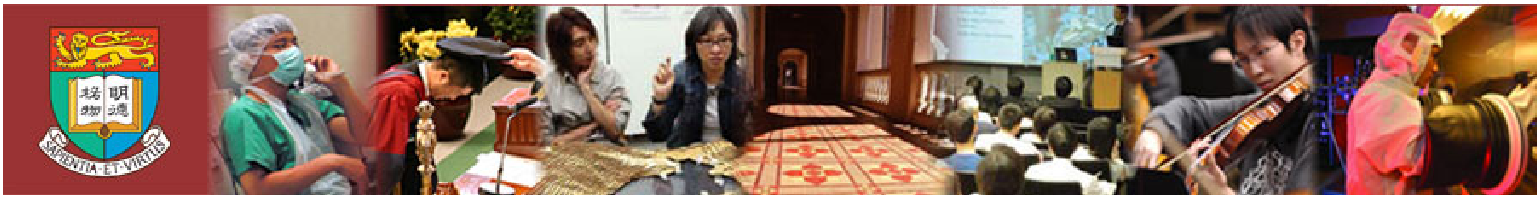

Title	Bureaucracy and red tape ureaucracy and red tape
Other Contributor(s)	University of Hong Kong
Author(s)	Lam, Bing-chuen; 藍炳銓
Citation	
Issued Date	2004
URL	http://hdl.handle.net/10722/48848
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THE UNIVERSITY OF HONG KONG

BUREAUCRACY AND RED TAPE : A COMPARISON BETWEEN PUBLIC AND PRIVATE CONSTRUCTION PROJECT ORGANIZATIONS IN HONG KONG

A DISSERTATION SUBMITTED TO

THE FACULTY OF ARCHITECTURE

IN CANDIDACY FOR THE DEGREE OF SURVEYING

DEPARTMENT OF REAL ESTATE AND CONSTRUCTION

BY
LAM BING CHUEN

HONG KONG
APRIL 2004

Declaration

I declare that this dissertation represents my own work, except where due acknowledgment is made, and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualification.

Signed: ___________________________________

Name: ___________________________________

Date: ___________________________________

Abstract

Bureaucracy has long been the most controversial topic in organizational studies. Many previous studies provided support to the proposition that public organizations are more bureaucratic than private organizations. On the other hand, most of these studies have shown that the existence of bureaucracy has a very strong relationship with red tape. Therefore, many subsequent studies also supported that public organizations have more red tape than private organizations. (Baldwin 1990; Bozeman, Reed, and Scott 1991; Bozeman and Bretschneider 1994; Bretschneider 1990; Bretschneider and Bozeman 1995; Rainey 1979 and 1983; Rainey, Pandey, and Bozeman 1995). However, not many of these studies have put the focus on project organizations in construction industry. Therefore, the researcher would like to conduct a comprehensive study on bureaucracy and red tape in the context of construction project organizations in Hong Kong.

To begin with this study, the understanding of what is bureaucracy and red tape is very crucial. Therefore, in this dissertation, the literature of bureaucracy and red tape is reviewed. Furthermore, in order to measure and compare the degrees of bureaucracy and red tape in the public and private project organizations, questionnaire survey and case studies are adopted in this research. From the empirical results, it is found that public project organizations really have a higher degree of bureaucracy and

red tape than private project organizations.

On the other hand, the results of contextual analysis suggest that the perceived degree of bureaucracy and red tape can be affected by different years of experience and positions in the project organization. This can provide a basis for the future research that the measurement of bureaucracy and red tape should consider these two variables. The result of correlational analysis suggests that red tape is positively correlated with “rules and procedure”, this further supports the proposition that “Large amount of rules and procedures in the organization means a higher chance for red tape”.

The result of this study has revealed an actual situation about the degrees of bureaucracy and red tape in the public and private project organizations in Hong Kong. The government should carefully have a review on their project organizations, so that a balance can be struck between accountability and resources efficiency, any excessive bureaucracy and red tape should be cut.

Acknowledgement

I would like to express my deepest gratitude to, **Dr. A.M.M. Liu, my resourceful and helpful supervisor,** for her support, encouragement and invaluable guidance throughout my preparation of this dissertation.

In addition, I would like to thank **Mr. Mckey C.S. Ho Manager (Quality Management) of Housing Department** and **Mr. M. H. Suen, Head of Quantity Surveying of HongKong Land Limited**, for their kind provisions of Project Procedural Guides for investigation in my study. Without their kind support, my research cannot have been carried out so successfully.

Furthermore, thanks are also due to some senior professionals who have participated in the pilot study interviews. They include:

Mr. Benjanmin Chow	**Construction manager** **Hsin Chong Construction Company Limited**
Mr. K. M. Fung	**Senior construction manager** **Sun Fook Kong Construction Company Limited**
Mr. Eddy Ho	**Construction manager** **China State Construction and Engineering Company Limited**

Finally, I would like to express my sincere thanks to my parents, friends and fellow classmates who have supported me throughout the process of preparation of this dissertation.

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Chapter One Introduction

1.1 Rationale for the study

"Bureaucracy" and "Red Tape" are the mostly cited words for criticizing the inefficiency of government organizations. It seems that these two words are always linked with the government organizations. Actually, bureaucracy is a form of organization which is claimed by Weber (1949) as the most efficient form of organization. Its efficiency lines with its characteristics including, the hierarchy of authorities, the system of rules and control of the action of individuals in the organization. Furthermore, the employment of experts who have their specific areas of responsibility and the use of files can ensure an amalgamation of the best knowledge and a record of past behaviour of the organization. However, there were still many other scholars criticizing this form of organization. They claimed that the rigidity and standardization of bureaucracy is not suitable to the modern organization which needs flexibility to adapt to the change of environment. They also claimed that bureaucracy is inherently pathological. Some scholars view bureaucracy in a more neutral approach, they view bureaucracy as an efficient form of organization originally. However, if people put too much emphasize on achieving this form of organization, dysfunctions and inefficiencies would be resulted. Thompson (1961) classified these dysfunctions and inefficiencies generated by bureaucracy as "bureaupathology". Red tape is one of the bureaupathologies which refers to the excessive rules and procedures serving no functional purpose. The existence of red tape is regarded as wastage of resources. Same as bureaucracy, the term of red tape is also frequently associated with government organizations.

A nearly universal assumption of theorists and researchers is that public organizations have both higher degrees of bureaucracy and red tape than private organizations. Debates regarding dissatisfaction with the government are rarely complete without reference to bureaucracy and red tape. However, there were still some empirical researches showing that some private organizations are actually more bureaucratic and have a higher degree of red tape than government organizations. Therefore, the conclusion of "public organizations are more bureaucratic and have more red tape than private organizations" still cannot be drawn and generalized.

There were many previous studies to compare the degree of bureaucracy and red tape in public and private organization. However, there were not many studies attempted to compare the degree of bureaucracy in public and private organizations in public sector. Therefore, the researcher would like to conduct a comprehensive study on the degree of bureaucracy and red tape with the focus placed upon the construction project organizations. The researcher would like to investigate whether public project organization has a higher degree of bureaucracy and red tape than private project organization. As noted by Bozeman (2000), red tape is one of the bureaupathologies. The researcher would also like to find out whether there is a strong linkage between bureaucracy and red tape.

There are not many studies regarding bureaucracy and red tape focused on construction project organizations. In fact, this kind of study is worth to conduct, as a construction project requires a commitment of large amount of resources in terms of time and finance, if a project organization is not efficient enough, a lot of resources would be wasted. However, a certain degree of bureaucracy and red tape is certainly necessary for the government to maintain its accountability and delineate a clear structure of responsibility. Therefore, the government should maintain balance between keeping the efficient use of resources and maintaining its accountability. Recently, the problem of government deficit is very serious. In order to achieve the balance as soon as possible, our Chief Executive and Financial Secretary have devised many strategies to cut government expenditure. One of the strategies is to review the existing structure of different government departments. Therefore, it is also necessary to review the public organizations in the construction sector, since the government is committing a lot of resources in the housing and infrastructure developments in every year. If it is true that there are large amount of resources wasted by excessive degree of bureaucracy and red tape in public project organizations, the government should take immediate step to review the existing structure and cut the excessive bureaucracy and red tape. This research will serve the purpose of determining whether public project organization has an excessive degree of bureaucracy and red tape by comparing these two phenomenons in public and private project organization respectively.

1.2 Objectives

There are generally three broad objectives in this research. Firstly, as there are many different approaches to define bureaucracy and red tape, some people view them positively, but some people do not, therefore the author would like to review the literature of various key concepts about bureaucracy and red tape. Without clear understanding of these concepts, these two subjects would become too abstract and it is a barrier of further research.

Secondly, the researcher would like to compare the degree of bureaucracy and red tape between public and private project organizations. Thirdly, the researcher would like to investigate the relationship among the bureaucratic features and the relationship between bureaucracy and red tape. Finally, the researcher would like to investigate whether the factors like, years of experience, types of organization would affect the respondents' perception on bureaucracy and red tape in an organization. The researcher believes that this result can provide a basis for the future research on bureaucracy and red tape.

1.3 Selection of methodology

In this research, quantitative approach, instead of the qualitative approach, is adopted for this research. Qualitative approach, such as interviews, involves detailed investigation of the organizational bureaucracy and red tape is considered as not suitable for this research, as it has quite a number of drawbacks. For example, statistical comparison is not allowed on common variables. Also, it involves huge amount of time and cost in collecting relatively large amount of data. On the other hand, quantitative approach enables comparisons among different organizations, performance of a large number of statistical tests which enable testing of the data empirically. It maximizes the values of precision, systematization, repeatability as well as comparability. It can be widely applied in organizational research (Tucker, McCoy and Evans, 1991).

In this study, questionnaires were sent to construction project participants in Hong Kong so as to collect data concerning their perception of bureaucracy and red tape in public and private project organizations. Questionnaire survey is a kind of subjective measurement, which the result can be affected by human variables, therefore, in this research, a subjective approach would also be adopted in order to cross-validate the result of the questionnaire survey.

1.4 Structure of Dissertation

This dissertation can be divided into six main chapters.

Chapter 1 is an overview of this study including the rationale for choosing this topic, objectives of the study, methodology selection and the structure of the dissertation. In Chapter 2 is literature review. This chapter is divided into three main parts. Part 1 is a review about the concept of bureaucracy. Its definition, characteristics and inefficiencies are introduced. Part 2 is a review about the concept of red tape, its origins, causes and relationship with bureaucracy are discussed. Part 3 introduces the previous findings about the different degrees of bureaucracy and red tape in public and private project organizations. Chapter 3 is a brief statement about research questions and hypotheses of this study. Chapter 4 is a detail explanation of methodology of this study. Chapter 5 present and discuss the results of this research. The detail of data analysis is also presented. Chapter 6 concludes the major findings of this study and identifies the limitations and areas for further research.

Chapter Two Literature Review

Part I: Review of "Bureaucracy"

2.1 Definition of Bureaucracy

According to Bozeman (2000), "Bureaucracy" is originally derived from the French word "Bureau", a desk with many compartments. Encyclopedia Britannica (2000) defined bureaucracy as:

"A professional corps of officials organized in a pyramidal hierarchy and functioning under impersonal, uniform rules and procedures. In the social sciences, the term usually does not carry the pejorative associations of popular usage."

The philosophy of bureaucracy was first formulated in a systematic manner by the German sociologist Max Weber (1864-1920), whose definition and theories set the foundations for all subsequent work on the subject. According to Mouzelis (1975), in order to understand Weber's ideas about bureaucracy, we have to place them in the more general context of his theory of domination. Mouzelis (1975) stated that domination refers to a power relationship in which the ruler, the person who imposes his will on others, believes that he has a right to the exercise of power, and the ruled consider it their duty to obey his orders.

Weber (1947) distinguished three principles of legitimation – each corresponding to a certain type of apparatus – which define three pure types of domination. In the following, the three types of domination will be presented.

1. Charismatic domination.

   Charisma means literally ‘gift of Grace’, an exceptional quality by virtue of which one becomes leader. The charismatic leader justifies his domination by his extraordinary capacities and deeds. His disciples accept his domination because they have faith in his person.

2. Traditional domination

   The legitimation of power comes form the relief in the eternal past, in the rightness and appropriateness of the traditional way of doing things. the traditional leader is the Master who commands by virtue of his inherited status. His orders are personal and arbitrary but within the limits fixed by custom. His subjects obey out of personal loyalty to him ore out of respect to his traditional status. When this type of domination, typical in the patriarchal household, is extended over many people and a wide territory, the ensuing administrative apparatus can ideally take two forms.

3. Legal domination

   The belief in the rightness of law is the legitimation sustaining this type of domination. In this case, the people obey the laws, because they believe that these rules are enacted by a proper procedure, a procedure considered by the ruler and the ruled as correct. Moreover, the ruler is considered as a superior who has come to hold a position by legal procedures. It is by virtue of his position that he exercises power within the limits set by legally sanctioned rules.

According to Mouzelis (1975), the typical administrative apparatus corresponding to the legal type of domination is called bureaucracy. It is also characterised by this belief in the rules and the legal order. The position of the bureaucrat, his relations with the ruler, the ruled and his collegues are strictly defined by impersonal rules. These rules delineate in a rational way the hierarchy of the apparatus, the rights and duties of every position, the methods of recruitment and promotion. The means of administration do not belong to the bureaucrat. They are concentrated at the top. Thus the position of the official cannot be sold or inherited, it cannot be appropriated and integrated in his private patrimony. This strict separation between private and official income and fortune is a specific characteristic of bureaucracy, distinguishing it from the patrimonial and feudal type of administration.

2.2Characteristics of bureaucracy

In this research, the researcher has identified three studies which have systematically formulated the characteristics of bureaucracy. The detail is shown as in the following:

2.2.1 Weber (1947)'s study:

Weber (1947) is the first author to formulate the characteristics of bureaucracy in a systematic manner. According to Weber (1947), the following are said to be the fundamental characteristics of bureaucracy:

(1) A continuous organization of official functions bound by rules.

(2) A specific sphere of competence. This involves:

  (a) A sphere of obligations to perform functions which have been marked off as part of a systematic division of labour.

  (b) The provision of the incumbent with the necessary authority to carry out these functions.

  (c) That the necessary means of compulsion are clearly defined and their use is subject to definite conditions

(3) The organization of offices follows the principle of hierarchy; that is, each lower office is under the control and supervision of a higher one.

(4) The rules which regulate the conduct of an office may be technical qualifications. In the most rational case, this is tested by examination or guaranteed by diplomas certifying technical training, or both. They are appointed, not elected.

(5) In the rational type, it is a matter of principle that the members of the administrative staff should be completely separated from ownership of the means

of production or administration.

(6) In the rational type case, there is also a complete absence of appropriation of his official position by the incumbent.

(7) Administrative acts, decisions, and rules are formulated and recorded in writing, even in cases where oral discussion is the rule or is even mandatory. This applies at least to preliminary discussions and proposals, to final decisions, and to all sorts of orders and rules.

Weber (1947) noted that the purest type of exercise of legal authority is that which employs a bureaucratic administrative staff. The whole administrative staff under the supreme authority then consists of individual officials who are appointed and function according to the following criteria.

(1) They are personally free and subject to authority only with respect to their impersonal official obligations.

(2) They are organized in a clearly defined hierarchy of offices.

(3) Each office has a clearly defined sphere of competence in the legal sense.

(4) The office is filled by a free contractual relationship. Thus, in principle, there is a free selection.

(5) Candidates are selected on the basis of technical qualifications. In the most rational case, this is tested by examination or guaranteed by diplomas certifying

technical training, or both. They are appointed, not elected.

(6) They are remunerated by fixed salaries in money, for the most part with a right to pensions. The salary scale is primarily graded according to rank in the hierarchy; but in addition to this criterion, the responsibility of the position and the requirements of the incumbent's social status may be taken into account.

(7) The office is treated as the sole, or at least the primary, occupation of the incumbent.

(8) It constitutes a career. There is a system of "promotion" according to seniority or to achievement, or both. Promotion is dependent on the judgement of superiors.

(9) The official works entirely separated from ownership of the means of administration and without appropriation of his position.

(10) He is subject to strict and systematic discipline and control in the conduct of the office.

Weber (1947) proposed that the main features of bureaucracy lie are the highly developed division of labour and specialization of tasks which can be achieved by a precise and detailed definition of the duties and responsibilities of each position or office. The allocation of a limited number of tasks to each office operates according to the principle of fixed jurisdictional areas that are determined by administrative regulations. All individuals in the organization are selected on the basis of formal qualifications that ensure that the applicant has the necessary knowledge to accomplish that specialized duties effectively. Weber (1949) proposed that once a person enters the bureaucratic organization, his office is his sole occupation. It constitutes a "career." That is to say, it is not accepted on an honorary or short term basis; it implies stability and continuity, a "life's work." Moreover, there is usually an elaborate system of promotion based on the principles of both seniority and achievement. They usually receive a salary based not so much on his productivity performance as on the status of his position. Contrary to some forms of traditional administration, the officials of bureaucracy cannot sell his position or pass it on to his sons. There is a clear-cut separation between the private and the public sphere of the bureaucrat's life. His private property is sharply distinguished from the "means of administration" that do not belong to him

2.2.2 Mouzelis (1975)'s study:

Mouzelis (1975) summarized the main characteristics of the bureaucracy as follow:

1. High degree of specialization
2. Hierarchical authority structure with limited areas of command and responsibility.
3. Impersonality of relationships between organizational members.

4. Recruitment of officials on the basis of ability and technical knowledge.

5. Differentiation of private and official income and fortune and so on.

2.2.3 Bozeman's (2000) study:

Bozeman (2000) analysed Weber (1947)'s model of bureaucracy and further derived the characteristics of bureaucracy as follow:

1. Fixed and official jurisdiction, ordered by rules and administrative law
2. Regular activities distributed in a fixed manner
3. Authority by directives according to fixed rules
4. Rights and duties of administrators prescribed by law
5. Principles of official hierarchy with levels of graded authority; firmly established superior-subordinate relations.
6. Management based on written documents that are preserved in files.
7. Separation of public private lives of officials
8. Administration of bureaus that requires expertise, specialized training.
9. Administration as a full-time job, a career.
10. Bureau management following specific rules learned and transmitted from one official to the next.

2.2.4 Summary

From the above literature, we can see that bureaucracy is a kind of administrative apparatus in this legal domination world. It is characterised by rule and legal order. The features of high division of labour and specialization provide the organization with efficiency. In order to achieve the division of labour and specialization, personnel are selected according to their expertise and ability. The hierarchical nature assumed the power to control and command in order to coordinate the specialized activities. Weber (1947) claimed that bureaucracy is the most efficient type of organization in the modern world.

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2.3 Operationalization of bureaucracy

Whilst the idea of bureaucracy is conceptualized, its formal operationalization has received little attention by researchers. After revised the literature, the researcher has only identified one study which has tried to operationalize the concept of bureaucracy. The study was done by Bozeman and Rainey (1998); Rainey, Pandey and Bozeman (1995) in the National Administrative Studies Project (NASP). They have carried an extensive review on the previous literature about bureaucracy and identified the following five features of bureaucracy as the instruments for measuring bureaucracy in the organizations:

1. Hierarchy
2. Specialization
3. Approvals needed to perform a task
4. Written rules and procedures
5. Record keeping

Therefore, the above five features would be adopted for to operationalize the concept of bureaucracy in this research.

2.4 Efficiency of bureaucracy:

Weber (1947) proposed that a bureaucratic organization is technically the most efficient form of organization. It is because bureaucracy assured the hierarchy of authority, the system of rules and control of the action of individuals in the organization. Furthermore, the employment of experts who have their specific areas of responsibility and the use of files ensured an amalgamation of the best knowledge and a record of past behaviour of the organization.

2.5 Inefficiency of bureaucracy

Although Weber (1947) claimed that the “bureaucracy” is the most efficient form of organization, this word has long been viewed as a negative thing to the organization. According to York and Henley (1986), the bureaucracy is credited with depersonalization, inhibiting the social worker’s pursuit of client need and restricting professional autonomy. In this research, the researcher has identified several studies about the inefficiency of bureaucracy as below. These include:

- Beetham (1996)’s study on the inefficiency of bureaucracy
- Sanders (1997)’s study on the negative side of bureaucracy
- Merton (1940)’s model
- Crozier (1964)’s “Vicious Circle of bureaucratic dysfunctions”
- Thompson (1961)’s study on modern organization

2.5.1 Beetham (1996)’s study on the inefficiency of bureaucracy

Beetham (1996) claimed that the adherence to bureaucratic norms can hamper efficiency. This is because the principles of bureaucratic organization produce significant dysfunctional effects, which become more accentuated when more rigorously the principles are applied. The following are the dysfunctional effects of bureaucracy:

- Adherence to rules can become inflexibility and red tape.

- Impersonality produces bureaucratic indifference and insensitivity.
- Hierarchy discourage individual responsibility and initiative
- Officialdom in general promote officiousness

Apart from the above dysfunctions, Beetham (1996) also claimed that strict hierarchical structure can hinder the information flow, due to the direction of emphasis is from the top downwards, whereas the transmission of information also requires effective channels of communication upwards from the grass roots of the organization. A further defect of hierarchies is that they are constructed in a pyramidal fashion, narrowing as they approach the summit. It can create potentially enormous problems of overload and blockage in processing information in the opposite direction. He concluded that the most effective form of organization for experts is not a bureaucratic hierarchy, but a lateral network, whose discipline is maintained by loyalty to the organization as a whole, rather than to the narrowly defined duties of a specific office.

2.5.2 Sanders (1997)'s study

According to Sanders (1997)'s study of bureaucratic problems, bureaucracy can be objectively defined as administration over a contiguous area or an organization, using written regulations and centralized procedures. He claimed that modern bureaucracy can be characterized by three features which all have negative effects on the organizations:

1. **Hierarchy:**

Bureaucracies had a centralized, hierarchical structure. The hierarchical structure clearly defined responsibilities and promulgated directives more quickly and clearly. Decision could be made and action taken without endless debate. However, the bureaucracy's hierarchical structure actually hinders the communication and adaptability to social evolution. The pyramids of reporting lines slow down communication because they channel the much more technically advanced information through a manager who does not understand it nor is anywhere near as able to make a technical decision as two staff members located somewhere towards the pyramid's base.

This situation becomes especially troublesome when the speed of changes requires quick decisions to keep the organization on track. The pyramidal routes of messages up and down bureaucratic reporting lines seem even more like bottlenecks.

The permanence of hierarchical structures is much less suited to today's post-industrial society. For post-industrial society requires flexibility and a speed of communication that traditional bureaucracy is hard-pressed to provide. Bureaucracy tends to be too permanent and inflexible for a period of rapid change and unanticipated challenges.

2. Depersonalization

The second characteristic of modern bureaucracies is separation of the bureaucrat's person from the position or office he holds. The depersonalized bureaucracy can be traced to the attempts by central governments to strengthen their power by appointing new bureaucrats who, lacking their own independent power base, would be much more tractable.

However, depersonalization can easily degrade into dehumanization. It frequently leaves the bureaucracy with the appearance of an unfamiliar, inhuman machine that is frightening to the customer or citizen. Since such bureaucrats speak for an impersonal position, not for themselves personally, they are more likely to be callous and unfriendly.

3. Bureaucratic rules

The third defining element of modern bureaucracy is its adherence to, and enforcement of, rules. The development of a law- or rule-based administration complemented the rise of impersonal bureaucracy. Laws and administrative rules leave less room for personal whim and discretion.

Many of the rules seem to exist because someone thought there "ought to be a rule" for everything or because the procedural manual seemed a little slim. Sometimes bureaucrats have bolstered their egos by assigning complex procedures and numerous rules to the process for which they are responsible.

Such rules complicate and slow processing. Often it seems as though they are made for the sake of making rules. Complex rules can also be wielded as unfair weapons by certain bureaucrats who use their knowledge of the rules to justify whatever suits them.

2.5.3 Merton (1940)'s model

The best known critical commentary on Weber's theory of bureaucracy is Merton (1940)'s essay titled "Bureaucratic Structure and Personality". Merton (1940) used the term "dysfunction" to describe the bureaucratic behaviour. He viewed bureaucratic structures as conducive to efficient conduct generally but prone to self-protective behaviour on the part of officials, which is often inefficient.

Merton (1940) noted that the bureaucratic practices designed to produce efficiency will yield ritualistic or extremely rigid behaviour that detracts from efficiency. Bureaucratic regulations are written in far greater detail than is needed in most instances. He described the process as follow:

1. An effective bureaucracy demands reliability of response and strict devotion of regulations.
2. Such devotion to the rules leads to their transformation into absolutes, they are

no longer conceived as relative to a given set of purposes.

3. This interferes with ready adaptation under special conditions not clearly envisaged by those who drew up the general rules.

4. Thus, the very elements which conduce toward efficiency in general produce inefficiency in specific instances.

He further added that the bureaucrat's official life is planned for him in terms of a graded career, through organizational devices of promotion by seniority, pensions, incremental salaries, etc., all of which are designed to provide incentives for disciplined action and conformity to the official regulations. The official is tacitly expected to and largely does adapt his thoughts, feelings and actions to the prospect of this career. But these very devices which increase the probability of conformance also lead to an over-concern with strict adherence to regulations which induce timidity, conservatism and technicism. Displacement of sentiments from goals onto means is fostered by the tremendous symbolic significance of the means (rules).

He also claimed that the strict adherence to rules may be transformed into a meaningless thing, which is called displacement of goal. That mean the original goal of the rules can not be sustained:

"*Adherence to rules, originally conceived as a means, becomes transformed into an end-in-itself, this process is know as the displacement of goals whereby an* *instrumental value becomes a terminal value. Discipline, readily interpreted as conformance with regulations, whatever the situation, is seen not as a measure designed fro specific purpose, but becomes an immediate value in the life-organization of the bureaucrat." (Merton, 1940, p. 365)*

As cited by Merton (1940), there are four causes of displacement of goal:

1. Bureaucratic rules and regulations acquire symbolic significance apart from their functional value. Conformity to rules is rewarded, deviation punished.
2. Knowledge of regulations constitutes the principal expertise of officials. The esprit de corps of bureaucratic depends on their special knowledge of rules.
3. Over-conformity is the norm of impersonality. Any official appearing to bend the rules in order to accommodate a client's special needs may be accused of favouritism, which is inconsistent with the ideal that all clients should be treated alike.
4. The government agencies have no competitors, their clients cannot go elsewhere for the service they seek. Over-conformity incurs no costs to bureaucracies because of their monopoly position.

