

INVASION OF THE UK ORIGINATED QUANTITY SURVEYING PROFESSION INTO KOREA CONSTRUCTION INDUSTRY. A REVIEW OF THE QUANTITY SURVEYING CONSULTANCY SERVICES IN KOREAN CONSTRUCTION MARKET

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ABSTRACT: Quantity Surveying Profession is a new breed with a history of only less than seven years in S. Korea's Construction Industry. In this paper, the research aims to investigate the background of the market entrance of this profession in Korean Construction Industry, and the current market direction and future market demands. The research concludes that climate changes in Real Estate markets in relation to Project Financing practices caused by economic crisis of late 1997's, enabled the UK originated QSP sustainable in S. Korea. Moreover it was pointed out that the services of QSP current available in S. Korea's market attributed the different aspect compared to traditional quantity surveying services prevailed in UK. Finally it was apparent that the evolutionary direction of the future quantity surveying market in S. Korea is most likely toward multidisciplinary skilled services profession processing not only broader architectural knowledges but cost consciousness, specialty in construction costs and construction contract aspects and transparency in ethical manner.

Keywords: Quantity Surveying Profession (QSP); Quantity Surveying Services (QSS); Construction Industry (CI); Real Estate market

1. INTRODUCTION, METHODOLOGY OF THE RESEARCH

The aim of this research is to empirically investigate the actual use of Quantity Surveying Services (QSS), among services providers, practitioners, clients and foreign Construction Consultancy Practices in S. Korea and also evaluation of the attitudes, the market conditions and future demands. After the aim is stated an hypothesis was made, which after the end of the research should be accepted or declined. This hypothesis is made based on the emerging market condition of the growing interests of use of QSS in construction practice in South Korea. The final accepted hypothesis is that 'Real Estate market climate changes since economic crisis of late 1997 in S. Korea may make UK originated Quantity Surveying Profession sustainable'. This hypothesis of the research is to identify any correlation between the change of real estate market after economic recession and the sustainability and lasting foreign consultancy services in Korean territory.

For this reason, should be investigated the market players and the use of QSS. This lead to development of the five Objectives:

- I. to investigate the impact of the economic crisis in the S, Korean CI and climate changes in Real

Estate sector in S. Korea since late 1997's economic crisis

- II. to investigate the past and current projects for QSS offered by Quantity Surveying Practices in S. Korea
- III. to investigate the perception of QSS and current market trends among construction consultancy services providers in S. Korea
- IV. to investigate client's perception who have ever used quantity surveying practices and the likelihood of growth of demands in the future quantity surveying market
- V. to investigate a possible link between economic crisis, financial reform, real estate market changes and the appearance of QSS originated from UK.

The Research Methodology which was used, consists from three parts; the Literature Research, the Pathfinder Interview and the Structural Interview. The Literature research involved interdisciplinary literature review, involved in construction, real estate and macroeconomics, in addition with encompassed other countries' practices in these territories (Hong Kong, China)¹. In the Pathfinder Interview took part four interviewees, three of them coming from academic and research field, and the fourth one was a market analyst¹. The objectives of this strategy were:

- I. To identify the change of the market and the impact of economic crisis on the construction practice
- II. To identify the perceptions and attitudes on QSS in S. Korea CI
- III. To identify the status of Korean construction consultancy practices, i.e to perceive the current services availability and income structure of professional services, and compare with UK's perspective in the quantity surveying practices.

In the Industrial (Structured) Interview director and partner level personnel in the foreign construction consultancy firm has been interviewed to accommodate each different perception on the QSS and to be confirmed whether each firm is offering QSS to their clients at present. Six questions were prepared for each interviewee. After the interviews were conducted the data were collected and analyzed. So finally the initial hypothesis could be confirmed or rejected. Thus a final conclusion could be made and also some recommendations for future research

2. SOUTH KOREAN FINANCIAL REFORM AND REAL ESTATE MARKET CHANGE SINCE THE ECONOMIC CRISIS IN LATE 1997

2.1 Fundamentals of S. Korea's Financial Reform since the economic crisis of November 1997

The Financial reform of S. Korea after November's 1997 economical crisis has three major constituents;

- I. The 21\$ billion stand-by credit for S. Korea from the International Monetary Fund (IMF)
- II. The immediate issue of instability of financial sector, which had to be confronted, by
 - i) the resolution (closing, merger etc.) of troubled financial institutions
 - ii) the disposal of their non performing loans (NPLs)

For this purpose 64 billion US\$ were mobilized with the approval of the National Assembly.

