

MARKETS, PROFESSIONS AND FIRMS OF THE CONSTRUCTION INDUSTRY: THE CHANGING ROLES OF ARCHITECTS IN RESPONSE TO VERTICAL INTEGRATION

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The roles of professions in the construction industry in markets globally differ from one another according to the socio-political, cultural and historical contexts they are situated in, reflecting the institutional nature of the markets themselves. The institutional logics of state, market and profession compete to shape firm strategies. We adopt an institutional logics perspective to explore how architecture firms adapt their roles in the project procurement systems in response to vertical integration in the supply chain and the change of logics at the societal and field levels. Three architecture firms were analysed in this exploratory study. Data were collected through structured interviews, completed by company achieves and design documents. As a firm level study, the diversified roles of architects as manifested in their business models and the competition between the profession and market logics nuanced by a bureaucratic state logic. The study sheds light on the role of professionalism in balancing the market logic in shaping the outcome of our built environment. In a more general sense, we discuss the impact of the professional logic of architecture on the making and outcome of the built environment, and the value it can bring to an evolving structure of inter-professional collaboration in an integrating global industry.

Keywords: architect, professional, market, institutional logic, design firms, business model

INTRODUCTION

The diffusion of BIM technologies has accelerated vertical integration in the construction industry, which demands seamless inter-professional collaborations in project delivery and collapses the boundaries between domains of knowledge that used to be exclusively owned by the segregated professions. New procurement paths such as Integrated Project Delivery (IPD) magnify clients' quest of "more efficient and higher performance buildings at lower cost" (AIA 2013: 14). The pressing demand of efficiency is interruptive to professional roles and authorities, and particularly so to that of architects (Styhre and Gluch 2009). Builders increasingly criticise architects for poor management of design drawings, which is believed to cause construction rework and cost escalation

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(Love and Edwards 2004a, b, Love *et al.*, 2012); while architects find the strong belief on the traditional role has been a major obstacle to IPD (RIBA 2011, AIA 2013). Caught in a dilemma between professional values and economic pressure, architectural firms commonly “have difficulty generating profit from their services” (Bos-de Vos *et al.*, 2016). The profession of architecture is seeing a crisis of identity and role in the industry (Styhre and Gluch 2009). Subsequently, the wellbeing of individual architects is found problematic and is getting more research attention (Sang *et al.*, 2009, Caven and Diop 2012, Manzoni *et al.*, 2012). In reaction, architects theorise themselves as ‘gleaners’ to counter the progressive standardisation and streamlining of works prescribed by technocrats (Raisbeck 2016).

Whilst vertical integration is disseminated through economic globalisation and international practice, the roles of professions in the construction industry in markets globally differ from one another according to the socio-political, cultural and historical contexts they are situated in, reflecting the institutional nature of the markets themselves. Drawing from available institutional logics in their specific societal contexts, professional service firms adapt their roles to gain legitimacy to acquire critical resources and survive the market. With this background in mind, we explore how architects adapt their roles in the institutional environment of China as part of the global market the construction industry of which corresponds to the vertical integration process (e.g. CIOB 22 April 2014). Specifically, from an institutional logics perspective, this paper aims to explore how architecture firms accommodate their business models in China by interpreting and drawing upon the societal-level institutional logics of state, market and profession.

Joining the World Trade Organisation in 2001, China has shifted from a centrally planned, state-commanded system to a market economy in the late 1970s, embarking on professionalising the architecture profession in the 1980s. This transition occurred concurrently with the emergence of a global market for these services and the vertical integration in the construction industry. For China, these processes mean that the central state government started to divide and give out powers to the invisible hand of the market and to the self-regulation of the profession.