Merton (1940) claimed that although bureaucracy constitutes a social gain, it also incur some human cost: "bureaucratic structure exerts a constant pressure upon the official to be 'methodical, prudent and disciplined'." Discipline is acceptable to individuals only if it is congruent with the values and attitudes of those being disciplined. Thus, there arise "definite arrangements in the bureaucracy for inculcating and reinforcing" the appropriate values and attitudes. In these "definite arrangements" of socialization lies a hidden flaw. The disciplines and rules come to be regarded as "life values" rather than as utilitarian conveniences; the means become the ends. In place of flexible action and effective behaviour there emerges "an unchallenged insistence upon punctilious adherence to formalized procedures," with attendant rigidity, formalism, and ritual. Over-conformity creates a malfunction both for the bureaucratic structure and for the individual.

In Merton (1940)'s view, this bureaucratic organization demands formality and clearly defined social distance between occupants of different positions in the system. Because of this, people can predict the actions of others, and stable sets of mutual expectations emerge. "*The structure is one which approaches the complete elimination of personalized relationships and non-rational considerations (hostility, anxiety, affectual involvements, etc.) Merton (1940, p.363)*". Members of bureaucracies are also expected to exercise prudence and self-discipline.

Generally, Merton (1940)'s idea can be boiled down to three general propositions, and to three consequences or corollaries for the specific case of bureaucracy. Taken together, they constitute what we shall call "Merton Model".

The Merton model:

Proposition 1. Different forms of work organization require different relationships, roles and rules between workers and different value priorities.

Corollary. Bureaucratic organizations necessarily require rigid, hierarchical relationships, well-defined and specialized roles and clear cut, explicit rules. In bureaucracies, relationships between workers tend to be impersonal; and prudence, methodical action, and self-discipline are stressed as value.

Proposition 2. Given positive incentives for identifying with the organization, and given effective socialization procedures, workers will necessarily take on the organization's assumptions, procedures, rules and values as their own.

Consequence. Bureaucracies provide strong incentives for organizational identification, and provide strong socialization pressures and procedures, thus leading workers to value prudence, methodical action, impersonality, and rigid rules. The bureaucratic role and its attributes thus becomes a central part of the self system. Generalized, such values and self-definitions often lead to rigidity and over-conformity, both at the personal and at the organizational level. In this way, the functional advantages of bureaucracy may inadvertently lead to organizational and personal dysfunctions.

Proposition 3. In modern industrialized countries, bureaucracies have tended to become the prevalent form of work organization; this tendency will continue.

Consequence. The modal personality form in modern industrialized countries will increasingly conform to the "bureaucratic personality" as sketched above.

By socialization and conformity, the individual comes to mirror – and sometimes to exaggerate – the rules of the workplace in personal conduct.

According to Merton (1940), the over-conformity in orientation derives from structural sources. The process may be briefly recapitulated as follow:

(1) An effective bureaucracy demands reliability of response and strict devotion to regulations.

(2) Such devotion to the rules leads to their transformation into absolutes; they are no longer conceived as relative to a given set of purposes.

(3) This interferes with ready adaptation under special conditions not clearly

envisaged by those who drew up the general rules.

(4) Thus, the very elements which conduce toward efficiency in general produce inefficiency in specific instances.

In conclusion, Merton (1940)'s proposition is that bureaucracy requires people to strictly adhere to rules and procedures so as to achieve its effectiveness. However, this can easily transform the rules into absolute or meaningless thing, as it renders the people to adapt to the change of environment. As the result, the original goal of the rule may be changed after a change of environment. And this rule may become an end itself which we called as "red tape".

2.5.4 Crozier (1964)'s "Vicious Circle of Bureaucratic Dysfunctions"

The French sociologist Crozier (1964) has extended the dysfunctional aspects of bureaucracy to the point where bureaucratic structures are understood as inherently inefficient rather than as efficient instruments of administration. Based on a series of observational studies of public agencies, Crozier (1964) argued that modern bureaucracy embodies several values including the accomplishment of large-scale tasks but also depersonalization and removal of personal influence from human relationships. In the world of certainty sought by bureaucracy, rules could govern all contingencies, leaving little latitude for the exercise of personal decision.

Crozier (1964) constructed a general theory of bureaucratic process. Central to the theory is what Crozier (1964) calls a "Vicious circle of bureaucratic dysfunctions."

The first element in this vicious circle comprises impersonal rules, which were put in place to remove discretion from officials, thereby giving the appearance of rationality in administration. There are two types of rules existed in the organizations studied by Crozier (1964) as shown in the following:

1. those specifying work behaviour in minute detail.
2. those specifying how advancement and job allocation were to occurs.

He claimed that these rules left little chance to save for uncontrollable events like machine stoppages. The few choices that did remain were forced to the highest level of management, so that persons making decisions could not have a personal interest in their outcome.

The second element of the vicious circle is the centralization of discretionary decisions. The combination of detailed regulations and centralization of the few matters not covered by the rules yields the third element: the isolation of hierarchical strata from one another. One of the anomalies of large organizations is that they construct elaborate administrative hierarchies, which remove from lower-level supervisors the possibility of influencing their subordinates. Due to the line of command is so weak, non-hierarchical or parallel power relationships tend to emerge where rules cannot cover unforeseen occurrences. Parallel power, the fourth element in the vicious circle, triggers demand for new rules and greater centralization of decisions, further weakening the line of command and opening new areas for the exercise of non-hierarchical influence. Crozier (1964)'s model, thus, predicts that increased rules, centralization, strata isolation, and parallel power will occur and will lock bureaucracies into patterns of ever greater rigidity. Rather than changing with the environment, bureaucracies will resist change until a crisis of overwhelming proportions occurs.

The crozier (1964)'s model shown that the bureaucracy can lead to a vicious cycle which can increase the amount of rules which is an origin of excessive rules and regulations in the following study.

2.5.5 Thompson (1961)'s study on modern organization

Thompson (1961) studied the nature of modern bureaucratic organization. He claimed that the modern organization, especially government has exaggerated the characteristics of bureaucracy which lead to the inefficiency. He pointed out that such exaggeration of the characteristic of bureaucracy is due to the personal insecurity and the need to control in order to achieve the sense of security.

According to Thompson (1961), dependence upon specialization imparts to modern organizations certain qualities, including routinization, strong attachment to subgoals, impersonality, categorization and resistance to change, etc. The individual must adjust to the characteristics of bureaucracy, because they cannot be eliminated from bureaucratic organization. He claimed that, in our society, there are many people who have been unable to make this adjustment and who therefore find modern organization a constant source of frustration.

Thompson (1961) noted that personal behavior patterns are frequently encountered which exaggerate the characteristics of bureaucracy. Within bureaucracy, there are excessive aloofness, ritualistic attachment to routines and procedures, and resistance to change. From the standpoint of organizational goal accomplishment, these personal behavior patterns are pathological because they do not advance organizational goals. To the extent that criticism of modern bureaucracy is not "bureaucratic", it is directed at these self-serving personal behavior patterns.

Insecurity and the Need to Control

Thompson (1961) stated that the pathologies of bureaucracy is usually resulted form the personal insecurity. The pathological behaviors start with a need on the part of the person in an authority position to control those subordinate to himself. According to Thompson (1961), "to control" means to have subordinate behavior correspond as closely as possible with one set of preconceived standards. The need to control arises in large part from personal insecurity. He further elaborated that the source of insecurity is mainly the growing gap between the rights of authority and the specialized ability or skill required to solve most organizational problems.

"*The intellectual, problem-solving, content of executive positions is being increasingly diverted to specialists, leaving hierarchical rights as the principal components of executive posts. Persons in hierarchical positions are therefore increasingly dependent upon subordinate and non-subordinate specialists for the achievement of organizational goals. The superior tends to be caught between the two horns of a dilemma. He must satisfy the non-explicit and non-operational demands of a superior through the agency of specialized subordinates and non-subordinates whose skills he only dimly understand. To be counted a success, he must accept this dilemma and live with its increasing insecurity and anxiety.*" *Thompson (1961, p.156-157)*

<u>The bureaupathic Reaction</u>

Thompson (1961) noted that insecurity gives rise to personal needs which may be generalized in the need for control. He indicated that this need often results in behavior which appears irrational from the standpoint of the organization's goals because it does not advance them; it advances only personal goals and satisfies only personal needs. In so doing, it creates conditions which do not eliminate the need for control but rather enhance it. He stressed that as the insecurity and anxiety mounted, the personnel turned more and more to the formal system of rules, defined competencies, impersonality, and close supervision. When they met resistance and those above and those below, increasingly insecure, they reacted with increased aloofness and formality and exaggerated the characteristics of bureaucratic organization. He illustrated a vicious cycle of this pathology:

"*The manager's behavior was so strongly influenced by his personal needs to reduce his own anxiety, the employee's responses deviated more and more from organizational needs, thereby increasing the manager's anxiety and completing the vicious circle.*" *Thompson (1961, p.159)*

He further explained that the strict control from the seniors encourages employees to "go by the book", to avoid innovations and chances of errors which put black marks on the record. It encourages the accumulation of records to prove compliance. It encourages decision by precedent, and unwillingness to exercise initiative or take a chance. It encourages employees to wait for orders and do only what they are told. It is not hard to understand, therefore, why the superior may come to feel that he must apply more control.

<u>The drift to quantitative compliance</u>

As suggested above, an exaggerated dependence upon regulations and quantitative standards is likely to stem from a supervisor's personal insecurity in the parent-like role of the boss. An insecure superior will probably appreciate a large number of quantitative control standards because his ratings of his subordinates then appear to be inevitable results of the performances of the subordinates.

2.5.6 Summary

In the above criticisms on the bureaucracy, we can see that most of them argued the inefficiency produced by adherence to rigid rules and procedures. Thompson (1961) has provided an explanation to why the bureaucrats tend to strictly adherence to rules and procedures. Merton (1940) pointed out that the prescribed rules and procedures can easily become a meaningless thing due to the change of environment, however, the person who are still insisting to comply with these meaningless steps can incur an inefficiency to the organization. These meaningless rules and procedures are commonly termed as red tape. In part II, I would like to explain the phenomenon of "red tape" in details.

Part II: Review of "Red Tape"

2.6 Definition of Red Tape

2.6.1 Origin of red tape

According to Kaufamn (1977), the origin of red tape is as follow:

"*Red tape derives form the ribbon once used to tie up legal documents in England. At that time, because the common law gives great weight to precedent, every judicial decision must have been preceded by a thorough search of the records of every transaction are punctiliously filed and cross-filed. The clerks and lawyers have to spend a good deal of their time tying and untying the red ribbon-bound folders.*

Meanwhile, citizens and administrative officers trying to get action must have fretted and fumed while they waited for the meticulous minions to complete their patient unwrapping and rewrapping. And they must have exploded in outrage when, after all that, action was blocked on grounds of some obscure ancient decision or, still worse, because no unequivocal precedent could be found.

Hence, red tape is generally viewed a despised symbol. The ribbon has long since disappeared, but the hated conditions and practices it represents continue, keeping the symbol alive."

In modern society, red tape is usually used to describe excessive or meaningless paperwork (Bennett and Johnson 1979); a high degree of formalization and constraint

(Hall 1968); unnecessary rules, procedures and regulations; inefficiency; unjustifiable delays; and as a result from all this, frustration and vexation (Bozeman, Reed and Scott 1992). In common usage, red tape has a strongly negative effect on the normal operation.

2.6.2 Review on the theoretical definitions of Red Tape

In the following table, different definitions of red tape from various authors are reviewed. The review can give the readers a general idea of what is red tape. The adopted definition of red tape will be introduced in later parts.

Table 1: Review of theoretical definitions of Red Tape

Source: PANDEY, S. and SCOTT P. F. (2002). Red Tape: A review and assessment of concepts and measures. Journal of Public Administration Research and Theory 4

Authors	Theoretical Definition
Buchunan (1975)	There is no explicit definition of red tape. But red tape is adopted to describe due process and the heavy emphasis on rules and procedures in government organizations.
Rosenfield (1984)	Red tape is defined as “guidelines, procedures, forms and government interventions that are perceived as excessive, unwieldy, or pointless in relationship to decision making or implementation of decisions”
Balwin (1990)	Identifies two types of red tape: Formal red tape is defined as “constraints to an organization’s freedoms as a result of laws, rules, regulations and procedures.” Informal red tape is defined as “constraints…to an organization’s freedom caused by the influence, not formal sanctions, of key bodies in the political system”.
Bretshneider (1990)	There is no explicit definition of red tape. There is a discussion to highlights the procedural delay aspect. The concept of

	procedural delay, related to many layers of oversight, can be thought of as a form of red tape."
Bozeman, Reed, and Scoot (1992)	Red tape refers to the delays and subsequent irritation caused by formalization and stagnation.
Pandey and Bretschneider (1997)	Red tape is defined as a residual concept: "… the excess amount of delay above and beyond that generated by other factors influencing…time delays." This concept specification tries to distinguish red-tape based delays from ordinary delays.
Rainey, Pandey and Bozeman (1995)	Red Tape is defined as "rules, regulations, procedures that remain in force and entail a compliance burden for the organization but have no efficacy for the rules's functional object"
Scott and Pandey (2000)	Constraints imposed by rules and procedures.

From the above, we can see that red-tape is generally defined as a negative attribute to the organization. They include excessive rules, regulations, procedures and procedural delays.

2.6.3 Bozeman (1996)'s classification of red tape

According to Bozeman (1996), most of the literature about red tape can be classified by two views: "Bad red tape" or "good red tape".

"Bad Red Tape"

Bozeman (1996) pointed out that, in common usage, red tape is an emotive term connoting the worst of bureaucracy: gargantuan, cynically impersonal, bound up in meaningless paperwork, and beset by excessive, duplicative, and unnecessary procedures (Rai, 1983; Goodsell, 1985). Likewise, much of the literature on red tape treats it as pathology rather than a neutral organizational attribute. Juran (1967) identified that the common meanings that are attached to red tape are delay, indecisiveness and any action that contributes to inactivity. Bennett and Johnson (1979) identified red tape as overly strict routine and paperwork leading to ineffectiveness and rigid application of rules.

One of the earlier studies on “bad red tape” is Merton (1940)’s classic study of the bureaucratic personality. Merton (1940) argues that organizational demands for the rule adherence lead to goal displacement among individuals working within bureaucratic organizations. Rules become an ends in themselves, and adherence to formalized procedures interferes with the adaptation of these rules to special circumstances. Accordingly, the rules originally designed to produce efficiency in general, produces inefficiency in special or exceptional circumstances. Merton (1940) further suggests that sustained exposure to entrenched rules creates a tendency toward rigidity among individuals within bureaucracy. This may occur because bureaucratic organizations tend to reward rule-oriented workers more than those who display less of a rule orientation (Edwards, 1984). Other researchers, such as Argyris(1957), Thompson (1961), Hummel (1982), identified red tape as a bureaucratic pathology.

More recently, Bozeman (1993) views red tape as “good rules gone bad.” He examines the evolution of functional rules into dysfunctional red tape.

"Good Red Tape"

Several researchers pointed out that red tape sometimes provides benefits in the form of procedural safeguards that ensure accountability, predictability, and fairness in decisions (Kaufaman, 1977; Benveniste, 1983, 1987; Goodsell, 1985; Thompson, 1975). Bozeman (1993) pointed out that red tape can provide citizens protection against the arbitrary and capricious exercise of bureaucratic power and ensures equity in the treatment of clients.

Goodsell (1985) pointed out that red tape may be frustrating, however, it sometimes provides social benefits. Kaufman (1977) explains that the existence of red-tape is to ensure that government processes are representative and accountable and to meet the demands, often fragmented, of citizens and interest groups. Thus, part of the reason for red tape is the sheer number of specialized demands for government action. He also pointed out that process protection also gives rise to red tape. Landau (1969) suggested that excessive and duplicated rules and procedures can ensure the effective performance of the operation. However, while the extensive rules and procedures can confer benefits, Bozeman (1993) argued that concepts such as formalization should be more suitable to capture the notion of extensive but potentially beneficial rules and procedures.

2.6.4 Red tape as a bureaucratic pathology

James and Jones (1976) stated that for the current level of theoretical knowledge of red tape, an articulation of useful concepts is a most important task. Based on the previous accumulation of literature, Bozeman (1993) concluded that Red tape is a bureaucratic pathology. According to Bozeman (1993), there are several reasons to take this view. In the first place, it is clearly consonant with popular usage. Citizens and organizational members discussing red-tape rarely assume that it is positive, but a pathology which can affect the normal operations.

A second reason to view red tape as pathology is that there is already a set of organizational concepts that deal adequately with certain empirical aspects of rules and procedures. The extensive literature on formalization concerns itself with rules and procedures, without in most instances assuming any negative implications or impacts of rules and procedures. Bozeman, Reed and Scott (1992) asserted that it is useful to view formalization as part of the "physiology" of the organization and red tape as a pathological aspect of that physiology.

Bozeman (1993) defined two more concepts for the conceptualization of red tape. One concept pertains to the purpose for which a rule is apparently created, the other to its effects:

1. Functional object of a rule: The purpose for which a rule is created.

2. Rule efficacy: The extent to which a given rule addresses effectively the functional object for which it was designed.

According to the above concepts, Bozeman (1993) provided a definition to red tape as the follow:

Red tape : Rules, regulations, and procedures that remain in force and entail a compliance burden for the organization but have no efficacy for the rules' functional object.

2.6.5 Adopted definition in this research

Nowadays, many empirical researches on red tape have tended to view it as an organizational pathology. Red tape is described by Buchanan (1975) primarily in terms of excessive constraints that are largely structural in nature (e.g. procedural regulations). Balwin (1990) distinguished between formal and informal red tape. Formal red tape pertains to burdensome personnel procedures, whereas informal red tape concerns constraints created by such external sources as the media, public opinion, and political parties. Perhaps the closest to popular usage is Rosenfield (1984)'s definition of red tape as the sum of government guidelines, procedures, and forms that are perceived as excessive, unwieldy, or pointless in relation to official decision and policy. So, it can be concluded that the common approach is to view red tape as an organizational pathology which have negative effect to the organization.

In this research, we assume red tape is a bureaucratic pathology, and Bozeman (1993)'s definition of red tape will be adopted. The reason of adopting this definition is that it is close enough to most popular usages, so that it can avoid adding much to the considerable confusion already surrounding the term "red tape". Also, according to Bozeman (1993), this concept has the important advantage of not viewing the number of rules, procedures and regulations as identical to red tape, but rather viewing whether it will affect the achievement of functional purpose that it serve. But there is one point we have to bear in mind: although most people view red tape as an organizational pathology, there is a need to recognize that organizational administrative rules, regulations and procedures are not - in either number or content – inherently good or bad, but only good or bad from the perspective of values posited.

2.7 Operationalization of red tape

Red tape has been operationalized in a number of ways. The oldest empirical work on red tape is done by Buchanan (1975), he operationalized the concept of red tape with a "structure salience" scale, which measure the degree of red-tape by examine the degree of which managers felt restricted by rules. Rainey, Pandey, and Bozeman (1995) used four operational measures of red-tape which include the following:

1. Global measure of red tape
2. Personnel Red Tape measure
3. Administrative-Delay based red-tape measure
4. Number of approvals-based red tape measure.

The global measure of red tape was made up of a single question that uses a global referent: effectiveness of the organization as a whole. The concept of red tape is operationalized as the burdensome administrative rules and procedures that have negative effects on the organization's effectiveness. The personnel red-tape measure is an attitudinal measure of red-tape which was based on managerial perceptions regarding personnel systems. Administrative-Delay based red-tape measure based on the time required for execution a task. Number of approvals-based red-tape measure based on the number of approvals required before an action can be taken. (Rainey 1983, Rainey, Pandey and Bozeman 1995; Pandey and Kingsley 2000). For the details about the operational definitions of red tape, please refer to the table 5 in the Chapter four.

2.8 Causes of red tape

There are not many researches to study about the causes of red tape. The most complete one is "A theory of government red tape" by Bozeman (1993). In this study, Bozeman (1993) has conducted an intensive research on the government organizations in USA. It is identified the degree of red tape in these organizations is quite serious and he has derived two main categories for the causes of red tape:

2.8.1 Rule-Inception Red Tape: "Rules Born Bad"

Some rules are red tape at their inception because they meet the requirements specified earlier – having compliance burden while not addressing the function object. The term "rule-inception red tape" is used for rules that are dysfunctional at their origin. Bozeman also provided the following reasons for the emergence of this kind of red tape:

1. Inadequate comprehension

   Many dysfunctional rules have their origins in the misunderstanding of the relation between means and ends. According to Bozeman, in many instances, the reason for the inefficacy of rules is that persons designing the rules have insufficient understanding of the problem at hand, the relationship of the rule to the perceived problem, or other's likely application or response to the rule.

2. Self-aggrandizement and illegitimate functions.

   The concept of red tape assumes that rules should serve a legitimate, organizationally sanctioned functional object, either for the focal organization or for a legitimate controller of the organization. Thus a rule that is efficacious for an individual or group but which serves an illegitimate function, such as self-aggrandizement, qualifies as red tape, even if the rule is very effective for the illegitimate function.

3. Negative sum compromise

   In some instances, rules are established that serves so many diverse functional objectives that the net result is to produce a compliance burden but not enhance any of the functional objects it is designed to serve.

4. Over-control

   Over-control is the most common reason that rules are "born bad". Managerial control is an important organizational value and usually a legitimate one. However, it is also a value especially likely to be overemphasized.

2.8.2 Rule-evolved Red Tape: "Good Rules Gone Bad"

Bozeman (1993) identified the following factors which may lead to the evolution of rules into red tape, including:

1. Rule drift

   Rule drift occurs when the meaning and spirit of the rule get lost in organizational antiquity or when individuals inadvertently change the rule or its meaning. Sometimes, individuals enforce rules or comply with them without they serve. Perhaps the need for the rule no longer exists. Rules may be observed ritualistically and even may be venerated without anyone knowing what function they serve other than ritual.

2. Rule entropy

   Rule entropy occurs as rules get passed from one organization to the next and one person to the next. The more organizations, organizational levels, and jurisdictions involved in rule promulgation and application, the more likely the meaning will be lost through entropy and the more likely red tape will result.

3. Change in implementation.

   Change in implementation occurs if the rule itself stays essentially the same but individuals begin to implement it in a different manner.

4. Change in functional object

   The functional object of the rule changes in ways that render the rule obsolete or otherwise useless.

5. Change in the rule's efficacy

   Even if the functional object does not change, circumstances which mitigate the rule's usefulness can occur. For example, a rule requiring carbon copies of memoranda makes little sense if almost all communication is via electronic mail on a computer-based local area network. This example illustrates not a change in the functional object itself but a change in the rule's efficiency for the functional object.

6. Rule strain

   Organizations with too high a rule density level create strain and inefficient use of resources. Rules that are good but are too abundant can have a net negative effect.

7. Accretion

   Rules build one on top of another. Accretion means that the rules have an impact that is more than the sum of their parts. Rationality added to rationality may sum to irrationality.

8. Misapplication

   Misapplication of rules can occur for any of a variety of reasons. Sometimes rules may be difficult to interpret or apply because they have been written poorly and thus quickly evolve into red tape. Sometimes the purpose of a rule has never been clearly communicated to the person charged with its enforcement.

Part III: Comparison of “bureaucracy” and “red tape” in public and private organizations

2.9 Nature differences of public and private Organizations

Similarities and differences between the public and private sector have frequently been debated in the literatures on public administration, politics and economics. The main conventional distinction between public and private organizations is their ownership (Rainey et al.,. 1976). Whereas private firms are owned by entrepreneurs or shareholders, public agencies are owned collectively by members of political communities. The distinction is associated with two further public/private contrasts. First, unlike their private counterparts, public agencies are funded largely by taxation rather than fee paid directly by customers (Niskanen, 1971; Walmsley and Zald, 1973). Secondly, public sector organizations are controlled predominantly by political forces, not market forces. In other words, the primary constraints are imposed by the political system rather than the economic system (Dahl and Lindblom, 1953). Therefore the distinction between private and public organization are mainly: ownership, funding and control.

2.10 Theoretical Impacts of publicness on organizations

Boyne (2002) has identified the impacts of publicness on the organization from a variety of academic sources that contain claims concerning the distinctiveness of public agencies (Allison, 1979; Antonsen and Jorgensen, 1997; Box, 1999; Bozeman, 1987; Fottler, 1981; Metcalfe, 1993; Newman and Wallender, 1978; Rainey, 1989; Rainey et al., 1976; Ring and Perry 1985; Stewart and Ranson, 1988). Four main theoretical effects of publicness on the organizational structure have been identified in the literature on the differences between public and private management. These concern the relationship between publicness and organizational environments, organizational goals, organizational structures and the values of managers. In this research, focus is only put on the impact of publicness on the organizational structure, because it is directly related to the bureaucracy and red tape.

2.10.1 The impact of Publicness on organizational structures.

According to Boyne (2002), the internal characteristics of public agencies can be viewed as distinctive in the following ways:

- More bureaucracy.

  Organizations in the public sector have more formal procedures for decision making, and are less flexible and more risk-averse than their private sector counterparts (Bozeman and Kingsley, 1998; Farnham and Horton, 1996). These characteristics of public agencies reflect 'the lack of rewards or incentives for successful innovations and the penalties for violation of established procedures' (Fottler, 1981, p.5). Bureaucratic structures may also stem from the requirements of monitoring bodies and from demands for accountability in the public sector. As Rainey et al. (1976, p. 238) note, ‘the coercive nature of most government actions might be cited as a fundamental justification for constitutional checks and balances and extensive formal control mechanisms’.

- More red tape

This is often regarded as a pathological side-effect of bureaucracy (Bozeman and Scott, 1996). The existence of red tape implies an unnecessary and counter-productive obsession with rules rather than results, and with processes instead of outcomes. Bozeman et al. (1992, p.291) argue that ‘just as the original annoyance with red tape resulted from the delay caused by untying and tying the tape surrounding (official documents, red tape today refers not to rules and procedures themselves but to the delays and subsequent irritation caused by formalization and stagnation’.

2.10.2 The impact of publicness on organizational structures: Empirical evidence

Boyne (2002) has reviewed a number of empirical studies about the impact of publicness on organizational structure. 19 empirical studies have examined whether organizational structures differ significantly between public agencies and private firms. The statistical results provide some supports for the structural hypotheses, but the balance of the evidence is not overwhelming (see Table 2.1). Although the unweighted mean support score is as high as 60 percent, the weighted mean is only 38 per cent.