- III. The mobilization of another 40 billion US\$ for the second stage of the restructuring of the economy.

Totally a sum of 155.4 billion US\$ of public funds, was put on use for the restructuring of the financial sector of the country.

For accomplishing that purpose, the troubled financial institutions were merged, revoke their license or even proceed with liquidation, thus their number was reduced substantially, until the end of 2001. Also the financial institutions were forced to remove of NPLs to centralized asset management cooperation (KAMCO), which was re organized by Government with the mandate to purchase impaired loans from all the above financial institutions. Also a large portion of public funds was put to use in recapitalizing banks, in order to encourage financial institutions to recapitalize themselves. And this was mandatory for banks in order to keep their licenses and to receive public fund support. In order to facilitate this

process the Government also liberalized regulations on foreign ownership, a fact that once was a big taboo for Korea.

Included in Government's actions was the restructuring of the whole framework for banks, together with regulatory norms, accounting, auditing and disclosure practices. These regulations were then up-graded and got closer to global standards. Each bank should have the majority of board to be outside directors, and have also some sub-committees which all would make the decision making process more transparent. Also the basis of banks' lending decision making has been switched from the value of collateral to the creditworthiness of the prospective borrower. In general the financial system has undergone a substantial overhaul, moving away from indirect financing to direct financing. The traditional importance of commercial bank loans has been steadily eclipsed by the rise of equity finance through bourses. After this reform, S. Korea eventually managed to pay off the last portion of the IMF loan three years earlier than expected, and became the fourth largest country in the world in foreign exchange, and the possibility of facing an other economic crisis seemed remoted for the foreseeable future in that time.

2.2 Climate changes in Real Estate Market since the economic crisis

The Real Estate prices were on decline since 1991, and they kept on dropping after the crisis. Only after 1999, as the economy started to bouncing, they seemed to recover from that fall. During the above period the Korean Government boosted the construction industry, through financial and tax incentives. Since that time the real estate prices keep on overshooting. At that period a shift away from financial into real assets took place in public's portfolio, which was mainly caused from the combination of record-low interest rates, high expectation of capital gain from real estate, and a run away increase in consumer credit, much of this used to finance home purchase. Once more the government helped this tension, by implementing statutory regulations concerned price control on new apartments and securitization of real estate with specific securitization schemes. Also due to liquidation problems and debt burdens, major properties located in special business districts in Seoul were sold to foreign investors. Finally in 2001 the Government induced the legal framework for establishing Real Estate Investment companies (REITs), and a couple of so called corporate-restructuring REITs have been established so far.

2.3 Open of Foreign Direct Investment (FDI) and Ownership

The Korean's government attitude toward foreign direct investment is and was in the past generally positive, and the most policy-makers realize the value of FDI, especially after the crisis in 1997's. So Korea became more attractive to foreign investors. To ensure that the government established the Korea's Foreign Investment Promotion Act (FIPA) since late 1998. By this Act the business activities are categorized as either open,

conditionally or partly restricted, or closed for foreign investors. From time to time there are reviews for the restricted sectors for possible further openings. The FIPA generally facilitates some procedures for the foreign investors and give them incentives. Korea fully recognizes the rights of private ownership and has a well-developed statutory framework for that. Private entities may freely acquire and dispose of assets, in accordance to Fair Trade Act. Particularly by liberalizing its property ownership law in 1998, and according to Alien Land Acquisition Act, even non-resident foreigners and foreign corporations have the same rights as Koreans in purchasing and using land. Finally with the Real Estate Investment Trust Act in 2001, the sound indirect investments in real estate and restructuring of corporations are been supported.

3. BACKGROUND OF CONSULTANCY SERVICES IN S. KOREA CI AND THE CURRENT PRACTICES OF FOREIGN CONSTRUCTION CONSULTANCIES

From the late 1980's more than 20% of GDP was invested in the construction industry², in S. Korea. In 1997 the 9.6% of the Korean workforce was employed in construction industry, too. This percentage was reduced in the years 1997 and 1998, according to statistics of National Statistic Office (Figure 1). After the financial recovery the total construction industry employees reached the 8.2% of the total employed people. In Korea in order to be a Contractor you should be licensed by the relevant authorities. In accordance the engineers in S. Korea are classified in three categories; Professional engineers, Engineers and Industrial Engineers, according their academic educational level, the working experience and the success in relevant examinations. The construction industry of the country was well influenced by the government's policy. After 1990 new opportunities and agreements opened, after Uruguay's Round Talk. Prior to these the military government showed a favoritism in Korean Chaebol (business conglomerates), which had tarnished the spirit of the trading for some years³.