The Profession of Architecture in China

A profession is characterised by, among others, a monopoly of competence in the prescribed field (Larson 1977), control of entry, ethics of practice, body of knowledge (through accreditation), and professional development (through mentoring mechanism) (Hughes and Hughes 2013). Professional roles in the construction industry are shaped by legislation, professional institutions, standardised contracts, professional indemnity insurance, and the nature of client (Hughes and Hughes 2013). To some extent, professional association acts as the vehicle of “state-protected monopoly”, which for example in the UK, is legitimised by a royal charter (Hughes 2015). Professional association is important in that it maintains a normative environment through conferring legitimacy to practice embedded a logic that differs from the market logic (Meyer and Rowan 1977). Hughes and Hughes (2013) stress the role of professional association as an organisation fostering a values system different from the market logic, thus provides alternative legitimacy to firms which would otherwise be left to the sole accountability to the buyers and confined to the activities of maximising profit and optimising efficiency (Hill and Lorenz 2011). Hughes (2015) further suggests that professional associations can be an agent of industry change.

Examined against these factors, the institutional environment of the architecture profession in China is characterised by rapidly changing policies, underdeveloped

professional institutions, and the absence of professional indemnity insurance. A powerful state bureaucracy nuances both the profession and the market, where registered architects are to be affiliated to a design organisation to carry out design practice, while the professional authority lies with the organisation instead of the individual, as described in an earlier study in 2004:

...an architect has the duties of designing or providing technical consultation on the design of a building, as well as undertaking building investigation, and evaluating and supervising the construction of work as designed. The duties, however, are to be carried out under the oversight of a building design unit through which all work should be commissioned and to whom fees are to be paid. Construction drawings are to carry the stamp of two parties, the architect and the design unit. If a licensed architect leaves a design unit, the unit is responsible for revoking the license to practice and returning the stamp to the administrative authorities, and the architect is then responsible for obtaining a new license and stamp from the design unit joined thereafter. (Kvan et al., 2008: 207)

More recently, the administrative control of the state has given way to the market logic to some extent. However, the previous institutional environment has fostered a culture of granting professional authority to the organisation, which, in a market environment, leads to a situation that the clients' trust lies with firms with qualifications of signing construction drawings, rather than with individual architects.

Institutional Logics

Institutional logic is the central values of institutional orders of a field, consisted of materialised practice and symbolic construction (Friedland and Alford 1991, Thornton *et al.*, 2013). It is an actor's theory-in-use in contrast to his espoused theory (Argyris and Schön 1974). The institutional logics lens enables us to see that firms take actions for gaining legitimacy defined by the prevailing logic, while profit maximisation does not always explain firm behaviours (Meyer and Zucker 1989, Thornton 2004). At societal level, Friedland and Alford (1991) suggest five central logics of a modern Western society that endorse legitimacy: the logic of capitalist market, which is commodification of human activities; the logic of state, which is rationalisation and regulation of human activity through bureaucracy and hierarchy; the logic of democracy, which is participation and institutional control over government; the logic of family, which is motivation of human activity by unconditional loyalty to an in-group; and the logic of religion (or science), which is people's essential belief of what is truth and reality. While the state and market logics are observed to be dominant in today's economic globalisation, recent research suggests the logic of profession as a viable alternative, which can be realised by professional autonomy in job discretion (Freidson 2001, Thornton *et al.*, 2013). In the field of construction industry, Hughes and Hughes (2013) stress the importance of a professional logics, pointing out that "the idea of placing the interests of the client above all else is tantamount to an abrogation of responsibility for professionals' actions" (35).

In terms of the professional logic of architecture, Thornton *et al* (2005) identified a cyclical pattern of institutional change in the American architecture profession that shifts between a design-technology dichotomy, echoing two contrasting logics:, artist-entrepreneur and engineer-manager . Cohen *et al* (2005) analysed the discourse of architects in England, and explicated three themes: architecture as creative endeavor, as business activity, and as public service. Jones and Livne-Tarandach (2008) identified three institutional logics in architects' profession: professional exemplars (artistic aspiration), business practice and state bureaucrats (related to users, community and functionality of the built environment). These typologies extracted from public discourses reflect external observers' perception of what is inside the profession. Cuff