Table 2 Previous empirical studies on the impact of publicness on organization structure

Source: BOYNE, G. A. (2002). Public and private management: What's the difference. Journal of Management Studies 39(1)

Study	*1. Support score (and no. of tests)*	*2. Sample*	*3. Time period*	*4. controls*	*5. Measure of publicness*	*6. Interpretation of results by authors of study*
Pugh et al. (1968)	33 (3)	46 organizations in England	1960s	None	Ownership	Personnel procedures more bureaucratic in public agencies
Buchanan (1975)	0 (1)	Middle managers: 76 in federal agencies, 69 in 4 industrial firms, USA	Unknown	Internal	Ownership	Private organizations are more bureaucratic
Holdaway et al. (1975)	100 (3)	23 college principals in Canada	Unknown	None	Ownership	Public organizations are more bureaucratic
Rainey (1979)	100 (1)	Middle managers: 150 in 5 public agencies, 125 in 4 private firms, USA	Unknown	Individual	Ownership	Personnel procedures less flexible in in public sector
Bellante and Link (1981)	100 (1)	3643 public and private employees, USA	1972	Individual	Ownership	Public employees are more risk averse
Rainey (1983)	75 (4)	235 middle managers in 5 public agencies and 4 private firms USA	Unknown	Individual	Ownership	Public organizations are more bureaucratic
Lachman (1985)	0 (1)	141 CEOs of industrial organizations in Israel	Unknown	None	Ownership	Public sector managers report to controlling agencies less frequently
Chubb and Moe (1988)	42 (33)	289 public and 53 private schools in USA	Early 1980s	None	Ownership	Private schools have more autonomy from school boards, especially over personnel decisions
Emmert and Crow (1988)	100 (1)	250 R&D organizations, USA	Early 1980s	None	Ownership	Public organizations are more bureaucratic
Baldwin (1990b)	100 (2)	234 middle and senior managers, 50 public and 2 private agencies, Atlanta, USA	Unknown	Internal	Ownership	Personnel procedures more bureaucratic in public agencies
Bretschneider (1990)	100 (7)	622 public and 383 private computing agencies, USA	Late 1980s	External, internal	Ownership	More red tape in public agencies (decisions take longer), especially on personnel issues
Coursey and Rainey (1990)	100 (9)	Senior and middle managers, 156 public and 185 private, one US city	Unknown	Internal	Ownership, funding, control	Public managers have less autonomy over personnel issues
Bozeman et al. (1992)	60 (15)	616–703 R&D organizations, USA	1987	Internal, external	Ownership, funding, control	More red tape in public organizations (decisions take more time)
Lan and Rainey (1992)	75 (4)	92 public and 62 private managers, 120 organizations in New York	Early 1980s	None	Ownership	Public organizations are more bureaucratic
Zeffane (1994)	100 (1)	474 public and 944 private employees in Australia	1990	None	Ownership	More emphasis on rules and regulations in public sector
Bozeman and Bretschneider (1994)	17 (54)	680 R&D organizations, USA	1987 and 1988	Internal	Ownership, funding, control	More red tape in public organizations (decisions take more time)
Rainey et al. (1995)	31 (45)	Top managers in 109 public organizations and 83 private organizations, New York State	1993	Internal	Ownership, funding, control	Red tape viewed as more prevalent by managers in public organizations
Bozeman and Kingsley (1998)	33 (3)	365 middle and senior managers in public and private agencies, USA	1992	None	Ownership, Control	Publicness has little impact on risk culture
Scott and Falcone (1998)	85 (12)	400 R&D organizations, USA	Mid 1980s	Internal	Ownership, Control	Personnel and procurement decisions take longer in public organizations

Notes:
Mean support score:
Weighted 38
Unweighted 60
1. The 'support score' is the percentage of tests that supports a publicness hypothesis (see text for details of the calculation of the weighted and unweighted mean support scores).
2. The 'controls' column refers to other variables that are held constant in the statistical analyses:
(a) external = environmental variables, such as industry and geographical location
(b) internal = characteristics of the organization (e.g. size)
(c) individual = characteristics of survey respondents (e.g. age)

2.11 Comparison of the degrees of bureaucracy in public and private organizations

Eleven studies have tested the hypothesis that public organizations are more bureaucratic. Six of these find strong support for this hypothesis (Emmert and Crow, 1988; Holdaway et al., 1975; Lan and Rainey, 1992; Rainey, 1983; Scott and Falcone, 1998; Zeffane, 1994). However, Buchanan's (1975) results suggest that the role of rules and regulations is stronger in private organizations, and Lachman (1985) finds that managers in private firms are more subject to bureaucratic controls. Such evidence is consistent with Knott's (1993, p.95) argument that 'successful private companies…employ extensive bureaucracy to deliver services. McDonalds Corporation prescribes volume of rules for everything from the ordering of hamburgers to the cleaning of restrooms and floors. The firm's operations manual has 600 pages and weighs four pounds'. Thus doubts remain about the relative bureaucratization of the two sectors.

The literature shown that the hypothesis "Public organization is more bureaucratic than private organization" cannot be generalized to every case. It is due to the fact that some private organizations are actually more bureaucratic than the government organizations.

2.12 Comparison of the degrees of red tape in public and private organizations

The relationship between publicness and red tape has been tested in four empirical studies. The concept of red tape is operationalized as ‘procedureal delay, related to many layers of oversight’ (Bretschneider, 1990, p. 537). In all four studies, it is claimed that the results support the red tape hypothesis, but the evidence is not always consistent with this conclusion. For example, the support score in Rainey et al. (1995) is only 31 percent. The only study that provides very strong support for this publicness hypothesis is Bretschneider (1990)’s comparison of public and private organizations in the US computing industry. He finds that decisions in public agencies take longer, particularly decisions on the appointment or dismissal of staff.

Wider evidence on the autonomy of public and private managers over personnel issue is provided by three of the empirical studies. The statistical results are again mixed, and show patchy support for the hypothesis of lower managerial autonomy in the public sector. Rainey (1979)’s and Balwin (1990b)’s conclusions that personnel procedures are less flexible in the public sector are based on only one and two tests respectively. Under half of the results are consistent with this finding in the other two studies (Chubb and Moe, 1988; Pugh et al., 1968). Nevertheless, it is worth noting that none of the evidence suggests that managerial discretion over personnel decisions is greater in the public sector.

Boyne (2002) has identified a general pattern of evidence on the effects of publicness on organizational structure which is summarized in Table 3. The table shows the number of studies with support scores in of three categories: zero, <50% and >50%. The last category can be taken to represent moderate to strong support for a difference between private firms and public agencies. Among the three hypothesis of the publicness effect on organizational structure, the one which have support scores of 50 percent or more is only: “public organizations are more bureaucratic.”

Table 3 General pattern of evidence of the effects of publicness on organizational structure

		0	≤50%	>50%
H1	Public organization is more bureaucratic than private organizations	2	1	8
H2	Public organization has more red tape than private organization	0	2	2
H3	Manager in public organization has lower managerial autonomy	0	2	2

Note:

1. *Figures show number of studies with support scores of zero, less than or equal to 50%, or more than 50%.*

Source: BOYNE, G. A. (2002). Public and private management: What’s the difference. Journal of Management Studies 39(1)

From the table, we can see that there is a strong support to say that public organizations is more bureaucratic than private organization while public organizations are not necessarily have more red tape than private organizations

2.13 Bozeman (2000)'s study on the different degree of red tape in public and private organizations

A commonly cited difference between public and private organizations is that public organizations are more bureaucratic and have more red tape. The empirical literature on public and private organizational difference provides support for the above proposition (Baldwin 1990; Bozeman, Reed and Scott 1991; Bozeman and Bretschneider 1994; Bretschneider 1990; Bretschneider and Bozeman 1995; Rainey 1979 and 1983; Rainey, Pandey and Bozeman 1995). It is cited commonly that the rationale for presumably higher levels of red tape in the pubic sector is that public organizations are subject to greater levels of accountability than private firms and, hence, face greater operating constraints that are manifested in the form of rules and red tape. In addition, goals in the public sector are considered more diffuse and vague. Accordingly, public manager rely more extensively upon rule compliance as a means of control and as a benchmark for effective performance (Buchanan, 1975; Thompson, 1961; Warwick, 1975). Bozeman (2000) argued that, even if there is a genuine tendency for greater red tape in government, this does not prevent some private organizations from having more red tape than similar government agencies. There are many government organizations with little red tape and private organizations with a great deal.

2.13.1 Causes of more red tape in public organization

Bozeman (2000) proposed that when organizations have high degree of the following two factors:

1) external control
2) large number of stakeholders,

they would have a greater likelihood of red tape. This implies that red tape is not an inexorable consequence of government ownership. It is because when these factors are present in any organization, government or business, more red tape is usually the result.

But, actually, there are inherent attributes of public organizations that lead to higher degrees of external control and larger number of diverse stakeholders, so a higher propensity for red tape is resulted. The inherent attributes are government's *sovereign political authority*, and governments' *breadth of mission.*

2.13.2 Sovereign political authority of government

Bozeman (1987) asserted that the only absolute difference between government organizations and private organizations is the high degree of publicness of government. He pointed out that sovereignty carries it legitimate power of such force that citizens inevitably demand sharp constraints on government official and safeguards. Kaufman (1977)'s analysis of red tape note that the procedural safeguards lead to the proliferation of rules, regulations and procedures.

According to Bozeman (2000), a set of rules protecting citizens from official abuse is not red tape. However, a set of rules devised to protect citizens from official abuse, but not meeting that purpose, may be red tape. One of the reasons that government has more red tape is that it has voluminous rules designed to protect citizens from the illegitimate uses of the legitimate powers of government and, sometimes, the rules simply do not work. Bozeman (2000) noted that by using the concepts developed to explain the etiology of red tape, it can be shown that there are certain causes of red tape that are particularly likely to arise in the case of procedural safeguards.

First, there is a strong likelihood of accretion because procedural safeguards almost invariably involve cross-cutting goals – they affect the same officials and the same missions as do policy goals. When officials find ways to reduce the efficacy of the procedural safeguards, the residue is red tape.

Secondly, inadequate comprehension is often a problem because those interpreting or applying procedural safeguards easily can lose sight of the purposes of the rule, focusing instead on mindless compliance.

Third is rule strain. In many instances, the sheer number of procedural safeguards, many of which are quite specific and detailed, produce an extensive compliance burden and, for organizations with limited resources, a high rule density.

2.13.3 Breath of mission

According to Bozeman (2000), another inherent attribute of government that leads to more red tape is the nature of government policy missions. He noted that, the inter-organizational linkage is associated with red tape. In the private sector, inter-organizational linkages typically occur among autonomous organizations seeking mutual economic advantage. In government, inter-organizational linkages often seek to achieve broad policy missions that transcend the linked government organizations and, thus, the linkage is qualitatively different. This qualitative difference means that linkage mechanisms require a different sort of inter-organizational “glue” – glue that can easily turn out to serve as the adhesive to red tape.

2.14 Conclusion

In conclusion, Bozeman (2000) told us that there are few reasons to explain why government must have more red tape than private organizations, but there are several good reasons why there is a stronger likelihood of red tape in government. What we can say is that the more rules will likely mean more red tape. When these rules are complex and when they are imposed from the outside, the probabilities become greater.

Chapter Three - Research Questions and hypotheses

There were many debates on the topic of whether public organizations are more bureaucratic and have more red tape than private organizations. Generally, most of the studies supported the hypothesis that “public organizations are more bureaucratic and have more red tape than the private organization”. However, this hypothesis still cannot be generalized to explain all situations, since, some studies have provided empirical evidences to refute the hypothesis and support the fact that some private organizations are even more bureaucratic and have more red tape.

Recently, some authors proposed some theoretical explanations to support the hypothesis, for example, the propositions of *“Publicness Impact”* by Boyne (2000) and *“The Government’s political authority and breadth of missions”* by Bozeman(2000). These can be regarded as a very strong support to the hypothesis.

In the general context, the proposition of “higher degree of bureaucracy and red tape” still cannot be justified. However, this proposition is not tested in the context of construction project organization. Thus, in this research, the researchers would like to test this hypothesis within the construction industry. If the hypothesis can be justified in the construction industry, this can further support the propositions. The research question is “Whether the public project organization has more bureaucracy and red tape than the private project organization?” Two hypotheses are formed accordingly:

H1 : The public project organizations have a higher degree of bureaucracy than private project organization.

H2 : The public project organizations have a higher degree of red tape than private project organization.

Chapter Four Methodology

4.1 Outline of research methodology

The methodology employed in this research is mainly based on the literature review and the methods adopted in previous studies, so its validity can be enhanced. The research methodology can generally be divided into two parts. The first part is to measure the degree of bureaucracy and red tape in public and private project organizations by a subjective approach, the method adopted is a questionnaire survey. The second part is to use an objective approach to cross-validate the result from the first part, the method adopted is a case-study method. The methods devised are mainly used to test the two proposed hypotheses and exploit any extra findings from the data available.

Testing of hypothesis 1

In order to test hypothesis 1, the degrees of bureaucracy in public and private project organization are measured. The method of measurement is to employ the questionnaire first. Campbell and Fiske (1959) noted that, a convergent validation should be adopted to validate the method of measurement. This is an approach which employs more than one method of data collection to see whether a particular way of measuring a concept converges with other measures. Therefore, in this research, the result from this subjective approach would be cross-validated by an objective approach. The method adopted for the objective approach is case study method. The details of questionnaire survey and case study would be discussed in later sections.

<u>Testing of hypothesis 2</u>

In order to test hypothesis 2, the degrees of red-tape in public and private project organizations have to be measured and compared. If the measured degree of red-tape in public project organization is higher than that of private project organization, then the hypothesis will be justified. According to Bozeman (2002), red tape depends on one's perspective and assessment of red tape requires judgement call, thus, the measurement of red tape can only be based on subjective approach. Same as measuring bureaucracy, the measurement of red tape is also done by using questionnaire survey.

Table 4: Research Plan

Part 1	Testing of hypotheses 1 and 2 by measuring the degree of bureaucracy and red tape in public and private project organizations by a subjective approach.	
	Pilot Study	- To investigate the perceptions of the project participants on bureaucracy and red tape.
	Questionnaire Survey	- To measure the degree of bureaucracy in private and public project organization - To measure the degree of red-tape in private and public project organization
Part 2	Testing of hypothesis 1 by measuring the degree of bureaucracy in public and private project organizations by an objective approach	
	Case Study	- To measure the degree of bureaucracy in private and public project organization

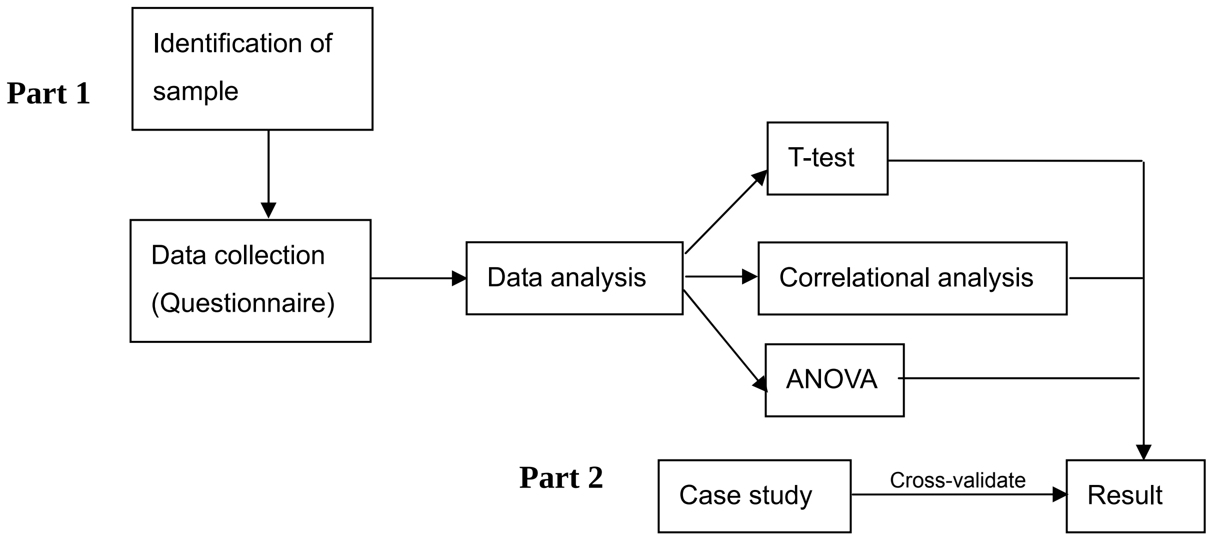


Figure 1: Flow Chart representation of methodology

4.2 Type of the projects to be compared

In this research, the type of the project organization to be compared should be fixed. It is because the comparison between different types of project organization may affect the assessment of degree of bureaucracy and red tape. For example, it is not appropriate to directly compare a civil engineering project organization with a building project organization, because their organizational structures and working procedures are totally different. Therefore, the type of the project to be compared should be fixed. In this research, the researcher aims at compare the degree of red tape and bureaucracy in public and private project organization, therefore, a common type of project organization should be identified from public and private sector.

According to the website of Architectural Service Department (2003), the public construction projects in Hong Kong can mainly be classified by the following types:

1. Government office

2. Housing projects
3. Amenities projects
4. Civil Engineering projects
5. School projects
6. Others, such as police station, school projects and amenities projects…etc.

On the other hand, the private construction project can generally be classified by three types:

1. Residential
2. Commercial
3. Industrial.

In this research, the Housing Authority project organization and the private residential development project organization are chosen for the comparison, because they are similar in nature and it can be assumed that they have similar working stages and procedures to follow.

As a result, the respondents who have both experiences in public housing projects and private residential development projects will be asked to evaluate the degree of bureaucracy and red tape in Housing Authority projects and private residential projects.

4.3 Questionnaire Survey

For examining hypotheses 1 and 2, questionnaires will be employed. Self reporting, either from questionnaires or from interviews, is a common technique in industrial/organizational psychology and organizational studies (Leary 1991 p.44). Since the questions used to determine the degree of red-tape in public and private organization are relatively straight forward and it is best to obtain a large number of responses in a relatively short time, also self-administered questionnaires are invariably cheaper than interviews, therefore questionnaire approach is more feasible than conducting interviews.

However, according to Cheung (1999), there are several shortcomings of using questionnaires:

1. Usually, a low response rate is expected and the sample size may not be large enough to represent the population. Therefore, in order to encourage the response rate, the following will be done:
    - Introductory letters are sent to the participants so as to explain the objective and purpose of the questionnaire and provide guidance for filling in the questionnaires. The author's personal contact number is also included for answering any queries.
    - The targeted organizations are phoned before sending the questionnaires. This help to identify a contact person and obtain prior consent before

distributing the questionnaires.

- Respondents are encouraged to reply by email, which is more convenient for them.
- Respondents are not asked for disclose personal information to protect he confidentiality.

2. Misinterpretation of questions may be likely. However, this problem is actually not so serious in this survey, since the targeted respondents are highly educated professionals. Nonetheless, questionnaires are written in a simple and straight-forward manner which facilitates understanding. In the following, the sample for the survey and the designs of the questions to measure the degree of bureaucracy and red-tape in the public and private project organizations are discussed

4.3.1 Sample for the questionnaire survey

To measure the degree of bureaucracy and red tape in public and private project organization, the first priority of the respondents is that they must be a project participant. Furthermore, as the respondents have to answer several question based on their experiences, they should have working experiences in both private and public project organizations.

Besides, the respondents should not have any bias when answering the questions.

Therefore, the personnel from the client's organization are not selected as the sample, otherwise they have to evaluate against their organization and the result may be biased.

Furthermore, Oppenheim (1986) indicated the chief danger of subjective measurement is that the respondents' perspective can easily be influenced by other variables. For example, when the respondents are come from two different disciplines, it is more likely that they will have different perceptions on the same issue. Thus, the extraneous variables can influence their assessment. In order to minimize the influence of those extraneous variables, some variables should be fixed as constant, such as, the type of their organization and position.

In this research, among the project participants, the construction manager and project consultants in Hong Kong are the selected as the sample. The reasons include the following:

1. They are the participants in the project team organization, so they are more familiar with the rules, procedures and structure in the project organization.
2. They are independent from the client's side, therefore they are less likely to have bias in evaluating the private and public project organizations.

4.3.2 Identification of the sample

First of all, to identify the construction managers who have both experiences in public and private housing projects, the contractors who have experiences for the two types of projects should be identified first. The names and contacts of these contractors are identified in the approved list of Housing Authority Building Contractors. After that, all contractors in the approved list are contacted by phone to see whether they would like to participate in the research. For those contractors who are interested to participate in the research, the researcher would request for a list of construction managers' contacts and so on, the questionnaires are sent to these construction managers through email. The collection method is also through email as stated in the questionnaire.

For the consultants, architects were chosen as the sample in this study. Their contacts are identified from the list of Hong Kong Institute of Architects. Since, there is no prescribed list for Housing Authority projects, thus the researcher has to ask the respondents whether they have the experiences in both Housing Authority and Private residential projects in the questionnaires.

4.3.3 Pilot study

Before any in-depth investigation, a pilot study is conducted in order to have a general picture about the respondents' knowledge and perception on the bureaucracy and red tape in public and private organization. It is considered as an important step, because if these groups of people have never heard of such terms, the researcher has to spend more time on the definition and meaning of the terms before conducting subsequent questionnaires. On the other hand, if they have different perceptions on the red tape, additional steps should be taken to solve this semantic differential problem.

Target of pilot interview

Three construction managers who have experiences in both private and public housing projects were contacted and interviewed by the researcher to find out their understanding about bureaucracy and red tape. The three interviewees come from (1) Hsin Chong Construction Company Limted. (2) Sun Fook Kong Construction Limited and (3) China State Construction and Engineering Company Limited respectively. They are all involved in the industry for a long period of time, therefore it is worth to consult them before conducting the questionnaire survey. Personal interviews are conducted to investigate their perception on the bureaucracy and red tape in the project organizations. The questions asked are open-ended which include the following:

1. Whether they have the idea about “bureaucracy” and “red tape”?
2. How do they compare the degree of “red tape” and “bureaucracy” in private and public project organizations?

3. Do they perceive "red tape" as a positive thing or negative thing?

Findings from the pilot study

Interview 1: Mr. Benjanmin Chow, Construction Manager of Hsin Chong Construction Company Limited

He has more than 20 years experience in the construction industry. When he was asked whether he has the idea about "bureaucracy" and "red tape", he answered "yes" for "bureaucracy", but "no" for "red tape". However, when the researcher explained the concept of red tape in terms of "excessive rules and procedures which do not serve any purpose", he replied that he had this experience before. In his view, the existence of red tape can absolutely reduce the efficiency of the project and waste a lot of resources including time and money. For the comparison of the degree of bureaucracy and red tape between Housing Authority and private project organizations, he asserted that the projects of Housing Authority has an especially high degree of bureaucracy and red tape among other type of projects. He said that reason behind is mainly due to the poor performance of public housing project in recent years. In addition, he pointed out that the topic of this study is quite interesting and worth investigating, as there are not many studies to reveal this kind of problems in the industry.

Interview 2: Mr. K M Fung, Senior Construction Manager of Sun Fook Kong Construction Company Limited

He has nearly 15 years of experience in the industry. Again, he is unfamiliar with the term of "red tape", but he said in some government projects, especially the projects of Housing Authority, there were actually the existence of excessive rules and regulations. In contrary to Mr. Kwok's view, he treat red tape as a positive attribute which can provide a greater security and guarantee to the smoothness of the project. He advised that the term red tape should be defined in detail, so that the respondents can understand the term more easily and give a more accurate answer.

Interview 3: Mr. Eddy Ho, Construction Manager of China State Construction and Engineering Company Limited.

He has about 15 years of experience in the industry. He said he knows the concept of "bureaucracy", but he didn't get in touch with the term "red tape" before. He agrees that excessive rules and regulations actually exist in some project organizations, especially for government projects. He viewed red tape as a negative attribute to the project as he thought that adherence to excessive rules and procedures can cause procedural delay and result in poor quality of work. He pointed out that the degree of red tape is especially high in public housing project and there is a need for the Housing Authority to review its system of rules and procedures, otherwise, the money of taxpayers will continue to be wasted.

Conclusion

From the pilot study, we can see that all three interviewees are familiar with the term 'bureaucracy', but not for "red tape", thus, it is necessary to provide definitions and explanations of the "red tape" in the questionnaire. Also, an example of red tape should better be given in order to enhance the understanding of the interviewees. Their perception on red tape is quite different. Mr. Chow and Mr. Ho viewed red tape negatively while Mr. Fung viewed red tape positively. Thus, the design of the questionnaire has to address this problem.

4.3.4 Structure of questionnaire

The questionnaire is divided two sections. The first section aims at measuring the degree of bureaucracy in Housing Authority and private residential project organizations, while the second part aims at measuring the degree of red tape. Most of the questions are based on the instruments adopted in previous researches. This can ensure that the questions asked are theoretically based and help to avoid ambiguity, vagueness and inappropriate use of technical expressions. Modification or supplements have been made to the questions to improve the clarification of the questions, provided such changes would not alter the original aim of the questions. In the following, the designs of the questions in each section are to be elaborated in detail:

Section 1: Questions to measure the degree of bureaucracy

(i) Instruments to measure the degree of bureaucracy

In the National Administrative Studies Project (NASP), Bozeman and Rainey (1998); Rainey, Pandey and Bozeman (1995) have conducted questionnaires survey research to measure the degree of bureaucracy in public and private organizations. Hundreds of questionnaires were sent to government and private organizations. They have carried an extensive review on the previous literature about bureaucracy and identified the following five features of bureaucracy as the instruments for measuring bureaucracy in the organizations. The five bureaucratic features include the following:

6. Layers of Hierarchy
7. Degree of specialization
8. Number of approvals needed to perform a task
9. Amount of written rules and procedures
10. Number of record keeping

Actually, before their research, York and Henley (1986) had already adopted the above instruments to measure the degree of bureaucracy in the public organizations. In this research, the instruments adopted to measure the degree of bureaucracy are also based on the above five bureaucratic features identified in the literature review. These instruments for measuring the degree of bureaucracy are to be adopted in both questionnaire and case study.

(ii) Scaling method

According to Oppenheim (1996), rating gives a numerical value to some kind of judgement. Interval scale will be employed as it can indicate the order of responses and distances between them.

As noted by Bell (1993), a even-number scale should be used, as the neutral position of respondents can be avoided. This can force people to make a decision in a particular direction, instead of avoiding the answer. Therefore, in this questionnaire, an eight-point rating scale will be used to allow the respondents to assess the degree of bureaucracy in Housing Authority and private project organizations.

In section 1 of the questionnaire, the respondents are requested to give a rating to the five bureaucratic features according to their experience in the two types of project organization. The higher rating indicates a higher degree of bureaucratic feature. For each questionnaire, the rating for each bureaucratic feature will be summed up to produce a total score for the degrees of bureaucracy in private and public organization can be produced respectively.