3.1 History of Construction Consultancy in Korean Construction Industry

Before 1990's the construction services were all provided by Korean Cheobol, which have their own contractors and efficient in-house personnel, to fully construct a project. So it was difficult for small contractors to enter the construction industry. After 1994 SungSoo-Bridge collapse was generate the need for Construction Supervision, as a new construction profession in CI. After the influence from the US practices in many fields in Korea, the new born terms Construction Management (CM) and Project Management (PM) came across the CI, but with no clear distinction between them*. This resulted in the establishing new independent consultancies business in CI.

Construction Employee						
Employee Status by Industrial Sectors						
Year	Employed People (A)	Agriculture and Fishery	mining and manufacturing industries	Service Industry	Construction Industry (B)	Annual increase in Const' Sector Employees
1979	13,664	4,887	3,237	5,540	836	1.8%
1980	13,706	4,658	3,095	5,952	841	0.6%
1981	14,048	4,806	2,996	6,247	875	4.0%
1982	14,379	4,612	3,143	6,624	829	-5.3%
1983	14,506	4,315	3,375	6,816	817	-1.4%
1984	14,429	3,914	3,491	7,024	905	10.8%
1985	14,970	3,733	3,659	7,578	911	0.7%
1986	15,505	3,662	4,013	7,830	889	-2.4%
1987	16,354	3,580	4,602	8,172	920	3.5%
1988	16,869	3,483	4,807	8,579	1,024	11.3%
1989	17,560	3,438	4,972	9,150	1,143	11.6%
1990	18,085	3,237	4,990	9,858	1,346	17.8%
1991	18,612	3,064	5,061	10,487	1,550	15.2%
1992	19,009	2,667	5,041	11,301	1,688	8.9%
1993	19,234	2,592	4,772	11,871	1,706	1.1%
1994	19,848	2,491	4,797	12,560	1,805	5.8%
1995	20,414	2,403	4,844	13,168	1,913	6.0%
1996	20,853	2,323	4,748	13,782	1,983	3.7%
1997	21,214	2,285	4,564	14,365	2,027	2.2%
1998	19,938	2,397	3,937	13,603	1,580	-22.1%
1999	20,291	2,302	4,046	13,943	1,475	-6.6%
2000	21,156	2,243	4,310	14,603	1,580	7.1%
2001	21,572	2,148	4,285	15,139	1,585	0.3%
2002	22,169	2,069	4,259	15,841	1,746	10.2%
2003	22,139	1,950	4,222	15,967	1,851	4.0%
2004	22,495	1,549	4,276	16,670	1,843	-0.5%

Figure1. Number of Employees in Construction Industry⁹

3.2 Foreign Construction Consultancy Practices and Current Market Players

In Korea, the services by foreign design and engineering firms have been offered in project basis^{4,5}. For this purpose a temporary organization has to be set up which will cooperate with local design and engineering firms due to unawareness of local codes and regulations. Currently there aren't any foreign design and engineering firms that have been established under the name of a local branch in Korea. However some landmark buildings were completed be collaboration of Korean and foreign design

firms, like the *Kyobo Life Seocho Bld*, which was a collaboration of Mario Botta and ChangJo Architect.

In addition as far as the foreign consultancy firms there are only a few active in Korea. Most of them are providing Construction Management and Project Management services and have been established and work after 2000. They employ an amount of 50 people, and are originated mostly from US, UK and Hong Kong. Some of them offer quality surveying or equal to that services too. The dominant foreign consultancy firms are: *Hanmi Parsons Inc*, *Davis Langdon & Seah Korea Co. Ltd*, *Parsons Brinkerhoff*, *EC Harris LLP* and *Rider Levett Bucknall*.