(1992) as an insider in the profession gives an account of the differentiated roles of architects within a design firm, including principals, associates, project architects, design architects, draftspersons and technicians. In this perspective, an architectural design firm is inherently embedded with, and shaped by, multiple logics that are not necessarily professional logics but more of societal level logics practiced by the individuals of various roles. Essentially, the professional logic of architecture can be defined as the creation of spatial order to a given environment, with aesthetics as an essential concern during the creative process (Mitchell 1990). Traditionally, design decision throughout this process is made on an individual base; the professionalism in it dated back to Michelangelo's letter to his client, "*I neither am nor will be obliged to tell your lordship or any other person what I intend or ought to do for this work; your office is to procure money, and to take care that thieves do not get the same; the design for the building you are to leave to my care*" (Vasari 1550 [1963 ed.] cited in Cuff 1996:72). The individual nature of architecture's professional logic is embedded in the curriculum of architecture and carried through history worldwide (e.g. Lu and Sexton 2006).

METHODOLOGY

The study employed a firm-level exploratory case study approach (Yin 2013), guided by an institutional logics perspective. Methodologically, the concept of institutional logic suggests the study of discourses need to be triangulated with the actual practice for a better prediction of organisational outcomes (Jia *et al.*, 2017). We analyse cases of three design firms on the manifestation of societal level institutional logics in terms of market, profession and state in the business models of the firms. The roles of architects are examined by the firms' business model, defined as a firm's value proposition and strategies undertaken to realise them (Morris *et al.*, 2005). We focus our analysis on how the professional logic of architecture is practised and interpreted in the firm's business model in response to a market context of vertical integration, examined by the state and market logics.

Three cases were selected for the exploratory study in Shanghai, China. The cases were selected to cover a variety of types of practices, sizes of firms and business models. Structured interviews were conducted with the Senior Project Architect in Case A and C, and the Principal in Case B. The interview guidelines were adapted from the instruments developed by Symes *et al* (1995). The original instruments consisted a questionnaire at individual level and two sets of interview guidelines at project and organizational levels. We used all the three levels of instruments for structured interviews to obtain a detailed profile of the firms.

The firm level questions covered topics on firm history, strategies of marketing and approaching clients, source of projects, scope of service, design values and philosophy, organisational structure, decision-making pattern and project workflow. The project level interviews functioned as critical incident technique (Flanagan 1954) to generate detailed descriptions about the team structure, project expertise, and inter-organisational corporations and coordination. At an individual level, the interviewee's personal experience on the link between the education and practice was analysed to understand the background of architectural education in China. Two additional questions were added to understand the compatibility between the architectural profession in the China context and their counterpart in the West, including the role of the professional association and the difference between registered and non-registered architects. The lengths of the interviews ranged from 1.5 to 3.5 hours.

The interview data were transcribed verbatim; critical incidents were verified through triangulation with documentary data including relevant public media reports, company archives and publicly available information of firm profiles and completed projects. The texts in the authentic cases were then analysed with thematic content analysis (Weber 1990)

RESULTS

Case A. An Initiative of Transforming the Professional Logic

Firm A employs around 15 staff, was registered in 2003, and was recently affiliated to a listed design corporate in Shanghai to survive an increasingly vertically integrated industry. The firm identifies their core business in the design of commercial buildings. Over years, the architect proactively took up planner's role to provide business-planning service prior to the design stage. As described by the Principal of the firm, the architect provided planning service to bridge a gap of expertise in the market:

Business planning is normally commissioned to retail-investment planners in commercial building projects. The problem is that planners do not have creativity. The business planners in China only copy and paste, but those from overseas are not better. They are efficient in producing an elegant report, but you won't find a single page that is useful. It is a very thick book, but there is no concept. This is the situation of global retail planners. As architect, we are obliged to take the lead.

In taking over the business planner's role, the Principal articulated a broadened professional logic that legitimates his practice:

Social responsibility should be rated as the most important virtue of architects. Architecture is not about realising personal idea. It is about serving the people and the city, be responsible to them. 'People' include clients and users. I am committed to both my client (the developer) and the city. Architects should take the lead to integrate all the built environment disciplines and the developer is one of them.