Section 2: Questions to measure the degree of red tape

(i) Instruments to measure the degree of red tape

The oldest empirical work on red tape is done by Buchanan (1975), he measured the existence of red tape with a "structure salience" scale, which measure the degree of red-tape by examine the degree of which managers felt restricted by rules. Rainey, Pandey, and Bozeman (1995) used four operational measures of red-tape which include the following:

5. Global measure of red tape

6. Personnel Red Tape measure

7. Administrative-Delay based red-tape measure

8. Number of approvals-based red tape measure.

Table 5 presents the exact wording as well as the computation step taken to come up with each measure. The global measure of red tape was made up of a single question that uses a global referent: effectiveness of the organization as a whole. The personnel red-tape measure is an attitudinal measure of red-tape which was based on managerial perceptions regarding personnel systems. Administrative-Delay based red-tape measure based on the time required for execution a task. Number of approvals-based red-tape measure based on the number of approvals required before an action can be taken. Pandey and Scott (2002) have undergone a critical review on these measurements of red-tape. They have examined whether these measures of red tape based on the same reality by examining the inter-correlations among different measures of red tape and between them and Weberian characteristics. The results concluded that the Buchanan (1975)'s "structural salience" scale, global measure of red tape, personnel red-tape measure, number of Approval-Based Red Tape Measure and administrative delay-based measure of red-tape tape into similar aspects of reality and represent equally valid approaches to measuring red-tape.

In this research, the personnel red-tape measure is considered not appropriate, as it only considers the red-tape in personnel systems which cannot provide a general picture of red-tape in the project organization. Pandey and Scott (2002) pointed out that there are two problems with administrative delay-based measure. The first problem is that it only captures the processing time. However, the processing time does not seem to capture a negative which is a key component of the theoretical definition. Another problem is that the time it takes to perform key managerial tasks only provides an indirect and implicit measure of red-tape; administrative delay is neither separately identifiable nor is it the only factor contributing to delays. Thus, administrative delay-based measure will also not be adopted in this research.

As a result, Buchanan's "structural salience" scale, global measure to measure and number of Approval-Based Red Tape Measure would be adopted as the instruments to measure the red-tape in public and private project organization.

Table 5: Operation definitions to measure red tape in previous studies

Buchanan's (1975) "structure salience" scale Respondents were asked to rate the following items on a 6-point Likert scale. 1. My supervisor is more concerned that I follow rules and procedures than he is than I do an effective job. 2. I feel that rules, regulations, and procedures are very important in this organization. 3. I always check things carefully with my boss before making important decision. 4. It is considered inappropriate in this organization to try to deal with a problem without following prescribed rules and procedures.
Global Measure of Red Tape (Rainey, Pandey and Bozeman, 1995) Based on a rating from 0 to 10, with 10 indicating the highest level of red-tape of the following statement. If red-tape is defined as burdensome administrative rules and

procedures that have negative effects on the organization's effectiveness, how would you assess the level of red-tape in your organization?
Personnel Red-Tape Measure (Rainey 1983, Rainey, Pandey and Bozeman 1995; Pandey and Kingsley 2000) Sum of the following items rated on a 4-point likert scale, with 1 indicating strong agreement, were used to measure personnel red-tape. 1. Even if a manager is a poor performance, formal rules make it hard to remove him or her from the organization. 2. The rules governing promotion make it hard for a good manager to move up faster than a poor one. 3. Due to rules, pay raises fro managers are based more on longevity than on performance. 4. The formal pay structures and rules make it hard to reward a good manager with higher pay here. The personnel rules and procedures that govern my organization make it easier for superiors to reward subordinates for good performance.
Administrative Delay-Based Red Tape Measure Respondents were asked to indicate the time taken between the initiation of the request made by a unit within the organization and the actual approval of the request.
Number of Approval-Based Red Tape Measure Respondents were asked to indicate the number of persons in the organization who must typically approve each activity before action can be taken

(ii) Semantic-differential problems

According to Waldo (1959 p. 369), "one man's red tape is another man's system". This different perception of respondents on rules and procedures will affect the measurement of red-tape. This is called semantic differential impacts of red-tape. The semantic differential problem will certainly affect the assessment of red tape in public and private project organization by the respondents, so the result may be unreliable. If somebody views red-tape as a positive attribute to the organization, this would contradict the proposition in the literature that "red-tape is a negative attribute to the organization". Also, they are sceptical to work in an environment with more red-tape and can hardly realize its existence.

In order to investigate the respondents' perceptions on red-tape, the semantic-differential technique will be employed. The semantic-differential technique was originally developed by Charles E. Osgood and his colleagues (1957). It consists of a number of rating scales that are bipolar, with each extreme defined by an adjective which aims at determining the perceptions of different people on the same matter. Simple profile-analysis can show us the different ways which several objects or concepts are rated on the same set of scales and how two or more groups differ in these respects.

In the questionnaire, there is a question which is designed to ask the respondents whether red-tape is a good thing or not. For those respondents who view red tape as a good thing to the project, their response would not be chosen for study, as this perception do not conform with the commonly adopted perception identified in the literature review.

(iii) Scaling method

For measuring the degree of red tape, an eight-point rating scale is adopted. The rationale for using such scale has been discussed before.

There are five statements describing the existence of red-tape in an organization which is based on the measurement techniques identified in the literature review. The respondents have to give a rating for their degree of agreement. If the respondent gives a high score, that means there is a high degree of red-tape in the project organization. For each questionnaire, the score for each statement for public and private organization will be sum up, so that a total score for red-tape in private and public organization can be produced respectively.

4.3.5 Methods of analysis

After obtaining the relevant data from the respondents, several statistical tests are conducted. The Statistical Package for Social Science (SPSS) 11.5 version is employed to carry out the following statistical tests:

1. Paired-Samples T-test
2. Correlational analysis
3. One Way Analysis of Variance

<u>Paired Sample T-test</u>

In order to test for the both hypotheses, paired sample T-test was employed to test whether mean score for bureaucracy or red tape in Housing Authority project organization is greater than that in private residential project organization

According to George and Mallery (2002), the Paired-Samples T-Test procedure compares the means of two variables for a single group. It computes the differences between values of the two variables for each case and tests whether the average differs from 0.

When using t-tests to determine if two distributions differ significantly from each other, the test that measures the probability associated with the difference between the groups may be either a one-tailed or a two-tailed test of significance. The two-tailed test examines whether the mean of one distribution differ significantly from the mean of the other distribution, regardless of the direction of the difference. The one-tailed test measures only whether the second distribution differs in a particular direction from the first.

In this research, the one-tailed test of significance is employed to indicate whether the degree of bureaucracy or red tape in Housing Authority Projects is greater than that in Private Residential Projects.

Correlational Analysis

According to George and Mallery (2002), correlational analysis is conducted to find out whether there are statistical significant relationships:

1. between each bureaucratic feature; and
2. between each bureaucratic features and overall degree of red tape.

The above two major analysis are done for both Housing Authority and Private residential projects.

Correlation is used to quantify the relationship between variables. Two variables are said to be correlated when there is some predictability about the relationship between them (Clark-Carter, 1997). Positive correlation means that one variable get bigger while the other gets bigger and negative correlation means that one variable gets smaller while the other gets bigger.

Correlation coefficient is also known as Pearson's Product Moment Correlation Coefficient, which can be found by the following equation:

$$= \frac{\text{Covariance between two variables}}{\text{SD1 x SD2}}$$

where SD1 and SD2 are standard deviations of the two variables.

The range of correlation coefficient is -1 to 1 (inclusive). A positive correlation coefficient indicates positive relationship and vice versa. For correlation coefficient equals to 0, there is no relationship between the two variables. In this research, mean scores are computed on each bureaucratic feature. Correlational analysis is carried out based on these mean scores for the factors. The researcher would like to find out any significant relationship among the bureaucratic features and the relationship between these features and the overall degree of red tape.

<u>One-Way Analysis of Variance</u>

According to George and Mallery (2002), one way Analysis of Variance (ANOVA) is conducted to find out any significant differences in respondents' perception on an issue. In this research, two sets of ANOVA are conducted to compare the degree of bureaucracy and red tape among their years of experience:

1. 1-5
2. 6-10
3. 11-15
4. 16-20
5. 21 or above

and their titles:

1. Consultants
2. Construction managers

respectively. Altogether, two major comparisons are carried out in both Housing Authority Projects and private residential projects.

George and Mallery (2002) explained that analysis of variance (ANOVA) is a statistical technique developed by the English Statistician Sir Ronal Fisher in the 1920s. One way ANOVA means that there is only one independent variable and one dependent variable. In this research, the score for the degree of bureaucracy in Housing Authority Project and Private Residential Projects are used as the dependent variable, while the difference ranges of experience and the organizational types are used as the factor for comparison.

There are 3 major assumptions in one-way ANOVA (SPSS Inc., 1999).

1. The k populations are normally distributed.

2. The variances of the k populations are equal

3. The observations are independent.

One-way ANOVA is used to determine whether the difference among several sample means are greater than would expected by chance alone if the null hypotheses were true. The null hypotheses are (H0):

H_0: μ1 = μ2……μN
(μ1 to μN is the group means of each group)

where N is the number of groups.

The null hypothesis (H_0) is that the mean scores for all the organization types are the same. The test statistic for ANOVA is the F-ratio:

$$\text{F-ratio} = \frac{MS_b}{MS_w}$$

MS_b reflects the variability among group means and is not affected by the variability of the observations within group. MS_w is the weighted average of the variances of the observations about the group mean in each of the J groups. It is not affected by the differences among the group means. The F-ratio has an expected value of one. When H0 is false, MSB is expected to exceed MS_w, and the F-ratio is expected to be greater than one.

After the computation of the F-ratio, the probability (p) of achieving the computed F-ratio, at the specified level of significance, should found. In this research, a level of significance of 0.05 is used. We can conclude that H0 is false if $p \leqq \alpha$ and if $p > \alpha$, H0 is tenable.

After conducting the ANOVA, it can tell that whether there are significant differences among the groups.

4.4 Case study

In the part 2 of the research, an objective study approach is adopted to cross-validate the test result of hypothesis 1: Housing Authority project organization has a higher degree of bureaucracy than private project organization. There is a need for carrying out such objective cross-validation, it is because the subjective method can easily be affected by the variable of individual perception. Therefore, in order to test the validity of the subjective result, a quantitative method should be adopted to measure the degree of bureaucracy in private and Housing Authority project organization.

Furthermore, the researcher would like to map the roles of each project participants delineated by the rules or procedures. This can help to reveal how the rules and procedures delineate the contribution of each party into the project. In the following, the researcher would like to review the definition of roles first, then, the literature about the case study methods, case study design and method of analysis would be reviewed.

4.4.1 Role in project organization

According to Hughes and Murdoch (2001), the relationship between a participant and an operation is known as a role. There is a variety of such roles, and they may be combined for each participant. They will be determined primarily by the purpose of each contribution as well as the participant's skill and ability.

The degree of detail and the classification of roles are dependent on the depth of the analysis and the purpose of the investigation (Cleland and King 1975). In their study, three types of system have been introduced, the Operating System, the Control System and the Managing System. These systems are exercised through various combinations of roles, and these are summarized in table 6 and grouped in Figure 2

Table 6: Definition of roles

Role	**Definition**
Operating system	
Operating	Carrying out work on some aspect of the project, and having overall responsibility for its output
Co-operating	Carrying out work as part of a team or committee with partial responsibility for output.
Advising	The provision of technical or other information when asked for it. Typically undertaken in the construction industry by professional consultants.
Receiving	Receipt of information about the project for purposes outside the management of the project: for example the accounts department of a client organization.
Control system	
Monitoring	Recording and filtering information about an operation and communicating it to those who may take action.
Supervising	Comparing progress with a predetermined plan and bringing about some sort of response to the situation.

Resourcing	Ensuring that those who carry out operations have sufficient resources
Managing systems	
Co-ordinating	Ensuring that information flows successfully between organizational links and assembling diverse outputs
Directing	The executive responsibility for ensuring that the output of activities is orientated towards the objectives of the project
Recommending	Passing information or the results of an activity to someone who must take a decision on it.
Approving	The executive function of taking decisions about the output of activities. This decision will usually form the input of a subsequent activity.

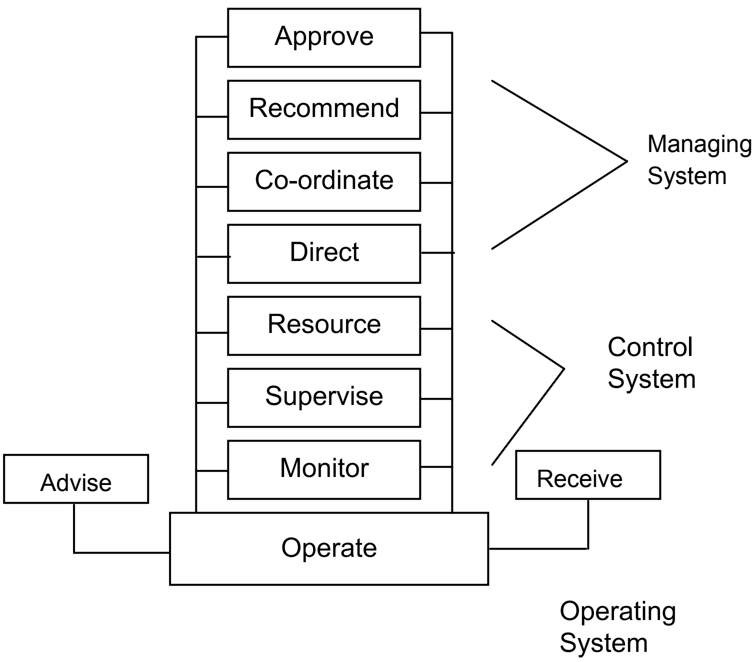


Figure 2: Hierarchy of roles related to systems

Recommendations may arise at any level in the hierarchy, and will be subject to approval by the next level in authority. This Approval may become a recommendation to someone in a higher managing function again, so the chain of recommendation and approval passes up the management hierarchy until it reaches the person who ahs the ultimate authority for the particular decision being taken. The ultimate authority in the project management system is the project manager or director or even the chief executive of the organization. Any analysis of a construction project's organization ought to be capable of exposing the situation where integration is achieved through meetings and team-works. Thus the role of "Co-operating" is defined as membership of a team or committee. This can occur at any level in the system, and has to be shown separately because in such a case, even though there may not be an individual whose responsibility is to co-ordinate, it may take place by teamwork and meetings.

These role definitions help to define the contribution that each participant makes to a project, and they relate to different type of system. Each level of decision-making constitutes a different level of detail for analysis. The control system should be applied at all levels. At operational level, control is achieved through the exercise of three roles. The process of observing is achieved via the role of monitoring. This gathering of information must include a certain amount of filtering, to make it effective. Thus, the Monitor undertakes some comparison of information to objectives.

In the cases study, the researcher would like to map out the roles of the parties delineated by each prescribed rules and procedures. According to Cleland and King (1975)'s study, the roles of the parties can generally be classified as managing system, control system and operating system. A comparison of the different pattern of roles delineated in public and private project organizations is made.

4.4.2 Review of Case Study methods:

In this research, an in-depth investigation is carried out to measure the degree of bureaucracy within the project organizations.

According to Bryman (1989), case study has the following purposes:

1. To achieve insights into a previously uncharted area.
2. To test theories.
3. To allow findings from other studies to be confirmed.

As a result, in this research, case study method will be employed to cross-validate the result from the questionnaire. In the following, literature about the case study method will be reviewed first:

According to Brewerton and Millward (2001), case study involves the description of an ongoing event in relation to a particular outcome of interest over a fixed time in the "here-and-now". Advantages of this design are:

1. It enable a more in-depth examination of a particular situation than other designs;
2. The information it yields can be rich and enlightening and may provide new leads or raise questions that otherwise might never have been asked;
3. The people involved usually comprise a fairly well-circumscribed and captive

group, making it possible for the researcher to describe events in detail.

Hilliard (1993)[1] suggests a number of different forms of case-study research, including narrative case-study research, single-case experiments, single-case quantitative analysis and combined quantitative/qualitative studies. The following is a review on these methods:

Narrative case studies

Narrative case studies employ qualitative techniques to elicit and analyse descriptive accounts. These narratives are concerned with making sense of the "stories" people tell about aspects of their experience. There are a number of different ways of gathering stories (e.g. stimulated recall of critical events, interviews, diaries or journal, open-ended questionnaires, observation of meetings)

Single-case experiments

These are known as "n=1" or single-subject studies and involve the systematic evaluation of change in individual cases. The aim is to record and assess specific changes attributable to specific interventions and usually involves systematic assessment before, during and after the intervention has occurred.

Single-case quantitative studies

In this type of design, the aim is to use quantitative techniques to trace the unfolding over time of variables but without introducing any experimental manipulation or control over these variables as in the single-case experiment.

Combined quantitative/qualitative case studies

To some extent, all quantitative case studies apply a version of this approach. It may, in some cases, be meaningless to report quantitative changes without reference to more in-depth material. However, in this case, in-depth data are used to back up or illustrate the quantitative findings. In case-study research, the notion of combining qualitative and quantitative data offers the promise of getting closer to the “whole” of a case in a way that a single method study could not achieve. The idea is based on the principle of triangulation which advocates the use of as many different sources of information on the topic as possible (e.g. questionnaire, observations, interviews) with a view to obtaining convergence on an issue.

4.4.3 Case study design

In this research, narrative case studies method will be adopted. The documents prescribing the rules, procedures and organizational structure of the projects are collected from Housing Authority and private developers for the study.

<u>Measurement of bureaucracy</u>

The measurement of bureaucracy will be based on the five bureaucratic features identified by the previous research (Rainey, Pandey and Bozeman (1995); Bozeman and Rainey (1998); York and Henley (1986)).

The methods for measuring these bureaucratic features are described below:

1. Layers of hierarchy

   Count the number of hierarchies in the project organization.

2. Degree of specialization

   Count the number of personnel involved in an activity.

3. Number of administrative records kept

   Count the number of administrative records kept in performing an activity.

4. Amount of written rules or procedures

   Count the number of written rules in performing an activity.

5. Number of approval

   Count the number of approvals needed to perform an activity

<u>Mapping of roles delineated by rules and procedures</u>

For each rule and procedure, the roles of the parties delineated are classified into managing system, control system and operating system. The number of the rules and procedures classified under these three types of system is counted.

4.4.4 Method of analysis

In this research, the "Master Process Manual" from Housing Authority and the "Procedural Guideline for tendering process" from Hong Kong Land Properties Ltd were collected for the analysis.

The "Master Process Manual" from Housing Authority is a document which delineates all rules and procedures which have to be followed by each project team participants. The manual has detail description of rules and procedures in all project stages, including: feasibility studies, layout design, detail design, tendering and construction.

On the other hand, the procedural guideline from Hong Kong Land Properties Ltd is an internal document which delineates all rules and procedures that the project team participants have to comply with during the tender stage in every project. Not same as the manual from Housing Authority project, this document only describes the rules and procedures in the tender stage.

The method of analysis is first to measure the amount of the above five features quantitatively and then compare them for each type of organization. If the organization possess a higher amount of the above five features, then the degree of bureaucracy in that organization is said to be higher.

For the comparison of different pattern of roles in the two types of project organizations, the number of each type of system implied in the rules and procedures would be counted and a comparison of the numbers is made between the public and private project organizations.

In this research, the researcher would like to compare the tendering section of the master process manual from Housing Authority with the tendering procedural guideline from Hong Kong Land Properties Ltd.

Chapter Five Results and Discussions

5.1 Introduction

After conducting the questionnaire survey and case study, empirical results are produced and analysed. In this chapter, the response rate and the basic information of the respondents are to be reported first. Afterwards, the results of questionnaire survey and data analysis are demonstrated. Finally, the case study result of Housing Authority and private residential project organization are to be reported and analysed.

5.2 Response rate and basic information

5.2.1 Response rate

For the questionnaire survey, the researcher has identified 61 building contractors from the Housing Authority approved contractors list. Among them, 8 building contractors agreed to participate in this research. 143 copies of questionnaires were emailed to the construction managers working in these contractors. 57 responses were received. The response rate is 39.86 percent.

For the consultants, we have identified 180 design consultant firms from the company list provided by the Hong Kong Institute of Architects. 70 firms were randomly selected to contact. Among them, 10 firms agreed to participate in the research. 70 questionnaires are emailed to the respondents and 23 responses were received. The response rate is 32.86%.

Parties	No. of Questionnaires sent	No. of Questionnaires received	Response rate
Construction managers	143	57	39.86
Consultants	70	23	32.86

Table 7: Response rate of questionnaire survey

The response rate is considered as satisfactory, which exceed the expected response rate of 30%. The researcher believes that the telephone calls before sending the questionnaires which identify the contact person to assist distribution of questionnaires are effective in improving the response rate. However, the number of questionnaires sent is small when compare with the whole population of construction managers and consultants in Hong Kong. It is due to the fact that the identification of respondents as well as consent to sent questionnaires were ensured prior to any sending of the questionnaires.

5.2.2 Number of valid questionnaires for study

In the section of methodology, the researcher has noted that, in order to avoid the problem of semantic difference on the meaning of red-tape, it is necessary to disregard those respondents who consider red tape as a positive attributes to the organization. Among the collected questionnaires, 5 responses from the group of construction managers and 3 responses from the group of consultants regarded red tape as a positive attribute to the organization, so these responses are considered as invalid and are disregarded. For the group of construction managers, the portion of valid questionnaires for study is 91.22 percent. For the group of consultants, the portion of valid questionnaires for study is 90.63 percent.

5.2.3 Basic information of the respondents

Age of the respondents

For the group of construction manager, 45% of them are aged between 31-40 years old, 38% of them are aged 41-50 years old and 17 % of them are 51 years old or above.

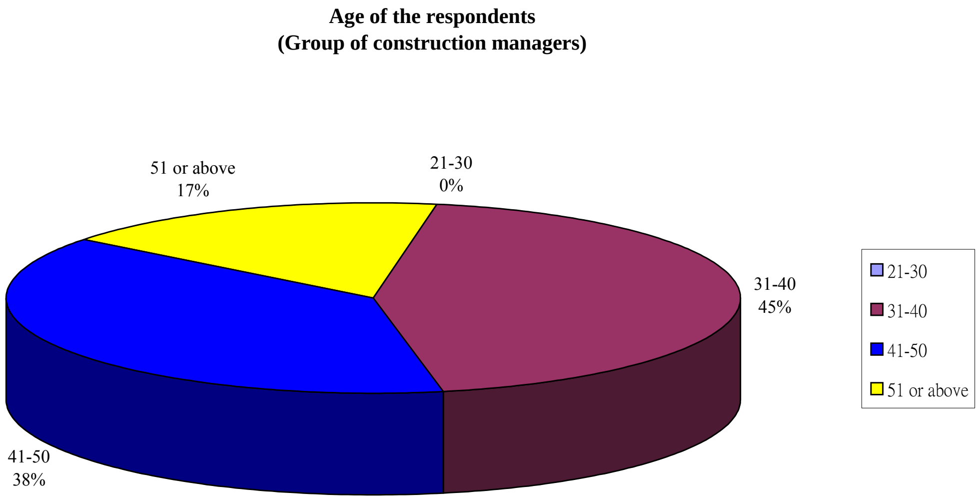


Figure 3

For the group of consultants, 35% of them are aged between 21-30 years old, 45% of them are aged between 31-40 years old and 20% of them are aged between 41-50 years old.

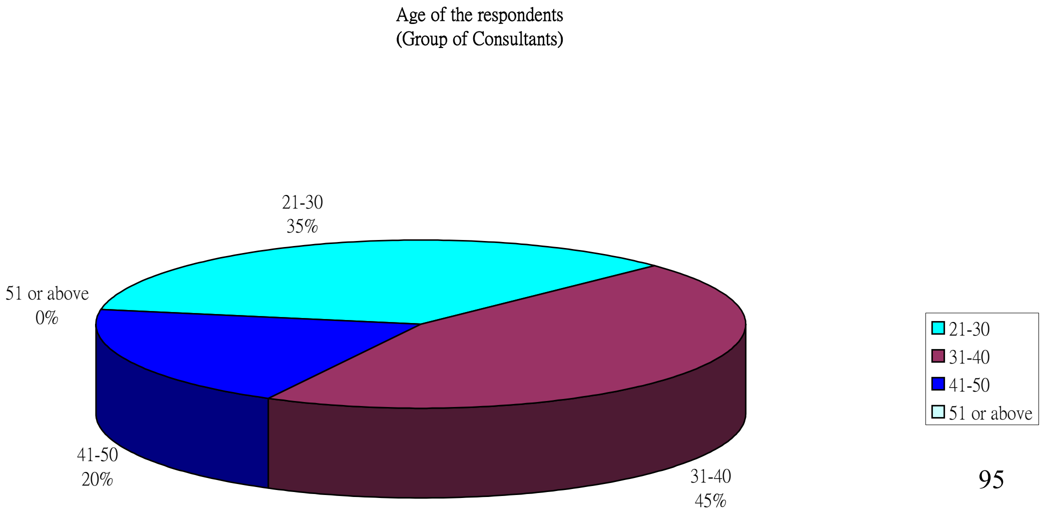


Figure 4

This shown that, in this sample, the age of the respondents from the consultant group is generally lower than that of from the construction manager group.

Years of experience

In the group of construction managers, 27% of them have 6-10 years of experience, 48% of them have 11-15 years of experience, 19% of them have 16-20 years of experience and 6% of them have more than 21 years of experience. The proportions of each group of years of experiences are shown in the following bar-chart:

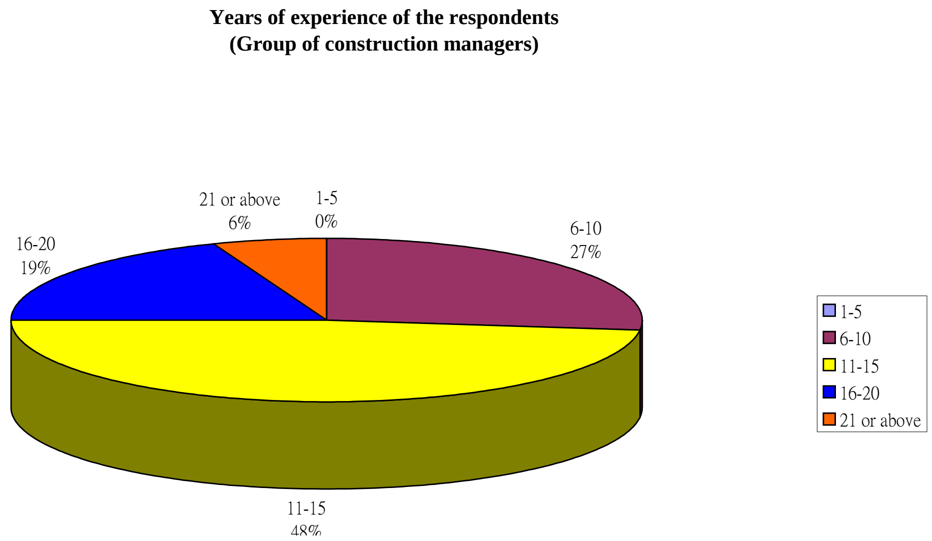


Figure 5

From the consultant group, 40% of them have 1-5 years of experience, 25% of them have 6-10 years of experience, 25% of them have 11-15 years of experience and 10% of them have 16-20 years of experience.