3.3 The Quantity Surveying Professional Services

The Royal Institution of Chartered Surveyors (RICS) identified a framework for the classification of skills and knowledge that professional quantity surveyors possess⁶. The knowledge possessed by an individual quantity surveyor may be classified into that which would be held by a 'normal' member of the society and that which would be possessed as a 'professional'. These include skills in Management, Business Administration, Quantification, Documentation, Analysis, Appraisal, Synthesis, and Communication. The specific knowledge areas germane to quantity surveyors include those relating to construction technology, as measurement rules and conventions, construction economics, financial management, and construction law. General the nature of work of consulting quantity surveying can be considered within the professional services sphere, in that the service is offered by qualified and skilled professionals. In accordance to RICS representatives in S. Korea, there are ten expatriate qualified quantity surveyors who work in the territory.

4. CONSTRUCTION CONTRACTS AND PROCUREMENT IN SOUTH KOREAN CONSTRUCTION INDUSTRY

In S. Korea, it is very likely the construction consultancies' main role to be related to pre-contract mechanisms such as procurement arrangements or tendering procedures for securing projects. Until some years before this role is seemed to be played mainly by senior level architects or engineers. The legal framework of Korean Construction Contracts is governed by statutes that involves separately the public and private sector. In more detail; the public sector's contracts have been ruling to 'Government Contract Act'. In private sector the contracts should obey only the 'Framework Act'. This act also provides the offer and acceptance provisions for construction contracts. Between contractors and subcontractors the contracts are in accordance with 'Fair transaction Act' and 'Sub-contractual Act'. In addition major public sector clients, local authorities, and state owned enterprises have their own Act for contracts including tender procedures namely 'Regional Finance Act' and 'Finance Act for State Owned Enterprises'.

4.1 Procurement Procedures

The 'Government Procurement Agreement' of World Trade Organization impacts the central government procurement procedures. According to this agreement, every member country should open its bidding to all other member countries. The local authorities and the state owned enterprises have their own Act for tender procedures. In private Sector the procurement procedures are governed by byelaws and sometimes with the guidelines of public sector, especially if the contract sum exceeds a certain amount. In summary tender and procurement procedures in S. Korea are still being revamped.

4.2 Tendering Procedures

The main tendering procedures are: open tender, selective tender, limited tender and negotiation. *Open tender* is the most common of all, especially for small scale projects. In this type the chosen tender is the lowest one. *In selective tender*, at least five tenderers must be selected and minimum two of them should participate in the procedure. In this way, prequalified or registered list of contractors can be used for the selection procedure. This has the disadvantage that some contractors may use this mechanism in order to collude and rig the market forming illicit cartel to control prices, according to Mr. Yu. *Limited tender*, is an open procedure to all, that have some specific qualifications such as specific experience, specific technical capability and equipment. This usually is used for large projects. The *negotiation* method is used in very special situations, such as natural disaster, national security, on going projects etc. In this case the bidding and eventually the contract price should be above the estimated price from the employees.

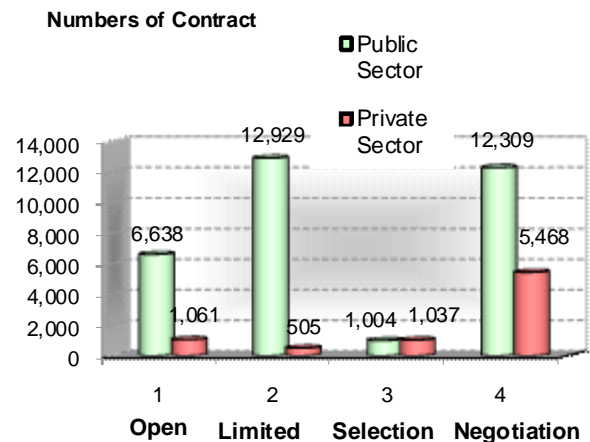


Figure 2. Comparison of number of constructs in public and private sectors (1998)¹¹

In Figure 2 is well presented how procurements undertaking is amongst private and public sectors. Public sector is primarily using open, limited and negotiation.

In Figure 3 it is indicated that Limited Tender is normally used for larger projects in public sectors whereas the private sector favours Negotiation.

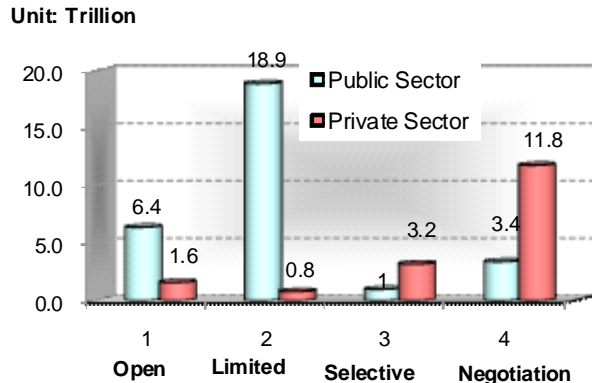


Figure 3. Comparison of contract value in public and private sectors (1998) ¹¹

4.3 Determination of the winner

There are three main ways in determining the winner. The first one is called '*Modified lowest bidding*'. In this method the employer estimates the project cost, and assumes a 80% of this estimated cost as a successful tender (Prefixed contract Sum). The tender that is nominated the project is that that is closer to that Prefixed contract sum, and specifically over that.

