as identified in this study, comprises both extrinsic and intrinsic motivation. Intrinsic motivation and external motivation can have very different impacts on design professionals’ levels of awareness IPR. This is because those design professions who are dominated by external motivation are task oriented and they do not claim ownership of their designs, as a consequence of which they are not well motivated to learn more about IPR and how the IPR (of their designs) can be protected. Intrinsic motivation, on the other hand, is both manifest in the designers’ passion for their work, but also highlights their intrinsic need to protect that about which they are passionate, and which could inspire them to actively seek more information about IPR. Furthermore, intrinsic motivation encourages professionals to engage in creative activities because of their personal interests, their passion to create, and their desire to express themselves. Hence, different motivations in design are likely to lead to different levels of IPR awareness and different IP practices.

**Current IP practice.** DistinctiveIP practices were observed among the managers and designers, with some taking no countermeasures to protect their IPR, some acknowledging the importance of IPR protection but lacking adequate IPR knowledge to use it, and some being fully informed on how to protect their work and doing so. We have identified that both different motivations in design and different levels of IPR awareness contribute to the different IP practices among design professionals. We also identified how proper IP practice is more a learned behaviour. Individual IP practice could be influenced by peers, by the working environment and by the ethical climate. Any prevailing current IP practice can have an unwavering impact on people’s attitudes towards IPR.

**IPR Awareness.** In this study, IPR awareness refers to an individual’s level of knowledge regarding what IPR is, and how and why it should be protected and enforced. The results of this study show that there is diverse level of IPR awareness among design professionals. To narrow the gap between design professionals, adequate and sufficient IPR training and IPR information should be provided by other more experienced and knowledgeable IPR professionals. Moreover, low levels of IPR awareness can easily result in no IPR protection, which is one of the main causes of the high level of IP infringements [8]. Improved IPR awareness provides solid working knowledge (in IPR) to design professionals. Improved IPR awareness can help to improve people’s attitudes towards IPR as it will help to clear misconceptions and misunderstandings of IPR.

**Perceived effectiveness of IPR law enforcement.** Our findings have identified that there is a significant discrepancy in the perceived effectiveness of IPR law enforcement across China. Design professionals’ perceived effectiveness of IPR law enforcement varies, in an inconsistent manner, between different design areas, and different regions across China. Effective IPR law enforcement provides people with some assurance that their IPR can be properly protected against IP infringements by third parties. The same effect is manifested in people’s perceived effectiveness of IPR law enforcement. When people perceive that IPR law enforcement is effective, it encourages them to learn more about IPR (i.e. what IPR is and how it works), as it is meaningful to do so, especially in the event that they want to protect their designs. When people perceive that IPR can be properly protected, IPR becomes valuable to its holders as it can be used to realize the commercial value of patented innovations/designs, hence the perceived effectiveness of IPR law enforcement can impact people’s (i.e. design professionals’) attitudes towards IPR.

**Ethical beliefs and ethical climate.** Our findings suggest that both the ethical beliefs held by the design professionals and the ethical climate of their working environment can have a strong influence on their attitudes towards IPR and in guiding their IP practice. Ethical beliefs mirror personal values and beliefs of what is right and wrong. A person who considers IP infringement to be unethical can have very different attitudes towards IPR than those holding more liberal ethical beliefs. Ethical climate refers the level of ethical practice within the working environment of design professionals. Our findings indicate that design firms can differ significantly in the level of their ethical practice, either in an inconsistent manner, or between large and small firms, or between firms located in different regions across China. As ethics guide the conduct of people and how they should behave, both ethical beliefs and ethical climate can play a role in shaping people’s attitudes towards IPR, since IPR is often considered both a legal and an ethical issue. Chinese culture finds its roots in Confucianism, an understanding of which is essential in the understanding of wider Chinese culture [35]. The ethical beliefs a person possesses, and the prevailing ethical climate in businesses are, to some extent, shaped by the influence of Confucianism, with some people and some regions in China being more influenced by Confucianism than others, and this is supported by the Rice theory [36].

Based on these findings, a theoretical model is proposed which incorporates those factors identified from the contextual interview study. Our theoretical model can provide a baseline model and theoretical foundations for future empirical studies on people’s attitudes towards IPR. Our model of designers’ attitudes towards IP is shown in Figure 1.



 **Figure 1** Proposed model of designers’ attitudes towards IPR

1. **Conclusion and implications**

We conducted an empirical study with a 49 Chinese designers and managers to explore which factors would influence their attitudes towards IPR. Based on the findings from contextual interviews, a theoretical model has been proposed to reflect the dynamics between the hypothetical factors identified with our interviewees and their attitudes towards IPR in the context of the creative industry in China. This model provides a theoretical framework for empirical investigations of people’s attitudes towards IPR, particularly for design professionals but also for the wider public in general.

The implications of this study can be divided into two categories: theoretical contributions and practical contributions. In terms of the theoretical contributions, firstly, existing literature has shown that because concepts of IPR originated and were developed the West, they may not be compatible with Chinese culture. This study conducted an evidence-based study with people selected from across different regions of China. This has provided a starting point from which to begin to understand the role of IPR in Chinese culture. Secondly, this study has tackled the under regulated and overlooked creative industry, it highlights the importance of reinforcing the IPR regime in this booming area. Thirdly, many existing IPR studies have been conducted based on either firm level or country level data, but this study has examined IPR from the perspective of individual designers and managers.

We have identified that a low level of IPR awareness exerts a considerable negative influence on Chinese design professionals’ attitudes toward IPR. This is the major practical implication from this study, drawing attention to the importance of building an IPR environment and enhancing people’s attitudes towards IPR in the creative industries in China. This importance can be observed in the practices evident in South Korea, Japan and Finland. Significant changes have been witnessed in the social attitudes towards IPR in South Korea since the copyright reforms of 1986, which was considered to result from the Korean government’s efforts to improve public awareness of IPR [37]. In Japan, the government held specific orientation sessions to advertise IPR strategic programs to the general public, while the government also promoted IP education in schools [38]. Hynynen [39] identified the low level of IPR awareness of entrepreneurs in Finland, and suggested strategies such as producing a free single-page guide to help them to take note of the link between key business activities and strategies and the value of IP. With regard to the problems in China, and to address this issue, specific strategies are needed which fit the attributes of Chinese society.

It has long been recognized that weak IPR protection in China is the result of inadequate IPR law enforcement rather than the absence of relevant IPR legislation [40]. The significant variation that exists between different regions in their IPR protection poses immense challenges for achieving fairness and consistency in IPR law enforcement in China. Findings from the interviews with design professionals from different regions in China, suggest that more coordination between the central government and local governments is required to improve the overall enforcement of IPR law in China. The World Intellectual Property Organisation has established an advisory committee and training program for enforcement, providing good examples of how to improve IPR law enforcement by bringing together the different government agencies and involving all parties to enhance the exchange of information between law enforcement agencies, in addition to identifying training needs and building an effective framework for the enforcement of IPR [41].

Our future work will validate the proposed model with large-scale users’ (design professionals) studies, and will quantify the impact of the proposed factors on people’s attitudes towards IPR.

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