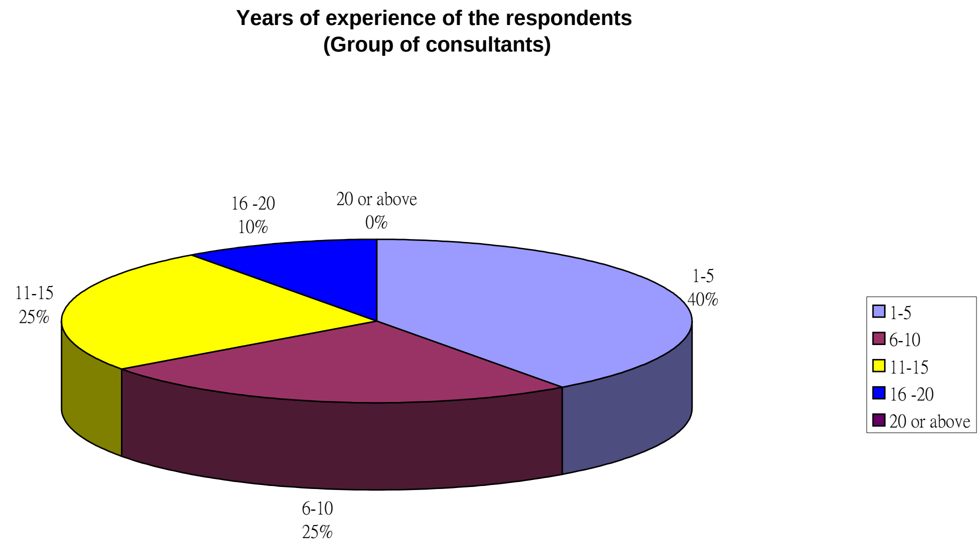


Figure 6

The result shown that, in this research, the respondents from consultants group are generally less experienced than the respondents from the construction managers group.

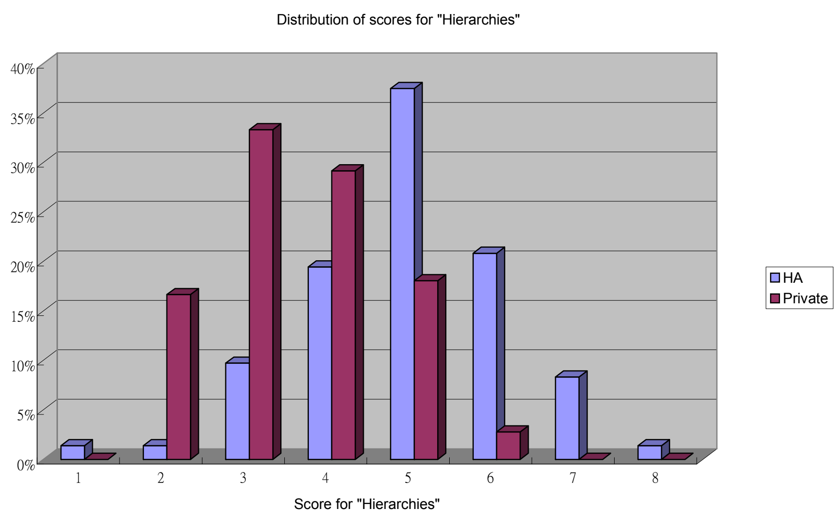
5.3 Result of questionnaire survey and data analysis

5.3.1 Measured degree of bureaucracy

The degree of bureaucracy is measured for both Housing Authority and private residential projects' organizations. The respondents are asked to rate the degree of five bureaucratic features in the two types of project organizations. For each respondent, the scores for five bureaucratic features were summed up to produce a score for the overall degree of bureaucracy in Housing Authority and private residential project's organizations respectively. In the following histograms, the distributions of scores for each bureaucratic feature are demonstrated:

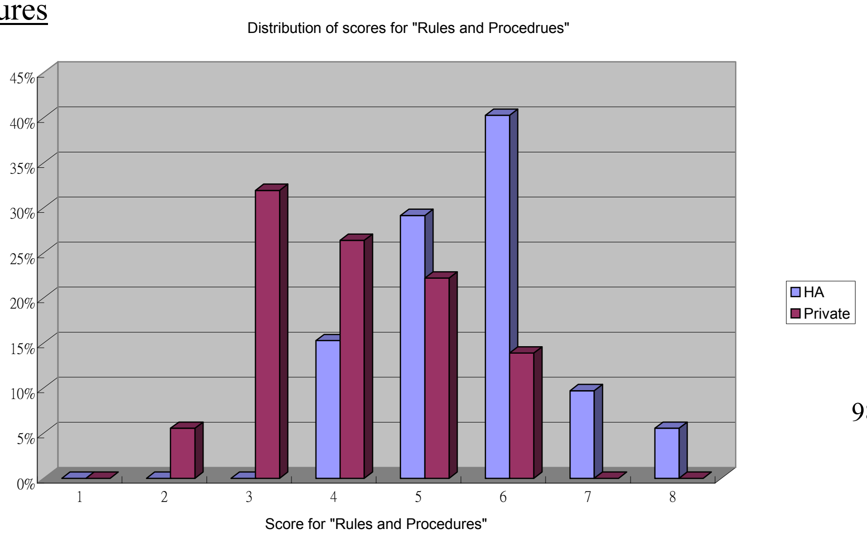
<u>Hierarchies</u>

Figure 7



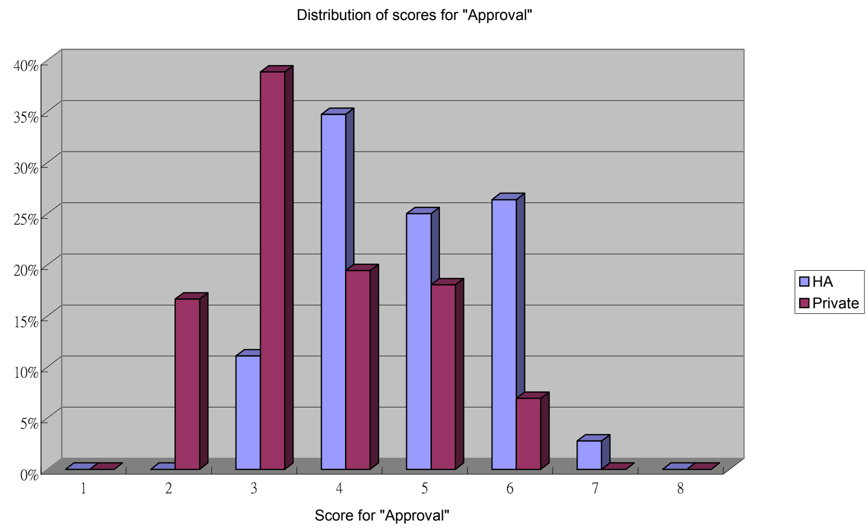
<u>Rules and Procedures</u>

Figure 8



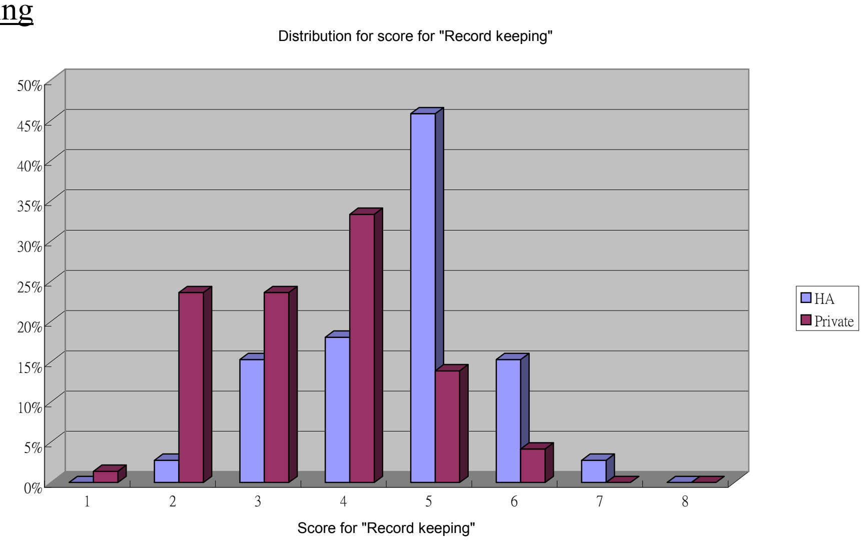
Approval

Figure 9



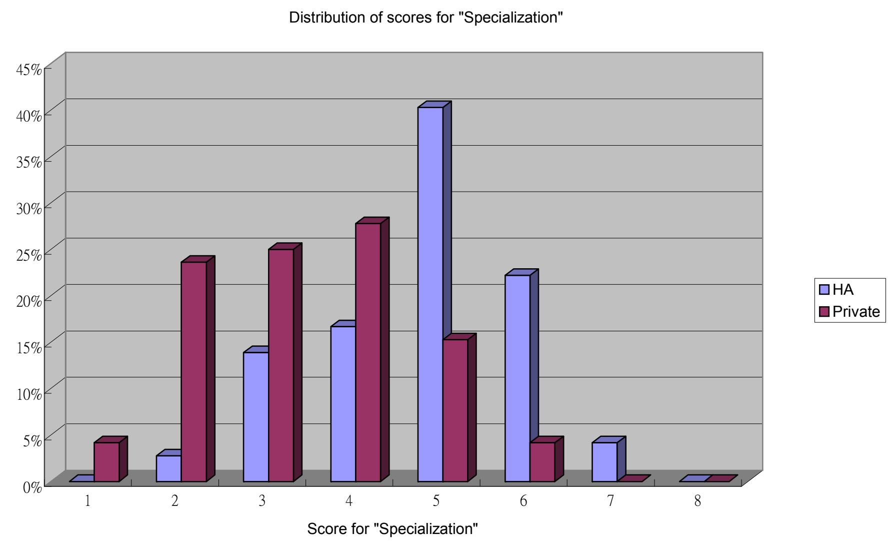
Records keeping

Figure 10



Specialization

Figure 11



The mean scores of the five bureaucratic features in Housing Authority

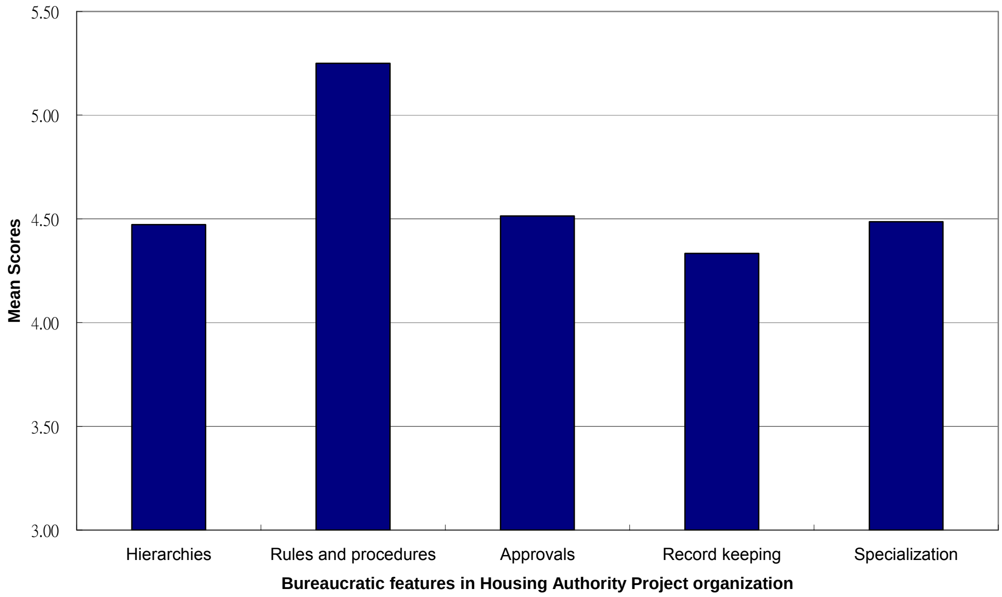


Figure 12

The mean scores of the five bureaucratic features in private project organization

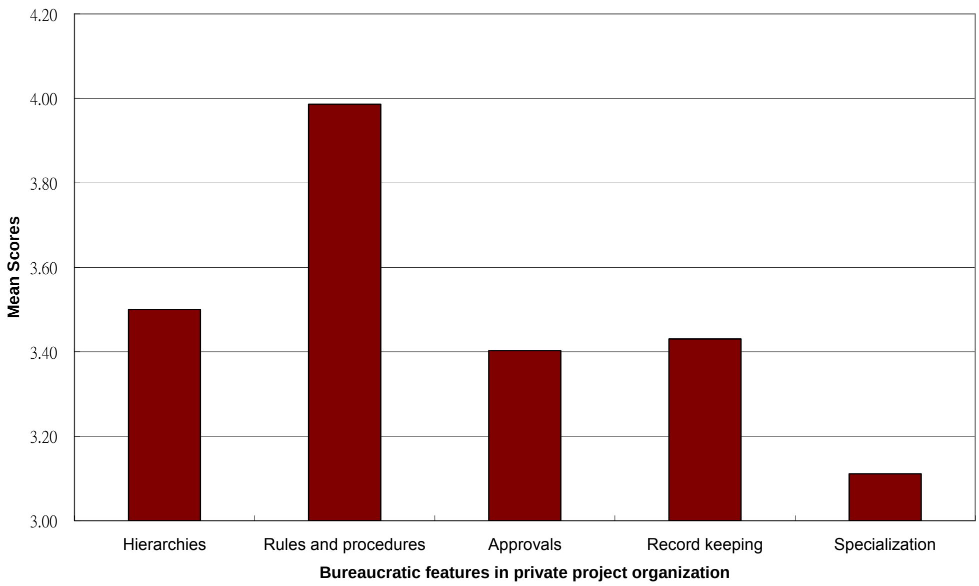


Figure 13

From the above histograms, we can see that in both Housing Authority and private project organizations, the bureaucratic feature of "rule and procedures" has the highest score among all other features. This suggests that in both types of organization, "rules and procedures" can be regarded as the dominant bureaucratic feature.

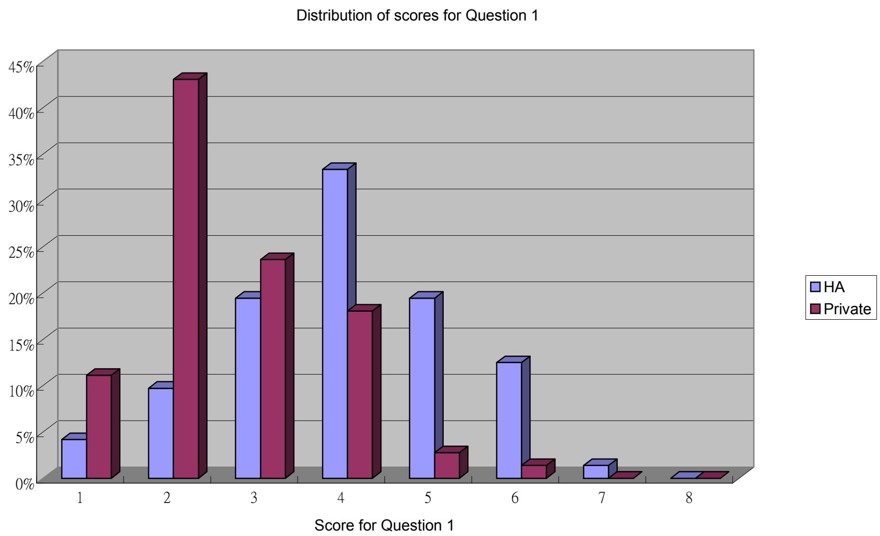
Besides, the score for the bureaucratic features in Housing Authority project organization are generally higher than that in private project organizations. This implies that the degree of bureaucracy in Housing Authority project is higher than that of private project. In fact, statistical test result for the comparing the degree of bureaucracy in Housing Authority and private residential project organizations would be discussed in later section.

5.3.2 Measured degree of red tape

The degree of red tape is measured in both Housing Authority and private project organizations. There are altogether five questions to measure the degree of red tape in both types of organization (For the question, please refer to appendix II). The respondents were asked to give rating to each question for each type of organization. For each respondent, the scores of the questions were summed up to produce the overall scores for the degree of red tape in Housing Authority and private project organizations respectively. In the following histograms, the distributions of scores for each question are demonstrated:

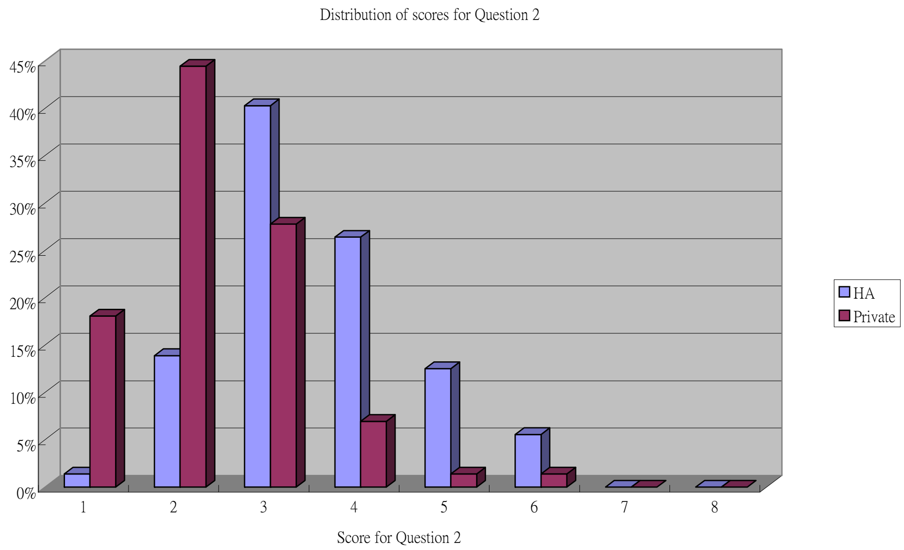
Question 1

Figure 14



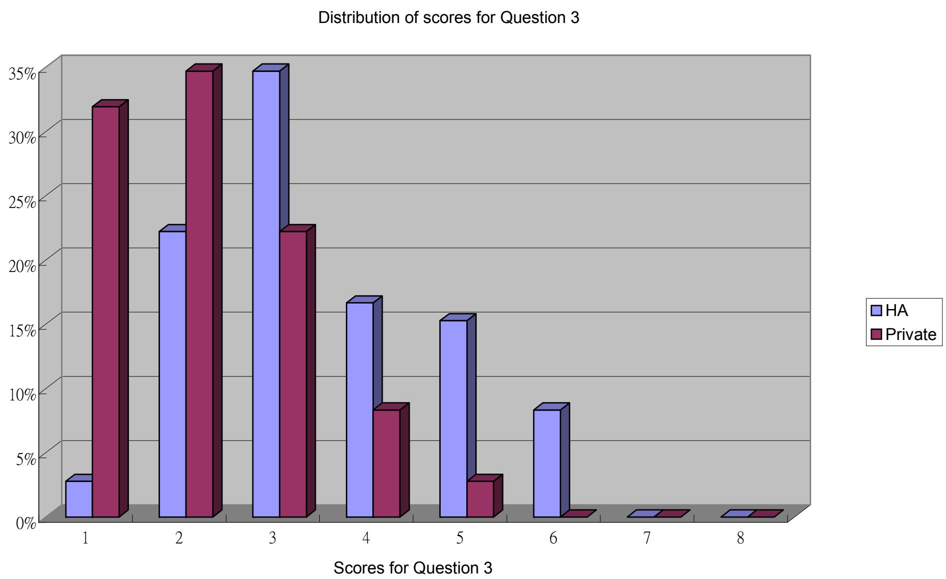
Question 2

Figure 15



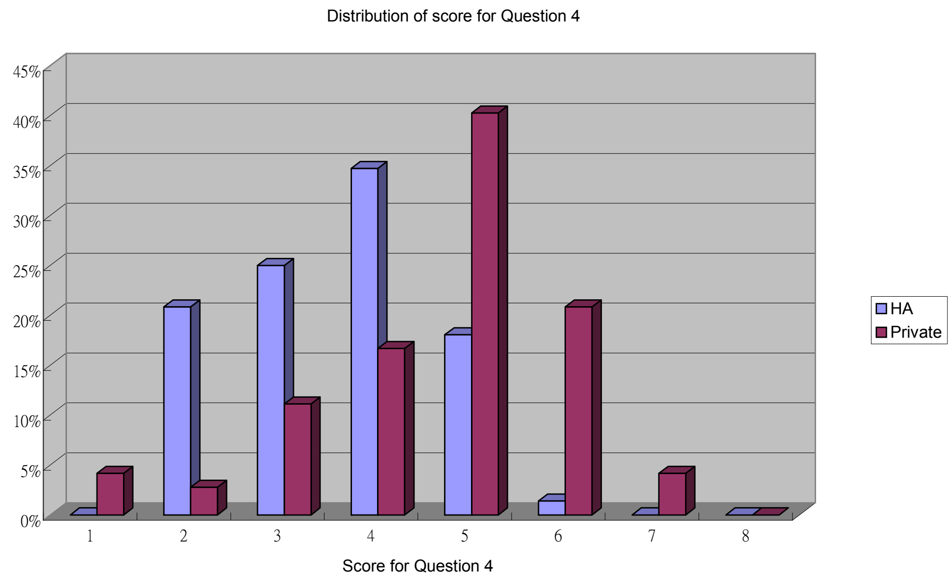
Question 3

Figure 16



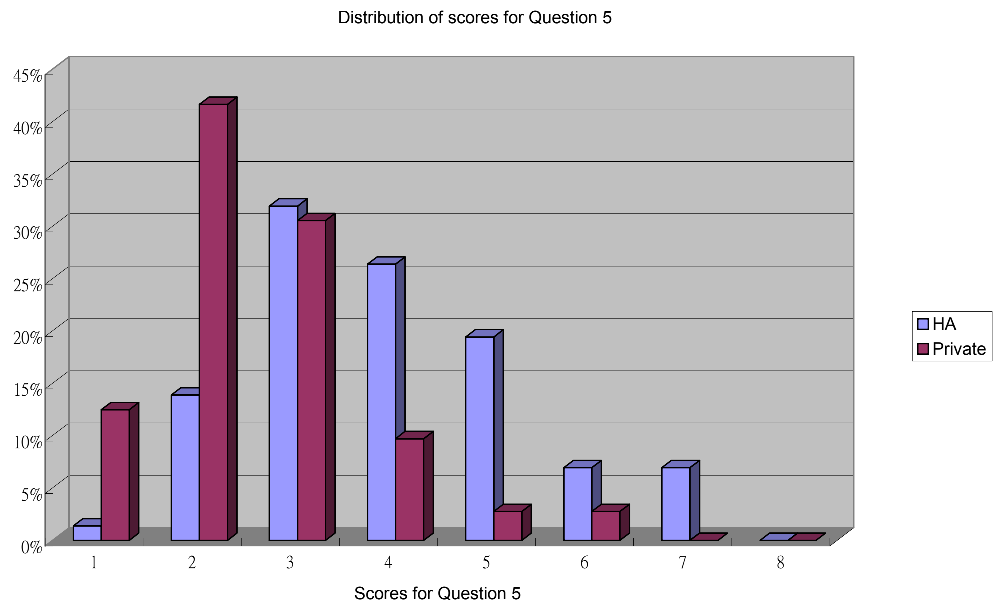
Question 4

Figure 17



Question 5

Figure 18



5.3.3 Result of T-test

<u>Comparison of the degree of bureaucratic features in Housing Authority projects and private residential projects</u>

The paired-sample t-test is carried out to identify the magnitude and direction of the differences among the degrees of the five bureaucratic features and the overall degree of bureaucracy in Housing Authority and private project organizations. The results of the tests are shown in the following:

1. The result of T-Test for comparing the means of the degree of Hierarchies in Housing Authority projects and private residential projects (Table 8)

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Hierarchies (HA projects) - Hierarchies (Private projects)	1.4306	1.54579	.18217	1.0673	1.7938	7.853	71	.000

2. The result of T-Test for comparing the means of the degree of rules and procedures in Housing Authority projects and private residential projects (Table 9)

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Degree of rules and procedures (Housing Authority Projects) - Degree of rules and procedures (Private Projects)	2.5833	1.40171	.16519	1.2539	1.9127	9.585	71	.000

3. The result of T-Test for comparing the means of the degree of approvals in Housing Authority projects and private residential projects (Table 10)

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Approvals (Housing Authority projects) – Approvals (Private projects	1.1528	1.37031	.16149	.8308	1.4748	7.138	71	.000

4. The result of T-Test for comparing the means of the degree of record keepings in Housing Authority projects and private residential projects (Table 11)

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Record keeping (Housing Authority Projects) – Record keeping (Private Projects)	1.1806	1.35653	.15987	.8618	1.4993	7.385	71	.000

5. The result of T-Test for comparing the means of the degree of specialization in Housing Authority projects and private residential projects (Table 12)

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Specialization (Housing Authority Projects) – Specialization (Private Projects)	1.3889	1.31680	.15519	1.0795	1.6983	8.950	71	.000

6. The result of T-Test for comparing the means of the overall degree of bureaucracy in Housing Authority projects and private residential projects (Table 13)

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Degree of bureaucracy in HA projects - Degree of bureaucracy in Private projects	6.6667	4.77670	.56294	5.5442	7.7891	11.843	71	.000

From the above results, we can see that the degrees of all the five bureaucratic features in Housing Authority project organization are significantly higher than that in the private project organization. Also, the Housing Authority project organization has a higher degree of overall bureaucracy. The empirical result shows that the hypothesis of "Housing Authority project organization has a higher degree of bureaucracy than that in private residential project organization" is not rejected. This result conforms to the findings in the literature review that public organizations are generally more bureaucratic than private organizations.