Regarding the role of the profession, the Principal mentioned an absence of a professional institution that effectively foster professional values.

We have an Association and an Academy. The Academy acts as a government agent to authorise regulations and design standards, while the Association is a trade union for business opportunities. Neither is taking a lead in the technical development of the profession. We are lack of an environment of architectural engagement.

By 'academy' the principal meant the Architectural Society of China, the equivalent institute of the Royal Institute of Architects in the UK or American Institute of Architects in the USA. However, unlike their Western counterpart, the Society is running as an academy that focuses on dissemination of knowledge. There is no code of ethics in professional practice. By administrative structure, the Society is jointly managed by Ministry of Housing and Urban-Rural Development and China Association for Science and Technology (which is directly led by the Secretariat of the Central Committee). In general, behaviours of individuals are subject to regulations of the state bureaucracy while firms are left to market competition without protection. As a consequence, architecture firms often find themselves in a competition of low price that make them vulnerable to high workload and low income.

It was not that we didn't do enough work; the work we have done is enough to feed a family of three generations. The problem is that we don't have a legal structure to support us, not an institutional system to support us to reward the effort of our work. I would have appreciated it even if we can have half of the turnover. But we are not paid for even half of our work. The majority of the clients are voiding payment, both public and private clients. The whole society is avoiding payment. This is the major difficulty of architects in China.

Case B. Professional Logic Patronised By Market Logic

Case B is an architectural design firm consists of 122 staff members, including ten registered architects; the rest are structural and building service engineers, executives and administrative staff. The firm was set up in 2009 as a branch firm of a listed real estate developer (Developer A). The developer's business was focused on development of residential buildings with an emphasis on design concepts. The architect had freedom in proposing design ideas and is secured in cash flow by the parent company. The advantage of Architect A as a branch firm of Developer A is demonstrated in the following case of project:

In the 2011 recession, all companies were in shortage of cash, ours was no exception. At that time, I was assigned a design project which claimed to be vital for the company's survival. It was a very small project, less than 30,000 square meters. We designed and built it. The apartments were quickly sold out for a return of CNY 600 million. The incoming cash revived the whole company. (Project Architect, Firm A)

There was a period that the architects felt interference in design when, in 2014, Developer A was acquired by another listed developer (Developer B). Developer A fosters a strong design professional values and was in a less financially comfortable condition than Developer B which align its organisational logic with the market logic. Developer B had a better cash flow by running a business model of selecting lowest bids and procrastinating on payment to contractors. This strategy resulted in a strong managerial logic focused on cost control. The architects were greatly unsettled. The merger immediately highlighted a conflict between the professional logic encouraged by Developer A and the market logic imposed by Developer B. The merger was cancelled within three months so that the firm returned to the original management structure and culture, thus the design process was once again governed by the professional logic.

Case C. Foreign Professionalism Detached From Local Institutional Context

Firm C is the Shanghai branch of an Architecture firm based on the UK, with offices in Hong Kong, Australia, Singapore, Beijing and Shanghai. In total the firm has around 400 staff, while the Shanghai branch has 50 to 60 staff, half of which are architects and the rest are interior designers. The Director is an experienced British architect. Solely owned by the parent practice, the foreign firm does not have the qualifications to sign construction drawings. The firm provides services in schematic design, design development and construction supervision, while the responsibilities for construction drawings and obtaining planning approvals are assigned to a local design institute partner. The British firm brought with them their professional modes of practice. Contracts are drafted and managed at senior management level. Director has control of all projects. The design fee for a project must not be lower than the professional standards; compromising the fee through low bidding is not permitted. Architects' workload are recorded in timesheets, and charged based on contract. Extra services are subject to additional charge.