The second method on the other hand, is called '*Qualification Test*', and it uses a qualification formula which combines construction capacity and tender price. Bids are evaluated from the lowest, and the chosen one should pass a specific qualification score. This method has prevailed in public sector the recent years. For smaller projects the weight of tender prices is kept high, in order the small business to keep their higher tender price.

The third method is the *Lowest Bidder Selection* system, which was recently announced by government especially for large projects. But for projects greater than 10billion won, prequalification method is also used, where the technical capability has the same weight as the tender price.

5. QUANTITATIVE DATA ANALYSIS OF INTERVIEW RESEARCH

5.1 The Pathfinder Interview

Pathfinder Interviews based on unstructured interview technique were conducted with four leading features in the CI, in order to have correct viewpoint with right direction of construction consultancy practices in S. Korea territory. The findings concerned mainly the first three Objectives, together with Objective 5.

The first Objective concerns the impact of economic crisis in Korean CI. Two out of four expertes pointed out

that the construction works have been dramatically reduced after the economic recession. On the other hand the number of contractors has been increased, so the contractors have to change their business strategy in order to retain their businesses, as the number of the construction works were not efficient. Especially one of the experts who have been intervieweed pointed out that they began to adopt two new strategies in order to survive. First they started to give high tender prices and second they began to use tactically claims or dispute resolution mechanisms to raise their profits. So it was apparent the demand of construction consultancy who would be capable to handle contactors' variations and contract administration related paper works in post contract stage. Referring in the same objective again, the impact of economical recession was in Real Estate market and practice of Project Financing for development projects. Market analyst explored that field and gave us useful information. The investors, in land transaction market, were very limited, including only large scale –contractors. After the 1997 due to bank tends to re-assess the development values in the scenario of Project financing rather than the scale of contractors' business, the participants in land market were expanded, and small scale diversified investors enter the market. In housing market, the monopoly of big Korean Cheobol was broken due to changes in regulations by the government, so in housing development projects enter newly born local developers, who didn't have sufficient in-house trained personnel, so it this developed the need of outsourcing powers specialized in construction consultancy to become the Project's Owner's Agent, for the achievement of the projects. In office Market, before the economic crisis, real estate was fixed assets that were properties of conglomerates. After that period, with the appearance of foreign real estate investment firms and asset management firms that perception was changed and the real estate was a subject of investment for achieving the high return on capital employed. The economic crisis influenced the way of preference in public works' procurement. All the respondents agreed on that kind of change. Added to this the government announced that *Design And Build* should be applied as a principal public procurement route for large public works ^{7,8}, without given enough thought to the disadvantages of this procedure especially for large scale and high quality construction works. In accordance the government confirmed that the lowest tender selection should be applied for all public works. These changes surely becomes a momentum both civil servants and consulting firms in private sector to pay attention for perceptions of industrial changes.

Responding to the Objective 2, all interviewees which were well known contributors in CI in S. Korea, they were not aware of any projects which Quantity Surveying firms in Korea were involved. As far as the Objective 3 concerns, once again all interviewees were not informed of Quantity Surveying Profession, and only Dr. Cho had perceived the contract administration and claims related services of Quantity Surveying Profession in partial.

5.2 Structured Interview and Telephone Interview

As before mentioned this type of interview was conducted with five client groups of people, and five director level personnel in foreign construction consultancies, as well as senior level of employees in domestic construction consultancies. As far as the Objective 1 concerns, the findings were not much different from the findings through unstructured interview. The Objective 4 about the perception, of client groups for quantity surveying profession, it was confirmed among the interviewees, that it is too low and little distinguishable in client perspective. Nonetheless the future demands and likelihood of growth of quantity surveying profession can be increased due to following basic proponents