Comparison of the degree of red tape in Housing Authority projects and private residential projects

The paired-sample t-test was also conducted to see whether there is significant difference between the degree of red tape in Housing Authority and private residential projects organization. In the following, the difference of the mean score for Housing Authority and private residential project in each question is analysed first:

1. **The result of T-Test for comparing the mean score of Question 1 to measure red tape (Table 14)**

"Please compare the amount of rules and regulations which serve no practical purpose in public and private housing project organization"

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Question 1 (HA projects) – Question 1 (Private projects)	1.3472	1.31256	.15469	1.0388	1.6557	8.709	71	.000

2. The result of T-Test for comparing the mean score of Question 2 to measure red tape (Table 15)

"There are many rules and procedures have to be cut"

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Question 2 (HA projects) – Question 2 (Private projects)	1.1806	1.30359	.15363	.8742	1.4869	7.689	71	.000

3. The result of T-Test for comparing the mean score of Question 4 to measure red tape (Table 16)

"The client has much little discretion in enforcing the rules and procedures"

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Question 3 (HA projects) – Question 3 (Private projects)	1.2917	1.26087	.14859	.9954	1.5880	8.693	71	.000

4. The result of T-Test for comparing the mean score of Question 4 to measure red tape (Table 17)

"The client takes it very serious for non-compliance of the rules and procedures"

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Question 4 (HA projects) – Question 4 (Private projects)	-1.1111	1.81198	.21354	-1.5369	-.6853	-5.203	71	.000

5. The result of T-Test for comparing the mean score of Question 5 to measure red tape (Table 18)

"The client is more concerned on following the rules and procedures rather than doing an effective job"

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Question 5 (HA projects) – Question 5 (Private projects)	1.0694	1.40749	.16587	.7387	1.4002	6.447	71	.000

From the above results, we can see that among the five questions measuring the degree of red tape, four of them are rated significantly higher for the Housing Authority project organization, while only question 4 is rated significantly higher for private residential projects. This suggests that, in the private project organization, the client takes it more serious for the non-compliance of rules and procedures. This may be due to the fact that the private organizations are usually profit-making bodies, all policies and rules made are mainly for maximizing the efficiency and profit, so they require their staff or project team members to strictly comply with the prescribed rules and policies, otherwise, the objective of maximizing profit may not be achieved. As the result, the private clients are relatively strict in enforcing the rules and procedures during the project process.

6. The result of T-Test for comparing the mean score of the overall degree of red tape (Table 19)

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Housing Authority projects – Private projects	3.8333	3.24146	.38201	3.0716	4.5950	10.035	71	.000

The empirical result suggests that the degree of red tape in Housing Authority project organization is significantly higher than that of private project organization. The empirical result justifies the hypothesis that "the degree of red tape in Housing Authority project organization is higher than that of private residential project organization." is not rejected.

5.3.4 Results of bivariate correlational Analysis

Bivariate correlational analysis is employed to analyze the relationship among each bureaucratic feature and the relationship between each feature with the overall degree of red tape. The results are shown in the following:

The relationship among the bureaucratic features

The following correlation matrixes show the relationships among the bureaucratic features in both Housing Authority and private project organization.

Table 20: The result of correlational analysis among the bureaucratic features in Housing Authority project

		Hierarchies	Rules	Approvals	Record keeping	Specialization
Hierarchies	Pearson Correlation	1	.364(**)	.431(**)	.410(**)	.399(**)
	Sig. (2-tailed)	.	.002	.000	.000	.001
	N	72	72	72	72	72
Rules	Pearson Correlation	.364(**)	1	.334(**)	.036	.034
	Sig. (2-tailed)	.002	.	.004	.77	.76
	N	72	72	72	72	72
Approvals	Pearson Correlation	.431(**)	.334(**)	1	.052	.0501
	Sig. (2-tailed)	.000	.004	.	.68	.69
	N	72	72	72	72	72
Record keeping	Pearson Correlation	.410(**)	.036	.052	1	.515(**)
	Sig. (2-tailed)	.000	.77	.68	.	.000
	N	72	72	72	72	72
Specialization	Pearson Correlation	.399(**)	.034	.0501	.515(**)	1
	Sig. (2-tailed)	.001	.76	.069	.000	.
	N	72	72	72	72	72

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 21: The result of correlational analysis among the bureaucratic features in private project organization

		Hierarchies	Rules	Approval	Record keeping	Specialization
Hierarchies	Pearson Correlation	1	.539(**)	.443(**)	.296(*)	.347(**)
	Sig. (2-tailed)	.	.000	.000	.012	.003
	N	72	72	72	72	72
Rules	Pearson Correlation	.539(**)	1	.532(**)	.0345	.0546
	Sig. (2-tailed)	.000	.	.000	.77	.67
	N	72	72	72	72	72
Approval	Pearson Correlation	.443(**)	.532(**)	1	.029	.041
	Sig. (2-tailed)	.000	.000	.	.85	.71
	N	72	72	72	72	72
Record keeping	Pearson Correlation	.296(*)	.0345	.029	1	.279(*)
	Sig. (2-tailed)	.012	.77	.85	.	.018
	N	72	72	72	72	72
Specialization	Pearson Correlation	.347(**)	.0546	.041	.279(*)	1
	Sig. (2-tailed)	.003	.67	.71	.018	.
	N	72	72	72	72	72

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

From the bivariate correlational analysis, several significant relationships are identified as follow:

Positive relationship between "hierarchies" and other bureaucratic features

This empirical result suggests that the feature of hierarchies is positively correlated with all other bureaucratic features. The increased degree of hierarchies would lead to the increase of the degree of other bureaucratic features. This phenomenon can be explained by the following proposition.

If the number of hierarchies in the organizational structure is increased, that means the organization have become more complex, therefore more rules and procedures have to be enacted, so as to delineate the roles and responsibilities of each party. The increasing layers of hierarchies would inevitably increase the number of approvals for performing a task, because the number of authorities has been increased. In the meantime, more records have to be kept in order to secure trace back the responsibilities of each party. Also, the increased number of hierarchies means that the function of each party will become more specialized in order to achieve the efficiency of the organization.

Positive relationship between "approvals" and "rules and procedures"

The increased number of approvals would lead to an increase of the number of rules and procedures, it is because the increased number of approval is usually resulted from the increased number of authorities, as the result, more rules and procedures would be enacted to govern the operations and delineate their roles, responsibilities and the limits of authority.

Positive relationship between "specialization" and "record keepings"

The increase of the degree of specialization means that each task would be further divided. As a result, the organization has to employ more personnel to perform more divided tasks. In order to ensure the accountability of each party, records have to be kept in order to provide a way to trace back the responsibility when there is any problem happened. Therefore, if the degree of specialization increases, the number of employees in the organization would increase, so more records have to be kept.

<u>The relationship between the bureaucratic features and red tape</u>

The following correlation matrixes show the result of correlational analysis among the five bureaucratic features and red tape in both Housing Authority and private residential project organization:

Table 22: The result of correlational analysis between the bureaucratic features and the degree of red tape in Housing Authority project organization

Variables		Degree of red tape
Hierarchies	Pearson Correlation Sig. (2-tailed) N	-.196 .098 72
Rules and procedures	Pearson Correlation Sig. (2-tailed) N	.876(**) .000 72
Approvals	Pearson Correlation Sig. (2-tailed) N	-.077 .520 72
Record keeping	Pearson Correlation Sig. (2-tailed) N	.084 .481 72
Specialization	Pearson Correlation Sig. (2-tailed) N	.118 .324 72

** Correlation is significant at the 0.01 level (2-tailed).

Table 23: The result of correlational analysis between the bureaucratic features and the degree of red tape in private project organization

Variables		Degree of red tape
Hierarchies	Pearson Correlation Sig. (2-tailed) N	.053 .658 72
Rules and procedures	Pearson Correlation Sig. (2-tailed) N	.744(**) .000 72
Approvals	Pearson Correlation Sig. (2-tailed) N	-.030 .803 72
Record keeping	Pearson Correlation Sig. (2-tailed) N	-.214 .071 72
Specialization	Pearson Correlation Sig. (2-tailed) N	-.036 .766 72

** Correlation is significant at the 0.01 level (2-tailed).

From the correlational matrixes, we can see that among the five bureaucratic features, only "Rules and procedures" is significantly correlated with the red-tape in both types of organizations. This empirical result has shown that if the amount of rules and procedures is large, the chance to have more red tape will be higher. The strong relationship between red tape and "rules and procedures" further supports Bozeman (1993)'s proposition that the emergence of red-tape is originated from rules and procedures.

5.3.5 One Way Analysis of Variance

In the following, on way analysis of variance is carried out to compare the degrees of bureaucracy and red tape perceived by the respondents with:

1. different years of experience
2. different titles

in both types of organization.

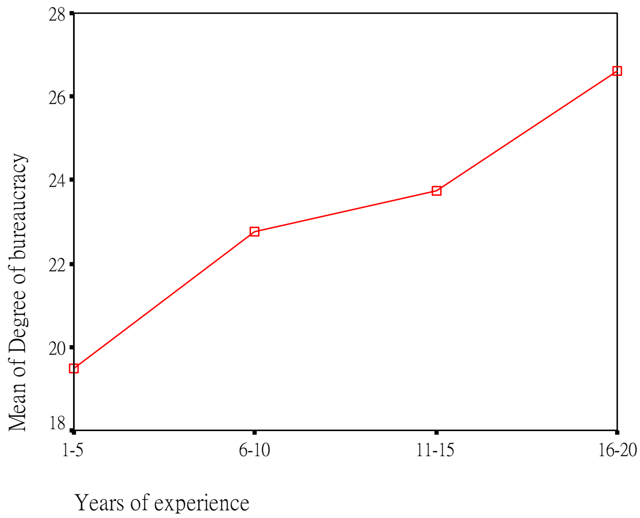
<u>Comparison of the degrees of bureaucracy perceived by respondents with different years of experience</u>

i) Housing Authority projects organization

Table 24: The results of ANOVA comparing degree of bureaucracy among different years of experience in Housing Authority project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	317.118	3	105.706	7.276	.000
Within Groups	944.360	68	14.529		
Total	1261.478	71			

Means Plots of degrees of bureaucracy among different years of experience in Housing Authority project organizations (Figure 19)

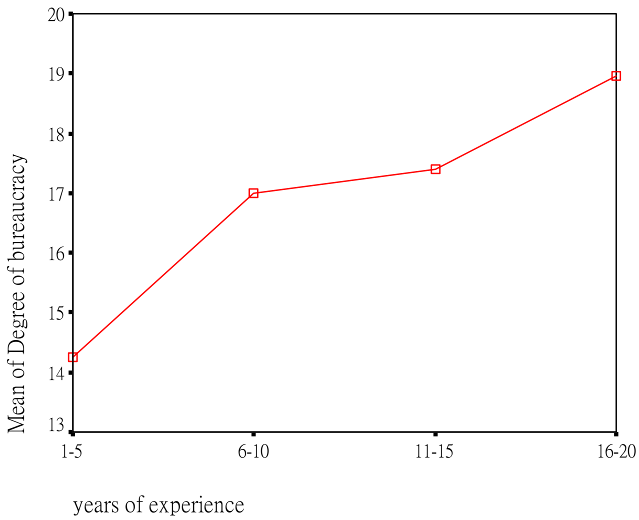


ii) Private residential project organization

Table 25: The results of ANOVA comparing degree of bureaucracy among different years of experience in private project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	131.826	3	43.942	6.194	.001
Within Groups	461.131	68	7.094		
Total	592.957	71			

Means Plots of degrees of bureaucracy among different years of experience in private project organization (Figure 20)



The empirical results above suggest that the respondent's perceptions on the degree of bureaucracy vary with their years of experience. The respondents with more experience in the industry can perceive a higher degree of bureaucracy in the project organization. This may be due to the reason that the more experienced respondents can have a better understanding on the operation and structure of project organization, so that they can have a deeper understanding on what is bureaucracy, therefore, they can perceive a higher degree of bureaucracy in the project organization.

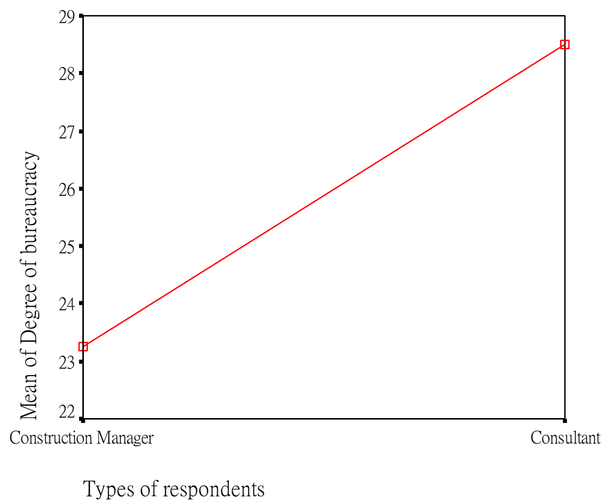
Comparison of the degrees of bureaucracy in the two types of project organization among the groups of consultants and construction managers

i) Housing Authority projects organization

Table 26: The results of ANOVA comparing degree of bureaucracy among the groups of consultants and construction managers in Housing Authority project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	398.125	1	398.125	23.927	.000
Within Groups	1164.750	70	16.639		
Total	1562.875	71			

Means Plots of the degrees of bureaucracy among the groups of consultants and construction managers in Housing Authority project organization (Figure 21)

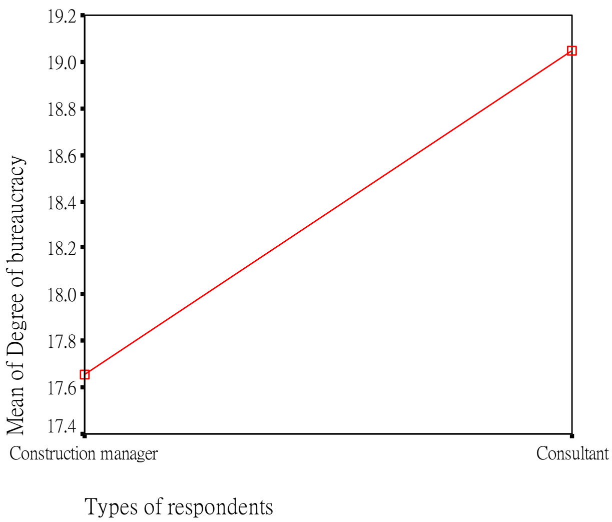


ii) Private residential project organization

Table 27: The results of ANOVA comparing degree of bureaucracy among the groups of consultants and construction managers in private project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	28.156	1	28.156	1.444	.234
Within Groups	1364.719	70	19.496		
Total	1392.875	71			

Means Plots of the degrees of bureaucracy among the groups of consultants and construction managers in private project organization (Figure 22)



The empirical result shows that the consultants, in general, can perceive a higher degree of bureaucracy than construction managers. This can be explained by the reason that, the consultants are generally have a closer contact with the clients, thus, they are more familiar with the client's organizational structure. As a result, they can perceive a higher degree of bureaucracy in the organizations.

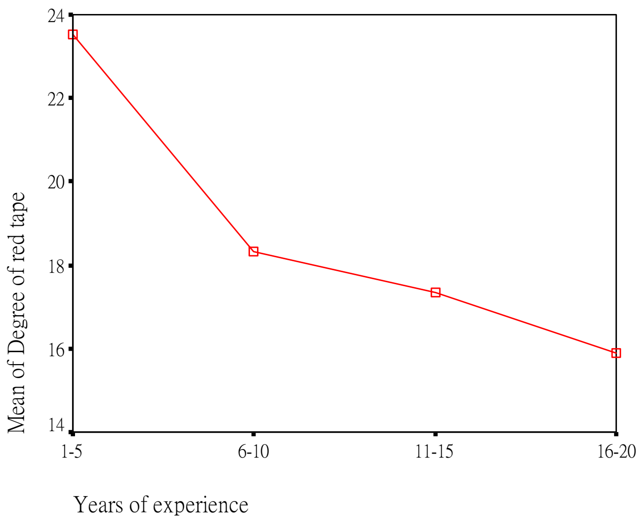
<u>Comparison of the degrees of red tape perceived by respondents with different years of experience</u>

i) Housing Authority projects organization

Table 28: The results of ANOVA comparing degree of red tape among different years of experience in Housing Authority project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	439.083	3	146.361	11.350	.000
Within Groups	876.903	68	12.896		
Total	1315.986	71			

Means Plots of degrees of red tape among different years of experience in Housing Authority project organization (Figure 23)

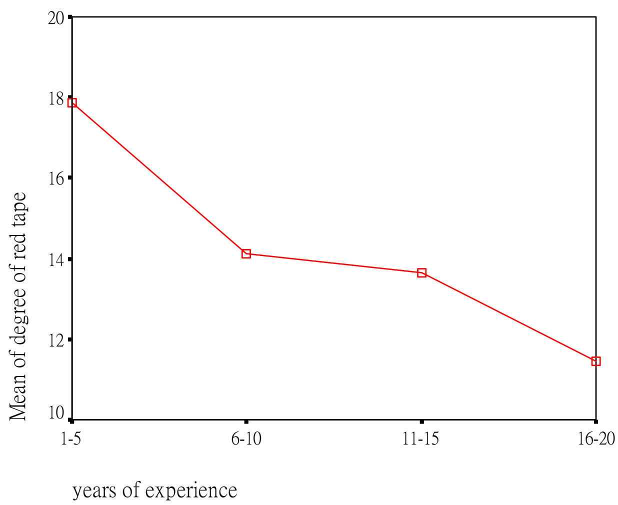


iii) Private residential projects organization

Table 29: The results of ANOVA comparing degree of red tape among different years of experience in private project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	224.346	3	74.782	10.702	.000
Within Groups	475.154	68	6.988		
Total	699.500	71			

Means Plots of the degrees of red tape among different years of experience in private project organization (Figure 24)



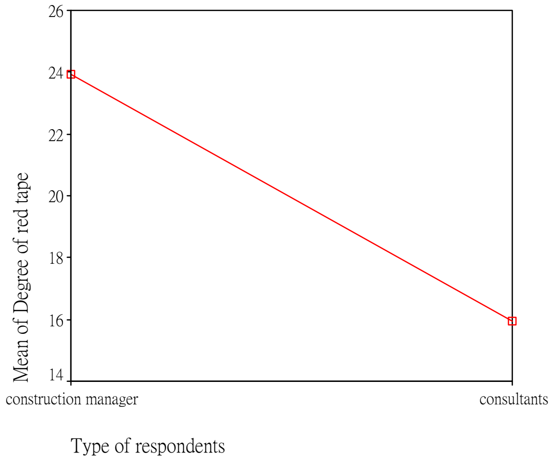
<u>Comparison of the degrees of red tape perceived by groups of consultants and construction managers.</u>

i) Housing Authority projects organization

Table 30: The results of ANOVA comparing degree of red tape among groups of consultants and construction managers in Housing Authority project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	926.223	1	926.223	194.248	.000
Within Groups	333.777	70	4.768		
Total	1260.000	71			

Means Plots of degrees of red tape among the groups of consultants and construction managers in Housing Authority project organization (Figure 25)

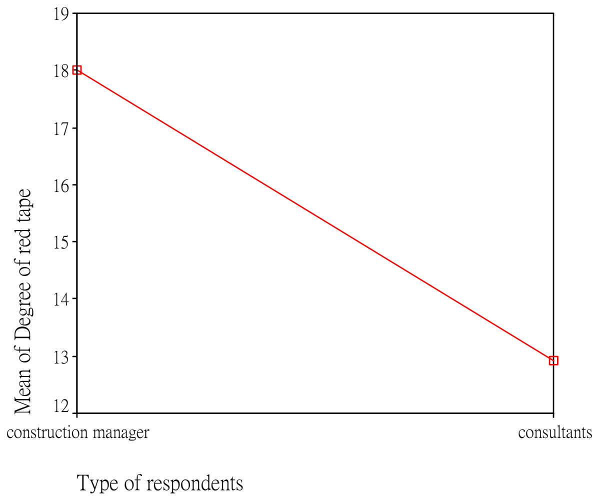


ii) Private residential projects organization

Table 31: The results of ANOVA comparing degree of red tape among groups of consultants and construction managers in private project organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	372.308	1	372.308	97.356	.000
Within Groups	267.692	70	3.824		
Total	640.000	71			

Means Plots of degrees of red tape among the groups of consultants and construction managers in private project organization (Figure 26)



The results above show an opposite phenomenon to the degree of bureaucracy. The respondents with more experiences and closer linkage to the client's organization would perceive a lesser degree of red tape. This may be due to their better understanding about the project organization's operation and structure, therefore, they can realize the actual functions of the rules and procedures, and therefore, they will not regard some "apparently non-functioning rules and procedures" as "red tape" so easily. Some parties simply do not understand or familiar with their actual functions and purpose are more likely to regard these rules and procedures as "red tape". As a result, the respondents who can well understand the rules and procedures are less likely to refer them as "red tape".

5.4 Result of Case Study

In this part, the researcher compares the degrees of bureaucracy between Housing Authority and private residential project organization by studying the project procedural documents collected from the two organizations. The case study is adopted as an objective approach to cross-validate the result from the questionnaire survey.

The procedural documents collected from the Housing Authority and HongKong Land Properties are the “Master Process manual” and “Procedural Guide for Tender process” respectively. These documents delineated all rules and procedures that the parties have to comply with. In the “Master Process manual” from the Housing Authority, all the seven work stages from the feasibility study to construction stage are covered, while the “Project Procedural Guideline for Tender Process” from HongKong Land only covers the tender stage. Therefore, the comparison will be made with regard to the tender stage only. That means, the researcher would compare the “Project Procedural Guideline for Tender Process” from Hong Kong Land Properties with the tender section of “Master Process manual” from the Housing Authority.

For measuring the degree of bureaucracy in the two organizations, the researcher has counted the number of rules, procedures, approvals and record keepings delineated in the project procedural documents. For the feature of hierarchies, its degree is measured by counting the number of hierarchies in the organizational chart of both project organizations.

Furthermore, the researcher has mapped the roles of the parties delineated by each rule or procedure. For the three types of role, their frequencies delineated by the two sets of rules and procedure has been counted and compared.

In the following, the measured degree of bureaucratic features and the mapping of role of each party are demonstrated.

5.4.1 The structures of Housing Authority and Hong Kong Land's residential projects organization.

Figure 27 **Organization Chart of Housing Authority Projects**

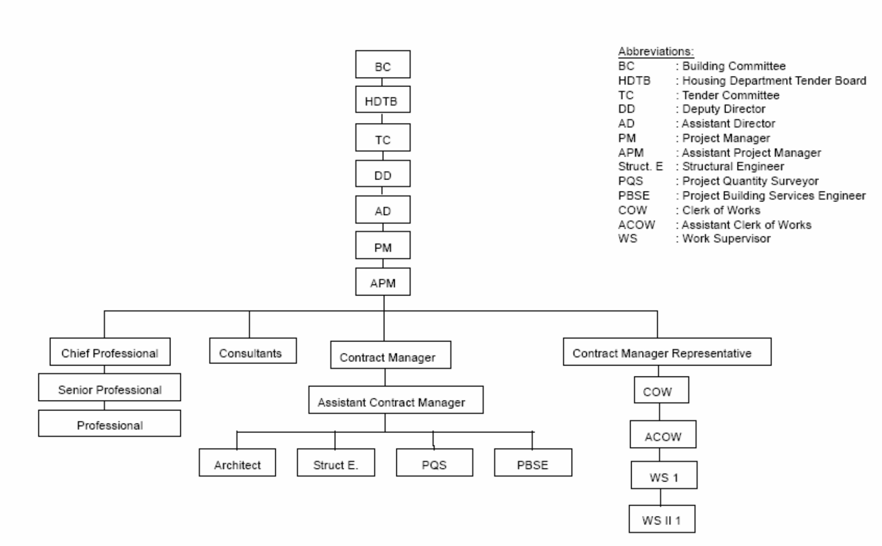
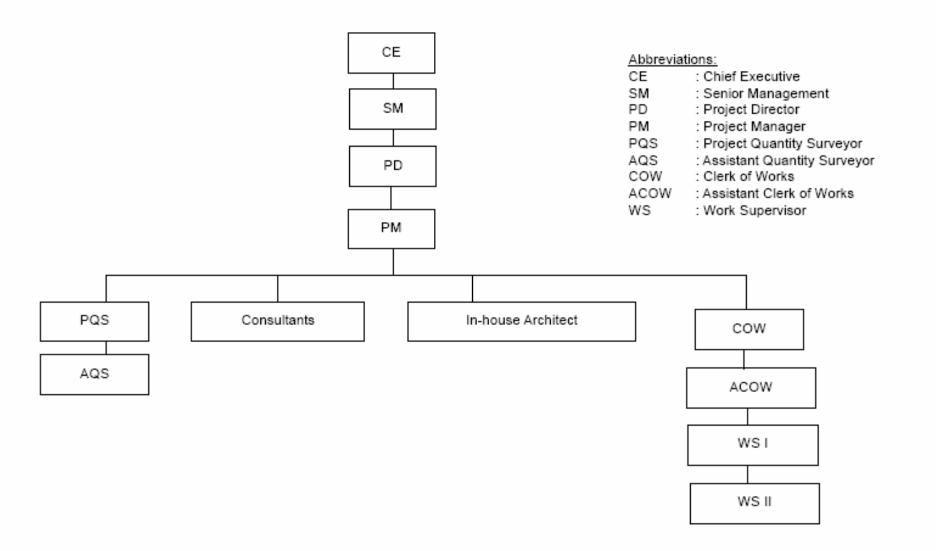
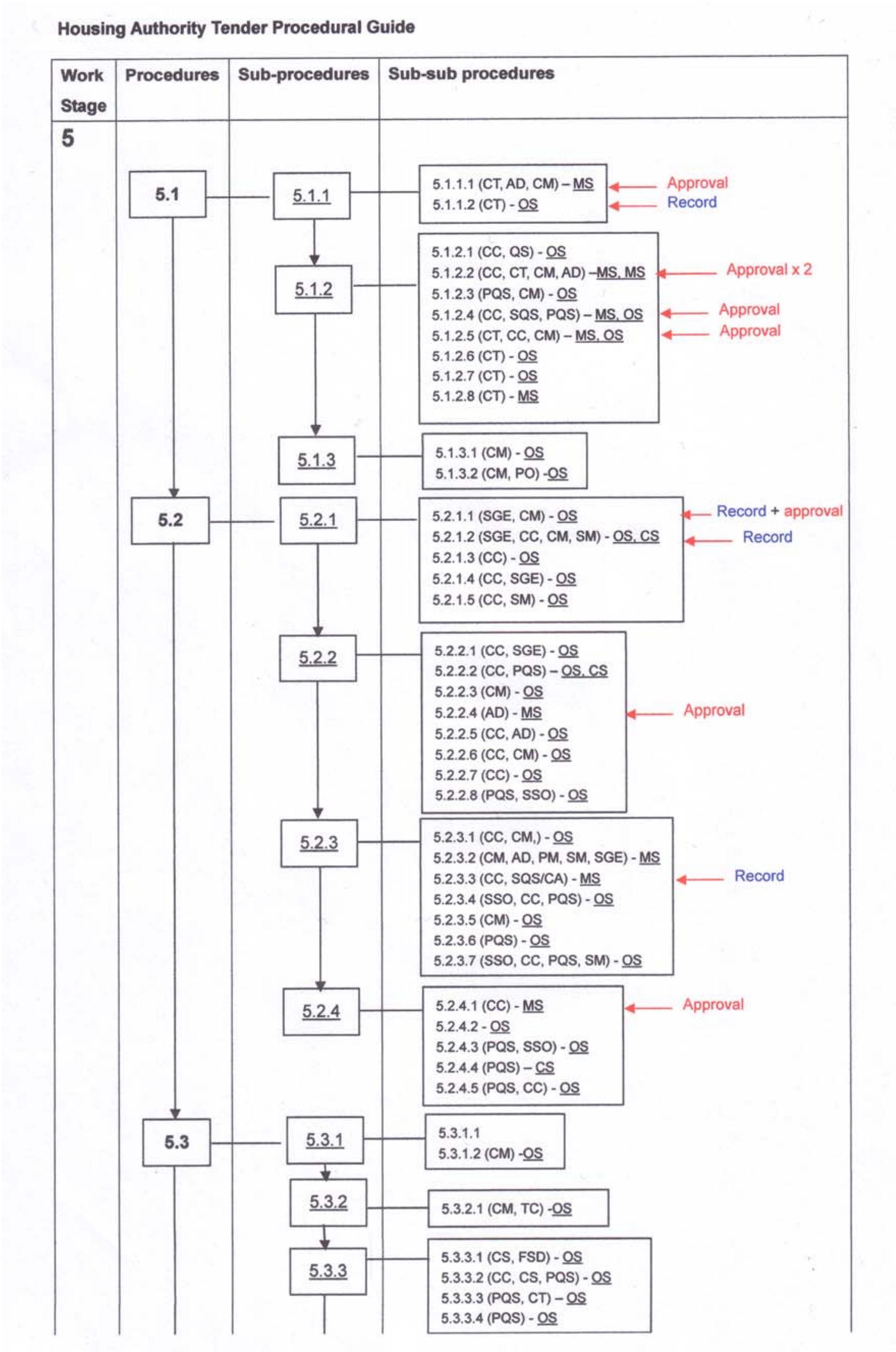