All our services strictly follow contract clauses. Any significant variation needs to be legitimated by an additional contract. If the contract does not include services on construction site then we don't go to construction site. We as architects don't go an extra mile to build up relationship with clients. For example, we don't invite client for dinner, because, if any of us wants to do so he has to pay from his own pocket; the company will not reimburse him a dollar. Therefore nobody is interested. (Senior Project Architect)

This strategy implies a higher charge compared to the local firms, where the profit from projects of a private client or public building will not be able to sustain. The firm thus focus their types of projects on commercial development projects only.

DISCUSSIONS

The cases analyses revealed that in the China context, the architecture profession is struggling with both the state bureaucracy and a prevailing market logic. Meanwhile, both the market and the profession are struggling for independence from the state bureaucracy. Hughes and Hughes (2013) suggest that professions in developing countries can complement the inadequate legal infrastructure with self-regulation, and can even go further to act as an agent to the inactivity of the government on relevant issues. This is not the case for China as discussed in our findings. First, the professional association in China does not regulate ethics of conduct. In fact it does not go beyond managing the body of professional knowledge, although the content of architectural education does have an institutional power in driving the decisions of the architects. Second, in the specific context of China, the professionalization process was simultaneous with the development of an institutional structure for a market economy. Both the profession and the market would not develop in full in the presence of a powerful state bureaucracy which takes over large part of the jobs of both, while a democracy logic does not exist as in a Western society to limit the state power. That said, the architect in Case A makes a case of institutional entrepreneurship that transforms the professional institution into a broader professional logic and take developer's role under the design leadership. As envisioned by the AIA (2013) Foresight Report, a trend of strategising design practice toward social impact through participation, volunteerism and community engagement, results of our study resonate this vision.

Bos-de Vos et al (2014) found that Dutch architectural firms in their study were all involved in certain forms of international practice except for the small or micro-sized firms. The firms recognized that partnering with local firms was vital in order to comply with local legal system and construction methods. Our study provides the other half of the story: the UK firm practicing in Shanghai (Case C) limit their practice up to the design development stage before handing over to the local firms. Bos-de Vos et al (2015) further reported a case in the Netherlands where the architect took a proactive role to provide real estate development service, but found themselves lack of legitimacy to charge for the service. In our study of Case A, the architect offered a similar service without charge, but legitimated this service as part of the professional logic of architecture. However, the lack of a strong professional logic in China leaves the architecture firms in disadvantage to the purchasing power of developers and vulnerable to market fluctuation. The consequence is the local design firms find it difficult to charge for their design services at a fair rate, which devalues the service and risks undermining the profession. In contrast, Case C managed to preserve a clear professional logic legitimated by the profession back in the UK. Their business strategy keeps them in a financially comfortable situation. The results of our study provide empirical evidence that an active professional logic is important in balancing the market dominance in the construction industry. Interestingly, our Case B as a branch firm of a developer that fosters a professional logic, the architect was structurally legitimated to act as part of a develop-design-construct-sell project team to survive the market while preserve professional values.

CONCLUSIONS

The aim of this paper is to explore the changing roles of architects, embedded in the professional logic of architecture, in response to vertical integration in the construction industry, manifested in the institutional context of state and market logics in China. Through a case study approach, we analysed three business models of architecture

practice in Shanghai: a case of proactive transformation of the professional logic, an architecture firm patronised by a developer, and a foreign firm practising an imported professionalism in China. The findings highlight the need of building a strong professional logic in the architecture profession in China (which is found not yet in existence after two decades of professionalisation) to balance the market logic, where the state bureaucracy is not providing sufficient protection to professional services. The results suggest that the role of architects can be extended to include upper stream services, legitimated by a transformed professional logic. The results also indicate another survival strategy for architects, alliancing with a developer of similar professional logic. However, this strategy is to be adopted with caution in China's special institutional context, in which a powerful state bureaucracy nuances both the market and the profession, which means the survival of developer is subject to periodical reversion of political institutions. The research contributes to the understanding of international practice and the transformation of the architecture profession in the global construction market.

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