- I. Specialty in dealing with cost but not just as cost estimating technique skill, which is already available in the market
- II. Transparency - the commercial services based on transparency and ethically clean Code of Conduct will be itself a service product
- III. Newly appeared construction profession possessing cost-consciousness make communication possible with commercial-minded client groups
- IV. New breed who are aware of contractual rights and obligation and who is capable of dealing with contract documents

Table 1. Standardized model of QSS from market investigation and research

Capital Investment Projects Scenario for Foreign Clients	Fund Monitoring/ Audit Services for Overseas Development				Tailor-made Services for Financing Investors	
The primary role of Quantity Surveyors	Client's requirements to QSS				The primary role of Quantity Surveyors	Client's requirements to QSS
	Operation and Maintenance Stage	Testing Adjustment & Balancing Stage	Construction Stage	Feasibility Stage		
Project Budget Review upon the development of design Advice on reasonable construction costs Draft of Construction Contract Valuation of work in progress and evaluation of contractor's variations Negotiation of contractor's claims and settlement of final account	Review of annual budget for Operation and maintenance Review of Cost-in-use Document review for completion inspection to use property	Witness of performance tests Advice on testing methods Document review for Warranty and making good defect	Periodic Audit of Construction Progress Valuation of work in progress Monitoring and evaluation of Change Orders (variations) Audit of Test and Comission	Due diligence services in Design and Design Development Stage Planning Permission Document Review Services in Design Development stage Review of construction contract Documents and Auditing of Tendering Procedures Review of overall construction costs	Attaining target contract sum by Competitive Tendering & Leading Tendering; process for clients best interest Draft conditions of Contract for minimasation of client's risk Monitoring/controlling for reflection of Client's Requirement Program control/Management by Contractor's	Completion on time for return on capital employed Evaluation of Contractor's interim payment for client's cash flow management Understand Complex structure of Project financing Response flexibility against the change of Client's requirements

The Objective 5 refers to the possible links between economic crisis, financial reform, real estate market changes and the appearance of QSS. The findings regarding the economic crisis were little different compare to the opinion by unstructured interview. All interviewees have pointed out the great potential of growth of construction consultancies which are strongly linked with changes in real estate market trends and the current development of articulated Project Financing skill in financial investment sectors. However without except all interviewed foreign construction consultancy firms' directors setout own business development strategy to reach these changes in real estate market and to develop Project Financial skills.

The interview people were reluctant to describe their own income model of use, in QSS. From market investigation and research the standardized model of QSS can be classified in three categories as it can be seen in Table 1.

In summary, during the series of interviewees with senior people in consultancy practices, it is overly agreed that the QSS are strongly linked with changes in real estate market trends and the current development of financial investment sectors' projects financing skills. Nonetheless almost everyone recognizes the future potential of growing of QSS on South Korea, in public and in private sector, there are some features that need more skepticism; especially about the fundamental changes that the educational system will need in order to product Quantity Surveying participants according to Dr.

Cho, and the recycling of the knowledge that each consultancy firm is in danger of, due to the fact that the diffusion of knowledge and experience between the employees would have the same sources which will be the company's projects and experience, according to Mr. Chan.

6. CONCLUSION AND RECOMMENDATIONS

The main hypothesis that has been set in this research should be accepted. Under the review of the answers of the unstructured interview, in deed the UK originated profession of Quantity Surveying can be sustainable in S. Korea , under the real estate changes since the economic crisis of late 1997's. However it would be suitable if the initial hypothesis turned to the following one : Climate changes in real Estate markets in relation to Project Financing practices caused by Economic Crisis of late 1997 in S. Korea enabled UK originated quantity surveying profession sustainable due to its specialty, transparency based services, cost-consciousness professional and the awareness of contractual-matter in construction contract.

Without corroboration from sufficient data and previous studies we cannot conclude about the status quo of QSS practices in S, korea territory. Despite the lack of samples in survey and in literature, the findings were corroborated by the views of interviewees in path-finding interview who all are experts in territory. The Industrial interview with the clien groups has indicated that the current level of satisfaction is sufficient to secure the consecutive jobs, but their expectations were also far more than the competencies which general quantity surveyors possess. Therefore the future demands of QSS attribute different features not just as it is in UK industry but only in much wider range of the highly commercial-minded consultancies competencies and technical skills. So experties skepticism is worth to pay attention about overlooking in diffusion of knowledge among the firms' personnel. Also the adaption of QSS to Public Works is not an easy task as the amendment of current industrial regulations must be taken in place initially, if the QSS are employed in public works.

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