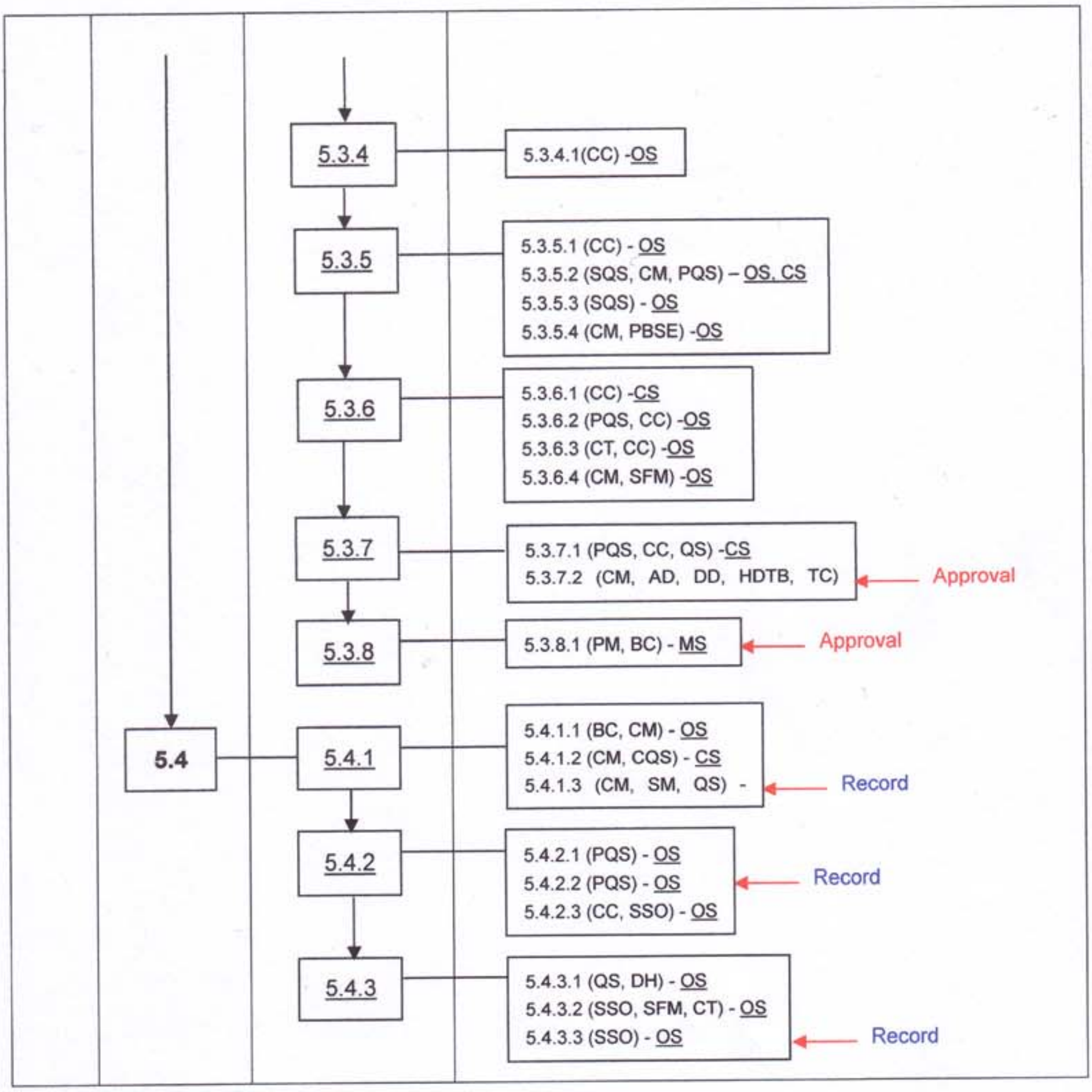
Figure 28 **Organization Chart of HK Land Residential Development Projects**



5.4.2 Project procedural documents from Housing Authority and HongKong Land Ltd.

Figure 29





( ) : Parties involved, for the exposition of abbreviations, please refer to appendix I

___ : Roles of the parties delineated by the rules/procedures

MS: Managing System

CS: Control System

OS: Operating System

Number of the bureaucratic features

Total no. of hierarchies	:	8
Total no. of rules and procedures	:	65
Total no. of approvals	:	9
Total no. of record keepings	:	7
Total no. of parties involved	:	123

Number of roles of the parties delineated by the rules and procedures

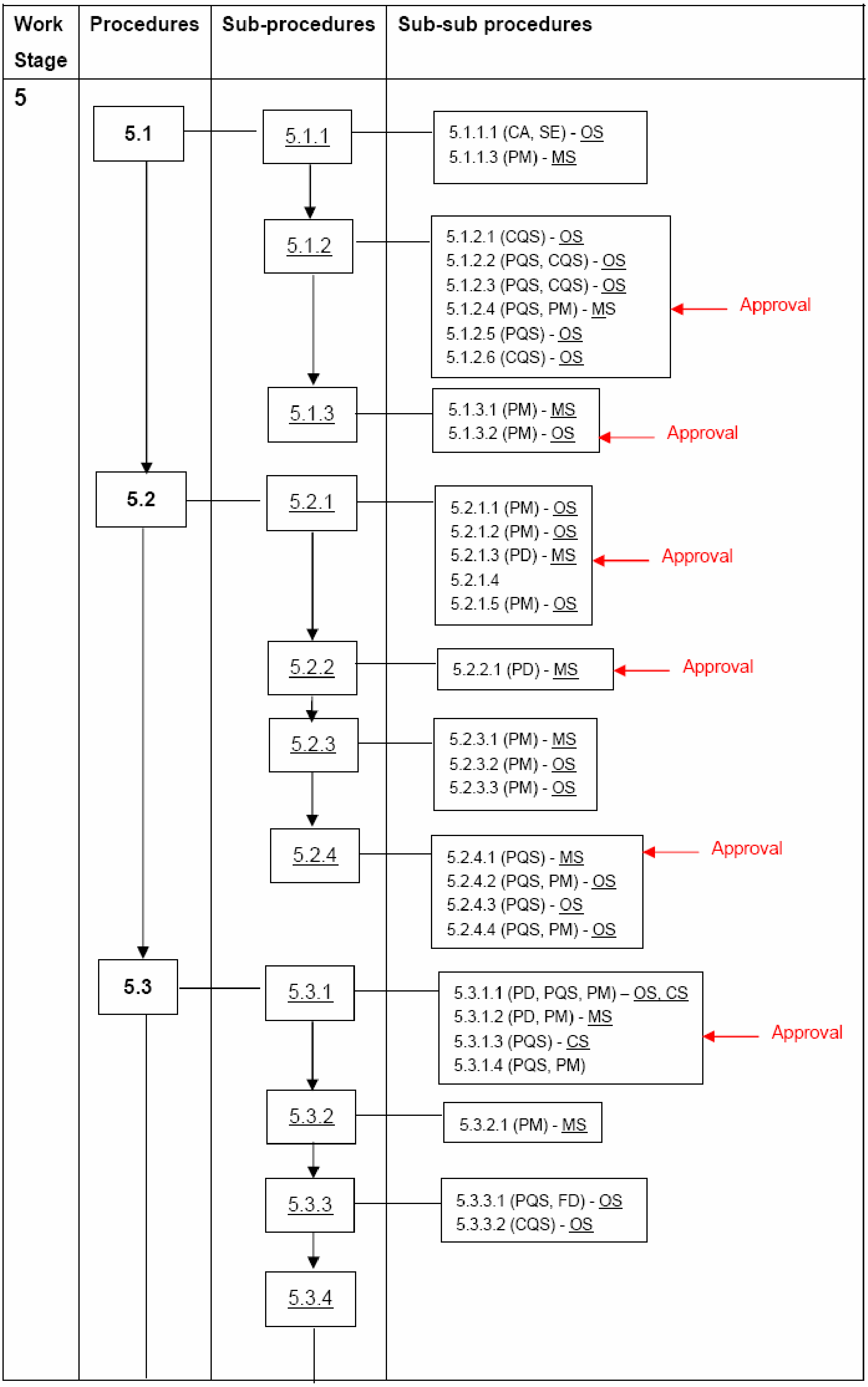
Managing System : 12

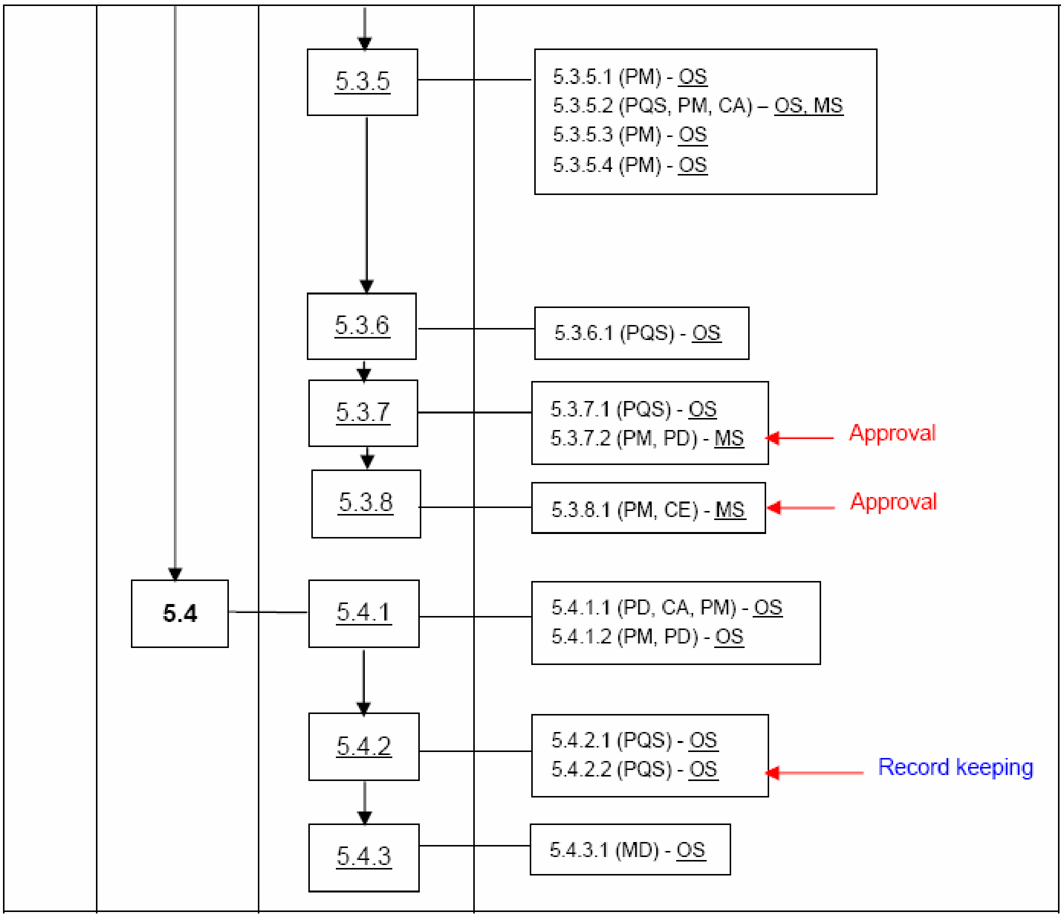
Control System : 8

Operating System : 50

Figure 30

Hong Kong Land Tender procedural guide





( ) : Parties involved, for the exposition of abbreviations, please refer to appendix I

___ : Roles of the parties delineated by the rules/procedures

MS: Managing System

CS: Control System

OS: Operating System

Number of the bureaucratic features

Total no. of hierarchies	:	5
Total no. of rules and procedures	:	40
Total no. of approvals	:	7
Total no. of record keeping s	:	1
Total no. of parties involved	:	58

Number of roles of the parties delineated by the rules and procedures

Managing System : 12

Control System : 2

Operating System : 29

5.4.3 Comparison of the rules and procedures in the project organization of Housing Authority and HongKong Land Ltd. during tender stage

Figure 31

Work Stage	Procedures	Sub-procedures	Sub-sub procedures (HA)	Sub-sub procedures (HKL)
5	5.1	5.1.1	5.1.1.1 (Approval) 5.1.1.2 (Record keeping)	5.1.1.1 5.1.1.2
		5.1.2	5.1.2.1 5.1.2.2 (Approval x2) 5.1.2.3 5.1.2.4 (Approval) 5.1.2.5 (Approval) 5.1.2.6 5.1.2.7 5.1.2.8	5.1.2.1 5.1.2.2 5.1.2.3 5.1.2.4 (Approval) 5.1.2.5 5.1.2.6
		5.1.3	5.1.3.1 5.1.3.2	5.1.3.1 5.1.3.2 (Approval)
	5.2	5.2.1	5.2.1.1 (Record + Approval) 5.2.1.2 (Record) 5.2.1.3 5.2.1.4 5.2.1.5	5.2.1.1 5.2.1.2 5.2.1.3 (Approval) 5.2.1.4 5.2.1.5
		5.2.2	5.2.2.1 5.2.2.2 5.2.2.3 5.2.2.4 (Approval) 5.2.2.5 5.2.2.6 5.2.2.7 5.2.2.8	5.2.2.1 (Approval)
		5.2.3	5.2.3.1 5.2.3.2 5.2.3.3 (Record keeping) 5.2.3.4 5.2.3.5 5.2.3.6 5.2.3.7	5.2.3.1 5.2.3.2 5.2.3.3
		5.2.4	5.2.4.1 5.2.4.2 5.2.4.3 5.2.4.4 5.2.4.5	5.2.4.1 (Approval) 5.2.4.2 5.2.4.3 5.2.4.4

Work Stage	Procedures	Sub-procedures	Sub-sub procedures (HA)	Sub-sub procedures (HKL)
	5.3	5.3.1	5.3.1.1 5.3.1.2	5.3.1.1
		5.3.2	5.3.2.1	5.3.2.1
		5.3.3	5.3.3.1 5.3.3.2 5.3.3.3 5.3.3.4	5.3.3.1 5.3.3.2
		5.3.4	5.3.4.1	
		5.3.5	5.3.5.1 5.3.5.2 5.3.5.3 5.3.5.4	5.3.5.1 5.3.5.2 5.3.5.3 5.3.5.4
		5.3.6	5.3.6.1 5.3.6.2 5.3.6.3 5.3.6.4	5.3.6.1
		5.3.7	5.3.7.1 5.3.7.2 (Approval)	5.3.7.1 5.3.7.2 (Approval)
		5.3.8	5.3.8.1 (Approval)	5.3.8.1 (Approval)
	5.4	5.4.1	5.4.1.1 5.4.1.2 5.4.1.3 (Record)	5.4.1.1 5.4.1.2
		5.4.2	5.4.2.1 5.4.2.2 (Record keeping) 5.4.2.3	5.4.2.1 5.4.2.2 (Record keeping)
		5.4.3	5.4.3.1 5.4.3.2 5.4.3.3 (Record keeping)	5.4.3.1

5.4 Comparison of the bureaucratic features in Housing Authority and Hong Kong Land's project organization

Table 32

Bureaucratic features	Housing Authority	Hong Kong Land
Hierarchies	8	5
Rules and procedures	65	40
Approvals	9	7
Records keeping	7	1
Specialization	123	58

From the above comparison, we can see that the degree of each bureaucratic feature identified from the Housing Authority project organization is higher than that in the private residential project. This can validate the result from the questionnaire and show that the hypothesis that "public project organization has a higher degree of bureaucracy than in private project organization" is not rejected.

5.5 Comparison of the number of rules and procedures delineating the three types of roles

Table 33

Roles	Housing Authority	HongKong Land's Properties
Managing System	12	12
Control System	8	2
Operating System	50	29

By comparing the frequencies of the three types of roles delineated in two sets of documents, it is found that the Housing Authority has set up more rules and procedure to delineate both control and operating systems. This shown that the Housing Authority has a greater demand on the effectiveness of control and operating systems in the organization, it can be inferred that the existence of red tape is due to the Housing Authority's too much emphasize on the control and operating systems.

Chapter Six Conclusion

6.1 Summary of analysis

6.1.1 Comparison of the degrees of bureaucracy in public and private organizations

From the analysis of the results of questionnaire and case study, it is found that the Housing Authority project organization has a higher degree of all five bureaucratic features and overall bureaucracy than the private project organization. This conforms to the previous literature findings and justifies the hypothesis 1 “Public project organizations are more bureaucratic than private project organization” is not rejected. This provides a further support to the long debated argument of “organizations in public sector are generally more bureaucratic than that in the private sector”

In this research, bivariate correlational analysis and one way analysis of covariance(ANOVA) were carried out to interpret the results. The findings include the followings:

(1) <u>The more experienced respondents generally perceive a higher degree of bureaucracy in the project organizations:</u>

The researcher divided the respondents into several groups with different years of experience and compared their rated degree of bureaucracy with each other, it was found that the respondents with more experience in the construction industry can relatively perceive a higher degree of bureaucracy in the project organization than those who have less experience. This can be explained by the reason that the respondents with more experience in both public and private projects are more familiar with the project organizational structure and its operations, therefore they can perceive a higher degree of bureaucracy in an organization.

(2) The group of consultants generally perceive a higher degree of bureaucracy in the project organizations

It was found that the mean scores for the degree of bureaucracy assessed by the group of consultants are significantly higher than that assessed by the group of construction managers. Similar to the reason above, the consultants generally have a closer and more frequent contact with the clients, so that they can have a better understanding about the client's organizational structure, as a result, they can perceive a higher degree of bureaucracy.

(3) Positive relationship between the bureaucratic feature, "hierarchies" and other bureaucratic features:

This result suggests that the feature of hierarchies is positively interrelated with all other bureaucratic features. The existence of hierarchies would lead to the existence of other bureaucratic features. If the number of hierarchies in the organizational structure is increased, that means the organization have become more complex, therefore more rules and procedures have to be enacted, so as to delineate the roles and responsibilities of each party. The increasing layers of hierarchies would inevitably increase the number of approvals for performing a task, because the number of authorities has been increased. In the meantime, more records have to be kept in order to secure trace back the responsibilities of each party. Also, the increased number of hierarchies means that the function of each party will become more specialized in order to achieve the efficiency of the organization.

(4) Positive relationship between approvals and rules

The increased number of approvals would lead to an increase of the number of rules, it is because the increased number of approval is usually resulted from the increased number of authorities, as the result, more rules and procedures would be enacted to delineate their roles, responsibilities and the limits of authority.

(5) Positive relationship between specialization and record keepings

When the degree of specialization increases, more staff has to be employed to perform the highly sub-divided task. Also, there is a need to ensure the accountability of each party by keeping their working records so as to provide a way to trace back their responsibilities once there is any problem. Therefore, if the number of staff in an organization is increased, the number of record keepings will also be increased.

6.1.2 Comparison of the degrees of red tape in public and private organizations

With regard to the degree of red tape, it is found that the Housing Authority project organization has a higher degree of red tape than the private project organization. The empirical result justifies that the hypothesis 2 “Public project organizations have a higher degree of red tape than private project organizations” is not rejected.

A bivariate correlational analysis was conducted to investigate the relationship between each bureaucratic feature and red tape. It was found that only “rules and procedures” is significantly correlated with the degree of red tape. This shows that if the amount of “Rules and procedures” in an organization is increased, then the chance to have more red tape would be higher. This phenomenon can be explained by Bozeman (2000)’s proposition that “Red tape is one of the bureaupatholgies”. According to Bozeman (2000), “Rules and procedures” is an essential element to govern the operation of an organization, however, if there are excessive rules and procedures which do not serve any functional purpose, they will become red tape. The existence of red tape means that the efficiency of an organization is affected as resources are wasted to comply with these rules and procedures.

Among the five questions measuring the degree of red tape, it was found that there is one question which was rated higher for the private project organization. The question was “Whether the client takes it very serious for the non-compliance for the rules and procedures”. The result shows that, in private organization, the compliance of rules and procedures is more important than in the public organization. It may be due to the reason that private organizations are usually profit-making bodies, all policies and rules made are mainly for maximizing the efficiency and profit, so the clients require all project participants and stakeholders to strictly comply with the prescribed rules and policies, otherwise, the objective of maximizing profit may be failed.

ANOVA was conducted to compare the degree of red tape perceived by the respondents with different years of experience and titles, it is found that the result is different from the situation of bureaucracy, the more experienced respondents and the group of consultants generally perceive a lower degree of red tape in the project organizations. This can be explained by the reason that the respondents with more experience and the group of consultants can have a better understanding about the project organization and the rules and procedures, so they can have a better interpretation to distinguish what are “functioning rules and procedures” and what are red tape. Those people who cannot understand the organization and the rules and procedures clearly can easily regard the functioning rules and procedures as red tape

6.1.3 Result of case study

From the results of case study, it is found that the degrees of the five bureaucratic features in Housing Authority project organization are all higher than that in the private project organization. This validated the result of the questionnaire survey which justifies that the hypothesis of "public project organizations are more bureaucratic than private project organizations" is not rejected. On the other hand, the researcher has mapped and analysed the roles of the parties delineated by each rule and procedure. It was found that, when compare with private project organization, the extra amount of rules and procedures found in the Housing Authority project organization are mainly used to delineate the roles of the parties in the context of control and operating systems. This result suggests that the Housing Authority has put too much emphasize on the control and operating system of the project organization which result in more rules and procedures. Therefore, it can be inferred that the existence of red tape is mainly due to reason that the Housing Authority's has put too much emphasize on the control and operating system.

6.2 Discussion of the findings

It is concluded from both literature and empirical findings in this research, the public project organizations have a relatively higher degree of bureaucracy and red tape than private project organization. As proposed by Boyne (2002), a certain degree of bureaucracy is necessary for public organizations to safeguard their operations and ensure their accountability. The public organizations are public funded and should be under control by the public, therefore, it is a must to make sure the government officials are accountable to the public. As a result, the public organizations have a higher degree of bureaucracy than private organization is a normal phenomenon and in fact, it is necessary for them to be more bureaucratic.

Although the rigid and formal bureaucratized organizational structure is ill-suited to deal with the change of environment, Mullins (1996) noted that only those organizations subjected to a turbulent environment are needed to be flexible in order to adapt to the change of environment. As the government is subjected to a relatively stable environment, therefore the rigid bureaucratic feature would not affect too much on its adaptation to the environment.

According to the contingency theory proposed by Lawrence & Lorsch (1970), an organization should be designed according to different specific circumstances. Within a turbulent environment, like Hong Kong which has a very speculative real estate market, the private project organizations are needed to be designed as more organic as proposed by Burns & Stalker (1961) in order to cope with the rapid change of environment. Therefore, the private project organizations generally have a lower degree of bureaucracy. When comparing with private project organizations, the public project organizations are subjected to less dynamic environment, as their developments are not affected by the economic market, thus they can maintain their highly bureaucratized structure so as to achieve the maximum efficiency. Therefore, the degree of bureaucracy in public project organization should be higher.

However, if the degree of bureaucracy is in excess, dysfunctions would be evolved. The dysfunctions are generally regarded as “bureaupathology” which have been discussed comprehensively in the literature review. As proposed by Thompson (1961), if the organization emphasizes too much on the bureaucracy, the personnel would become more cautious about their job and hence, personal insecurity will be resulted. The result of personal insecurity is the enactment of more rules and procedures in order to reduce their insecurity. From the standpoint of the organization, such behaviour is pathological and detrimental. Besides, Merton (1940) also noted that once the rules become an end of itself, inefficiency would be resulted.

One of the most criticized bureaucratic pathologies is red tape. It has been discussed comprehensively in the literature review. As red tape is one of the organizational dysfunctions caused by bureaucracy, thus, when the organization has a high degree of bureaucracy, the chance for it to have red tape would be higher. This argument has been justified by the empirical finding which justifies that public project organization has a higher degree of red tape than private project organization. Red tape is the rules and procedures which require people to comply with, while serving no functional purpose. The compliance of such rules and procedures requires the commitment of resources in terms of time, human and money. Therefore, the existence of red tape is absolutely wasting the resources. Now, the empirical finding reveals that the Housing Authority project organizations really has a higher degree of red tape, thus, there is definitely a need to remove it. It is very important for the government to have a better use of the available resources, especially for the time of suffering serious budget deficit. The relevant authorities should carefully review the existing system of rules and procedures governing the projects, so as to improve the efficiency.

The analysis of the result suggests that the perceived degrees of bureaucracy and red-tape are varied among different years of experience and type of organization. This provides a very important indication to the future research that, when measuring the degrees of bureaucracy and red tape by asking the respondents to give rating, their experiences and organizations should be taken into consideration and these two variables should better be fixed as constant.

6.3 Limitations of the study

In fact, there are some limitations in this research and these limitations are worth to discuss. Firstly, although the results are quite significant and strongly support the two hypotheses, the type of project studied in this research is only the residential type. Therefore, the result can hardly be generalized to other types of projects. Secondly, due to the reason of not many parties are interested to participate in the research, the sample of this research is relatively small when compare to the whole population in the industry. Therefore, the representiveness of the results is affected. It is definitely a problem as the conclusion should not be derived from a small group of people.

Thirdly, the correlation studies do not provide irrefutable evidence of causation. It only shows the relationship about these two concepts only. Also, any reverse causality cannot be derived. Further laboratory or longitudinal studies are needed to firmly establish casual direction. Efforts should be done to rule out the common method effect. Therefore, software such as LISREL should be used. It allows for an assessment of directionality in cross-sectional data; however other models may also explain the data equally as well. Longitudinal designs that can better test for causality are still needed. Finally, due to the time limit and not many private developers would like to disclose their internal documents and information for the study, there is only one case study which is considered not enough.

6.4 Recommendation for future research

Several aspects which are not emphasized in the present study are worth for further investigation.

Firstly, in this research, the researcher has only focused on the comparing the different degree of bureaucracy and red tape in Housing Authority and private project organization. It is not enough to assert that public project organizations are more bureaucratic and have more red tape, as Housing Authority is only one of the public organizations. There are actually quite a number of other public organizations responsible for managing the public sector projects, for example, Architectural Services Department, Civil Engineering Department and Drainage Services Department. We cannot rule out the possibility that Housing Authority has an especially high degree of bureaucracy and red tape. Therefore, it is better to do comparison between other public organizations and the private section. On the other hand, it is also worth to compare the Housing Authority with other public organizations to see whether Housing Authority has an especially high degree of bureaucracy and red tape.

Secondly, if the public organizations are really more bureaucratic and possess higher degree of red tape, the reason behind should be further investigated. A commonly cited rationale for higher levels of red tape and bureaucracy in public sector is that public organizations are subject to greater level of accountability than private firms and face greater operating constraints that are manifested in the form of rules and red tape. However, Bozeman and Scott (1996) pointed out that, though accountability is the widely alleged source of red tape, it is not frequently examined in research. Therefore, a further study in this area is needed. In this research, the reasons of the higher degree of bureaucracy and red tape in public organization are only covered in the literature review, it is worth to study the reason behind empirically, because the rationale behind can provide an insight for us to know why there are more bureaucracy and red tape and the necessity for their existence in public organizations. Qualitative research can be done to investigate the attitude of government officials on the high degree of bureaucracy and red tape.

Thirdly, important normative issues in red tape are not addressed here, we have noted that red tape is not necessarily “bad”, if it affords protection for employees or customers or clients, if it provides greater accountability, or if it simply is a reflection of greater care. The methods and data we employ here do not permit us insight into whether the red tape in our sample organizations is “good” or “bad”. Future research should examine carefully the motives and consequences of red tape. Finally, the impacts of excess bureaucracy and red tape should be studied. If there are no empirical studies to illustrate the negative impact of bureaucracy and red tape on the project, it can by no reasons convince the authority to have a review on its system. Actually, the negative impacts of bureaucracy and red tape are available in many previous literatures, however, it is worth to study whether these theoretical propositions can be observed in this industry and whether there are any other shortcomings which are not identified.

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Appendix I

Abbreviations for the tender procedural guides of Housing Authority and HongKong Land Limited

ABBREVIATIONS

A

ACABAS	Advisory Committee on the Appearance of Bridges and Associated Structures
ACM	Assistant Contract Manager
AD	Assistant Director
AD(D)	Assistant Director (Development)
ADTL	Assistant Design Team Leader
AGC	Attorney General's Chambers
APB	Approved Project Budget
APDB	Approved Project Development Budget
APM	Assistant Project Manager
Arch S D	Architectural Services Department

B

BC	Building Committee
BCT Paper	Building Committee Tender Paper
BQ	Bills of Quantities
BS	Building Services

C

C of P	Commissioner of Police
CA	Chief Architect
CA/D&S	Chief Architect/Design & Standards
CBS	Capital Budgeting System
CBSE	Chief Building Services Engineer
CBSE/1	Chief Building Services Engineer/1,
CC	Contract Coordinator
CCE	Chief Civil Engineer
CE	Civil Engineer; Chief Engineer
CED	Civil Engineering Department
CGE	Chief Geotechnical Engineer
CHM/R	Chief Housing Manager/Redevelopment
CITA	Construction Industry Training Authority
CL	Control List
CLP	China Light & Power Co. Ltd.
CM	Contract Manager
CM/M	Chief Manager/Management
CMR	Contract Manager's Representative
Comm. Secy.	Committee's Secretary
CPC	Commercial Properties Committee
CPLD	Committee on Planning and Land Development

CPO	Chief Planning Officer
CPRC	Contractor Performance Review Committee
CQS	Chief Quantity Surveyor
CQS/CS	Chief Quantity Surveyor/Construction Services
CSE	Chief Structural Engineer
CT	Contract Team

D

DBSI	Site Administration and Inspection Manual (Building Services Engineering)
DCMB	Development & Construction Branch Management Board
DCMBI	DCMB Instruction
DD(C)	Deputy Director (Construction)
DDRP	Detailed Design Review Panel
DFS, D of FS	Director of Fire Services
DHH	Divisional Heads
DIPCON	District Planning Conference
DLO	District Lands Office
DMGHS	District Monitoring Group on Housing Sites
DMO	District Maintenance Office
D of H	Director of Housing
DPO	District Planning Officer
D & S; D+S	Design and Standards
DSD	Drainage Services Department
DTC	Design Team Co-ordinator
DTL	Design Team Leader

E

EAR	Engineering Assessment Report
EAS	Environmental Assessment Study
ED	Education Department
EIA	Environmental Impact Assessment
EMSD	Electrical and Mechanical Services Department
EOT	Extension of Time
EPD	Environment Protection Department
ETWB	Environment, Transport and Works Bureau

F

FEHD	Food and Environmental Hygiene Department
F.I.	Financial Instruction
Finance SD	Finance Sub-Division
FM/RM	Finance Manager / Risk Management
FSD	Fire Services Department
FTNS	Fixed Telecommunication Network System

G

GCC	General Conditions of Contract
GE	Geotechnical Engineer; Government Engineer

GEO	Geotechnical Engineering Office
GPA	Agreement on Government Procurement
GR	General Registry

H

HA	Housing Authority
HAD	Home Affairs Department
HAFIS	Housing Accounting & Financial Information System
HD	Housing Department
HDCPRC (NW)	Housing Department Contractors Performance Review Committee (New Works)
HDESRC	Housing Department Engineering Specialists Review Committee
HDTB	Housing Department Tender Board
HM	Housing Management, Housing Manager
HKCA	Hong Kong Construction Association
HKE	Hong Kong Electric Co.
HOS	Home Ownership Scheme
HOUSCOM	Housing Committee
HPAT	Housing Project Action Team
HPRC	Housing Programme Review Committee
HyD	Highways Department

I

IFAS	Integrated Financial Accounting System
ISO	International Standard Organisation

K

KCR	Kowloon Canton Railway
KCRC	Kowloon Canton Railway Corporation

L

LCSD	Leisure and Cultural Services Department
LD	Liquidated damages

M

MB	Management Branch
MC	Main Contractor
MP	Maintenance Period
MTR	Mass Transit Railway
MTRC	Mass Transit Railway Corporation

N

NSC	Nominated Sub-Contract(or)
NW	New Works

O

ODP	Outlined Development Plan
OZP	Outlined Zoning Plan

P

PA	Project Architect
PASS	Performance Assessment Scoring System
PBSE	Project Building Services Engineer
PBSI	Project Building Services Inspector
PCE	Project Civil Engineer
PCFB	Pneumoconosis Compensation Fund Board
PCL	Provisional Long Term Control List
PCOW	Project Clerk of Works
PDB	Project Development Budget
PDRC	Project Design Review Committee
PES	Project Estate Surveyor
PGE	Project Geotechnical Engineer
PHDP	Public Housing Development Programme
PHMG	Public Housing Monitoring Group
PIOW	Project Inspector of Works
PLA	Project Landscape Architect
PLS	Project Land Surveyor
PM	Project Manager
PMS	Project Management System
PNAP	Practice Notes for Authorised Persons
PPRM	Project Progress Review Meeting
PSE	Project Structural Engineer
PO	Planning Officer
PQS	Project Quantity Surveyor
PRE	Project Resident Engineer
PSPS	Private Sector Participation Scheme
PTAS	Preferential Tender Award System
PTL	Planning Team Leader
PTO	Preferential Tender Opportunity
PTO(BS)/C1	Principal Technical Officer (Building Services)/C1
PWP	Public Works Programme

Q

QCE	Quality Control Engineer
QMS	Quality Management System
QRC	Quarterly Review Committee
QS/Est 1	Quantity Surveyor/Estimate 1
QS/SB	Quantity Surveyor/Standard Block

S

SA	Senior Architect

SAO	Senior Administrative Officer
SBSC	Specialist Building Services Contractor
SBSE	Senior Building Services Engineer
SBSI	Senior Building Services Inspector
SCC	Special Conditions of Contract
SCOW	Senior Clerk of Works
SES/R	Senior Estate Surveyor/Rental
SFM/BMS(2)	Senior Finance Manager / Business Management and Support (2)
SGA	Strategic Growth Area
SGE	Senior Geotechnical Engineer
SGE/TS	Senior Geotechnical Engineer / Technical Secretary
SHM/Agency	Senior Housing Manager / Agency
SHM/CP	Senior Housing Manager / Commercial Properties
SHM/R&D	Senior Housing Manager / Research & Design
SI	Site Instruction
SLA	Senior Landscape Architect
SLS	Senior Land Surveyor
SM1/CLM	Senior Manager 1 / Counterparty List Management
SM/QM	Senior Manager / Quality Management
SMS/TS	Senior Maintenance Surveyor/Technical Services
SOM	Senior Official Meetings
SP	Senior Professional
SPC	Strategic Planning Committee
SPO	Senior Planning Officer
SQS/CA	Senior Quantity Surveyor / Contract Advisor
SQS/CO	Senior Quantity Surveyor / Contracts Officer
SQS/SB	Senior Quantity Surveyor / Standard Bills
SRB	Site Record Book
SSO/CO	Senior Survey Officer / Clerical Officer
SSPC	Site Selection and Programming Committee
SWD	Social Welfare Department

T

TC	Tender Committee
TD	Transport Department
TDD	Territory Development Department
TDS	Territory Development Strategy
Tech Secy	Technical Secretary
TIA	Traffic Impact Assessment
TIR	Technical Information Room
TIU	Technical Improvement Unit
T & M	Tenders and Marketing
TS	Technical Secretary; Temporary structure(s); Technical Services
TSU	Technical Secretariat Unit

W

WO	Works Order
WSD	Water Supplies Department

Appendix II
Research Questionnaire

The University of Hong Kong
Department of Real Estate and Construction
Final Year Dissertation

Research Questionnaire

Dear Sir/Madam,

Questionnaire to measure the degree of bureaucracy and red tape in project organizations

I am currently a final year undergraduate of the Department of Real Estate and Construction at the University of Hong Kong. I am now working with my dissertation, titled ***"Bureaucracy and red tape in construction project organizations – a comparison between public and private projects"***.

As there is a general lack of study concerning this aspect, I would like to conduct a comprehensive survey which investigates the degree of bureaucracy and red tape in public and private project organizations. A comparison of the degree of bureaucracy and red tape would be made between these two types of organization.

As a lot of data from construction manager in Hong Kong are needed, I need your kindly help in completing the questionnaire. ***All of the information provided is highly confidential and is used solely for academic purposes. Your name is not required***. It is estimated that the questionnaire will only take you about 5 minutes to complete. Your help is definitely a vital contribution to the success of my research.

Here, I would like to express my greatest gratitude to thank for your kind attention and help. In the following, there are 13 short survey questions. Please fill in with reference to the guidelines below. Should you have any enquires on it, please contact me by email:h0110133@hkusua.hku.hk or call me at 98073292. Thank you for your kind attention.

Best wishes,

Frank

Frank Lam

Research objective:

To investigate the degrees of bureaucracy and red tape in the project organization of private and public projects. Respondents are requested to fill in the questionnaire according to their experience of participation in the private and public project organization.

Guidelines:

1. Please answer the following questions by underlining the answer

   Example 1:

   In your perception, apple is:

	1	2	3	4	5	6	7	8	
Not delicious	☐	☐	☐	☐	☐	☐	☑	☐	Delicious

   Example 2:

   Do u agree a student should be hard-working?

	1	2	3	4	5	6	7	8	
Strongly agree	☐	☐	☐	☐	☐	☐	☑	☐	Strongly disagree

2. After finishing all the questions, please send the questionnaire to my email address: h0110133@hkusua.hku.hk. Thank you for your help

Questions

Part 1

Basic information

1. Male 63 Female 7

2. Age

21-30	31-40	41-50	51 or above
7	32	24	9

3. Years of experience in the construction industry

1-5	6-10	11-15	16-20	21 or above
8	19	29	12	3

Part 2

This section aimed at compare the degree of bureaucracy in public and private housing projects. The followings are the five identified bureaucratic features in the project organizations, please base on your experience to assess the degree of these features in the project organizations of the public housing projects (Housing Authority projects) and that of the private housing projects:

Bureaucratic features			1	2	3	4	5	6	7	8	
1 Layers of hierarchies	Housing Authority project	Few	1	1	7	14	27	15	6	1	Many
	Private housing project	Few	0	12	24	21	13	2	0	0	Many
2 No. of written rules and regulations	Housing Authority project	Few	0	0	0	11	21	29	7	4	Many
	Private housing project	Few	0	4	23	19	16	19	0	0	Many
3 No. of approvals needed to perform a task	Housing Authority project	Few	0	0	8	25	18	19	2	0	Many
	Private housing project	Few	0	12	28	14	13	5	0	0	Many
4 No. of administrative records in performing a task	Housing Authority project	Few	0	2	11	13	33	11	2	0	Many
	Private housing project	Few	1	17	17	24	10	3	0	0	Many
5 Degree of specialization	Housing Authority project	Few	0	2	19	12	29	16	3	0	Many
	Private housing project	Few	3	17	18	20	11	3	0	0	Many

Part 3

The objective of part 3 is to compare the degree of red tape in the Housing Authority project and private housing projects. The followings are the questions which aim at determining the degree of red tape in the project organizations, please base on your experience to give a rating for each question.

Definition of "red tape":

Red-tape is defined as burdensome administrative rules and procedures that have negative effects on the organization's effectiveness and do not serve any functional purpose.

For example, there are some clauses in the specifications which are not practical or cannot help too much to the projects, but still the contractor has to spend resource to comply with them, then these clauses can be classified as "red tape"

Question 1

According to your perception, excessive rules and procedures which do not serve any constructive function in a project are generally:

positive ☐ negative ☐

According to your experience in Housing Authority projects and private housing projects, please assess the degree of the following statement in both types of projects.

Question 2

Please compare the amount of rules and regulations which serve no practical purpose in public and private housing project organization:

		1	2	3	4	5	6	7	8	
Housing Authority project	Few amount	☐	☐	☐	☐	☐	☐	☐	☐	Large amount
Private housing project	Few amount	☐	☐	☐	☐	☐	☐	☐	☐	Large amount

Question 3

There are many rules and procedures have to be cut:

		1	2	3	4	5	6	7	8	
Housing Authority project	Strongly disagree	☐	☐	☐	☐	☐	☐	☐	☐	Strongly agree
Private housing project	Strongly disagree	☐	☐	☐	☐	☐	☐	☐	☐	Strongly agree

Question 4

The client has much little discretion in enforcing the rules and procedures

		1	2	3	4	5	6	7	8	
Housing Authority project	Strongly disagree	2	16	25	12	11	6	0	0	Strongly agree
Private housing project	Strongly disagree	23	25	16	6	2	0	0	0	Strongly agree

Question 5

The client takes it very serious for non-compliance of the rules and procedures

		1	2	3	4	5	6	7	8	
Housing Authority project	Strongly disagree	0	15	18	25	13	1	0	0	Strongly agree
Private housing project	Strongly disagree	3	2	8	12	29	15	3	0	Strongly agree

Question 6

The client is more concerned on following the rules and procedures rather than doing an effective job

		1	2	3	4	5	6	7	8	
Housing Authority project	Strongly disagree	1	10	23	19	14	5	0	0	Strongly agree
Private housing project	Strongly disagree	9	30	22	7	2	2	0	0	Strongly agree

Appendix III

Housing Authority Tender Procedural Guide

Rules and Procedures in tender stage

5 Tender Stage

5.1 Prepare tender documents

5.1.1 Preparation of Tender Drawing

5.1.1.1 If some works cannot be detailed or drawings cannot be completed for billing, Contract Team decides on the drawing issue program to be specified in the contract and seeks agreement from respective Assistant Director and the Contract Manager. (MS: Directing, approving)

5.1.1.2 Contract Team prepares copy negative of all as-measured drawings, if any, and keeps these unchanged for contract and record purposes (record keeping) (OS: Operating)

5.1.2 Preparation of other tender documents

5.1.2.1 Contract Coordinator completes Project Design information sheet, advises in selection and compilation of appropriate standard BQs and agrees with Quantity Surveyor on items within standard BQs which are to be measured separately or as variations to the standard block. (OS: operating, advising, co-operating)

5.1.2.2 Contract Coordinator finalizes with Contract Team the nature and value of any Prime Cost Sums and/or Provisional Sums to be included in the contract, and identifies the attendance associated with these items, for inclusion in the Project Specification. Agreement is to be sought from Contract Manager (MS: Approving).Where Provisional Items and Provisional Sums are required to be included in the tender, Contract Manager should seek the endorsement of Assistant Director on the extent/scope and amount to be inserted prior to tender. (MS: Approving)

5.1.2.3 Project Quantity Surveyor provides Contract Manager with updated estimate of contract for completing contract particulars. (OS: operating)

5.1.2.4 Contract Coordinator forwards information for compilation of contract particulars and calculation of liquidated damages to Senior Quantity Surveyor for approval (MS: Approving)and passes the completed contract particulars and assessed liquidated damages to Project Quantity Surveyor for incorporation in the tender documents. (OS: operating)

5.1.2.5 Contract Team prepares List of Elements of Works of Safety concern. Contract Coordinator obtains Contract Manager's endorsement to the List (MS: Approving). Contract Team prepares tender document with reference to guideline for preparation of Project Specific Specification for Elements of Works of Safety Concern (OS: operating)

5.1.2.6 Contract Team takes action and follows the procedures in accordance with the implementation of the Pay for Safety Scheme. (OS: operating)

5.1.2.7 Contract Team prepares List of Elements requiring Warranties to be included in the Contract. (OS: operating)

5.1.2.8 Contract Team checks that the provision has been made to allow for the testing of materials and workmanship. (MS: monitoring)

5.1.3 Completion of Tender Arrangement

5.1.3.1 Contract Manager provides the following information to the Project Officers (OS: operating) responsible for the management of the entrustment works:

(a) The intended date for calling for tenders
(b) The current estimated cost of the works in that PWP item
(c) The cost of the administration fee
(d) Anticipated spread of expenditure by financial years
(e) The nature and approximate value of the Housing Authority work to be included in the contract; and
(f) Where appropriate, the area to be occupied by the contractor and the anticipated programme for completion of various sections of the work with particular reference to any problems of access that are likely to arise.

5.1.3.2 Contract Manager confirms with the Project Officer (outside CD) responsible for management of the entrustment works that is financially and administratively in order to tender and arrange for the issue of the Allocation Warrant. (OS: operating)

5.2 Invitation of tender

5.2.1 Before Tender-out date

5.2.1.1 On request from Senior Geotechnical Engineer/Technical Secretary, Contract Manager provides information of contracts to be tendered 6 months before tender-out. (OS: operating)

5.2.1.2 After receiving replies of interested contractors from Senior Geotechnical Engineer/Technical Secretary, Contract Coordinator complies and maintains the tenderer list for Contract Manager. Contract Manager issue letter of invitation to tenderers of the contract, two weeks before the tender-out date, with copies to Senior Geotechnical Engineer/Technical Secretary and Senior Manager. (Record keeping) (OS: operating, CS: Monitoring)

5.2.1.3 For contracts where tenderers are not shortlisted in accordance with the established rules, Contract Coordinator arranges prequalification of tenderers in accordance with the relevant Financial Instruction. (OS: operating)

5.2.1.4 In case the tender-out date is deferred to the next quarter or later, Contract Coordinator informs Senior Geotechnical Engineer/Technical Secretary to include the contract in the next 3-months tender schedule for an updated list of eligible tenderers. (OS: operating)

5.2.1.5 Contract Coordinator forwards tender program to Senior Manager not less than 2 weeks before tender-out date for monitoring the workload of contractors and imposing/uplifting tender restriction as appropriate. (OS: operating)

5.2.2 Tender Notification & Invitation

5.2.2.1 Contract Coordinator provides return to Senior Geotechnical Engineer/Technical Secretary for arrangement of publishing the Tender Notification in the government gazette and local press 6 months before tender-out date. (OS: operating)

5.2.2.2 Contract Coordinator checks and modifies the Notes to Tenderer to suit and pass to Project Quantity Surveyor. (OS: operating, CS: monitoring)

5.2.2.3 40 days or more after gazetting the Tender Notification and about 3 weeks before tender-out date, Contract Manager issues letter of tender invitation to the eligible tenderers of the contract by fax and registered post. (OS: operating)

5.2.2.4 The duration between tender-out and tender-in should be 42 days unless approval from respective Assistant Director (MS: approving) has been obtained to reduce the period the period to 28 days as a special case.

5.2.2.5 If the tender invitation is less than 40 days after gazetting the

Tender Notification or no gazetting of tender notification has previously been made, Contract Coordinator has to arrange with the Comm. Secy. to publish the Invitation to Tender in the government gazette and (OS: co-operating) the local press 42 days before tender-in unless approval from respective Assistant Director has been obtained to reduce the period to 28 days as a special case.

5.2.2.6 Contract Coordinator review availability of site and informs Contract Manager any deferral to tender program. (OS: operating)

5.2.2.7 Contract Coordinator arranges for inspection of tender drawings by tenderers (OS: operating)

5.2.2.8 Project Quantity Surveyor delivers to Senior Survey Officer/Clerical Officer one working day before tender-out sufficient tender documents for distribution. (OS: operating)

5.2.3 Action during Tender Period

5.2.3.1 Contract Coordinator advises Contract Manager of any reason for deferral of the date of tender return for Contract Manager's decision (OS: advising)

5.2.3.2 Contract Manager obtains agreement from Assistant Director via Project Manager as appropriate to extend the tender period and issues letter to all tenderers (MS: approving) with copy to Senior Manager and Senior Geotechnical Engineer. (records keeping)

5.2.3.3 After tender-out, Contract Coordinator sends the tender document to Senior Quantity Surveyor/Chief Architect (records keeping) (MS: monitoring)

5.2.3.4 Senior Survey Officer informs Contract Coordinator and Project Quantity Surveyor of any contractors who have not collected the tender documents 5 working days after the tender-out date. Contract Coordinator contacts these contractors to see if they still wish to tender. (OS: operating)

5.2.3.5 Contract Manager arranges and holds tender briefing for all tenderers to clarify particular aspects of the contract. (OS: operating)

5.2.3.6 Project Quantity Surveyor prices the tender documents and produces a tender estimate one week before tender-in date. (OS: operating)

5.2.3.7 Senior Survey Officer informs Contract Coordinator, Project Quantity Surveyor and Senior Manager any invited tenderers who have not collected tender document by the tender-in date. (OS: operating)

5.2.4 Tender Addenda (if any)

5.2.4.1 Contract Coordinator collates all tender addenda information and seeks agreement from Contract Manager before passing the information to Project Quantity Surveyor for issuing to all tenderers. (MS: approving)

5.2.4.2 Tender addenda that may require a significant change to the tenderer's pricing considerations should not be issued within 2 weeks before the tender-in date. (OS: operating)

5.2.4.3 Project Quantity Surveyor issues the addenda through Senior Survey Officer and consultant Project Quantity Surveyor issues the document directly to tenderers (OS: operating)

5.2.4.4 Project Quantity Surveyor ensures all tenderers have collected tender addenda before the tender-in date (CS: monitoring)

5.2.4.5 Project Quantity Surveyor informs Contract Coordinator any tenderers who have not collected the tender addenda before tender-in date. (OS: operating)

5.3 Evaluation of tender

5.3.1 Tender Evaluation System

5.3.1.1 The consideration of tender award for all building contracts is based on the Preferential Tender Award System (PTAS). Invalid tenders are to be excluded in the calculation of the PTAS to ensure that the comparison amongst valid tenders will not be distorted.

5.3.1.2 In recommending acceptance of a tender, Contract Manager also takes into consideration tenderers' updated performance in the past 12 months. The number of adverse reports under Housing Authority contracts is to be set out in the Tender Paper for reference. (OS: operating)

5.3.2 Re-tendering

5.3.2.1 CM may consider recommending to TC for re-tendering under one of the following circumstances: (OS: Advising)

(a) a policy change;

(b) unrealistic tender prices

(c) a major change of scope of contract works

(d) a major change in Public Housing Development Programme

(e) nil or insufficient number of tenders returned.

(f) any other special circumstances as recommended by the CM.

5.3.3 Distribution of Tenders for Examination

5.3.3.1 Comm. Secy forwards financial information submitted by tenderers to Finance Senior Director for examination. (OS: advising)

5.3.3.2 Contract Coordinator, upon collection of tender submissions from Comm. Secy., forwards all tenders to Project Quantity Surveyor. (OS: operating)

5.3.3.3 Project Quantity Surveyor forwards relevant sections of the three tenders with the highest Preferential Tender Scores to Contract Team for preparation of information for Tender Paper. (OS: operating)

5.3.3.4 Project Quantity Surveyor examines the three tenders with the highest Preferential Tender Scores. (OS: operating)

5.3.4 Notification to Tenderers

5.3.4.1 Contract Coordinator notifies the three tenderers with highest Preferential Tender Score and the remaining tenderers. (OS: operating)

5.3.5 Evaluation of Submitted Tenders

5.3.5.1 Contract Coordinator interviews tenderers for technical and contractual clarifications if necessary (OS: operating)

5.3.5.2 Senior Quantity Surveyor provides Contract Manager and Project Quantity Surveyor one week before the Tender Committee Meeting with comparison of construction cost with other recent tenders of similar type of buildings. (CS: Monitoring)

5.3.5.3 Senior Quantity Surveyor provides Comm. Secy. one week before the Tender Committee Meeting Schedule of Comparative Information of Tender Rates of Major items (OS: operating)

5.3.5.4 Contract Manager notifies Project Building Services Engineer, the method of construction and any objection on the NSC tenderers from the three tenderers with the highest preferential tender scores. (OS: operating)

5.3.6 Preparation of Tender Paper

5.3.6.1 Contract Coordinator checks the program/progress of letting of all separate contracts and nominated sub-contracts. (CS: supervising)

5.3.6.2 Project Quantity Surveyor provides Contract Coordinator with draft tender report and cost schedules at the agreed date or five weeks before Tender Committee Meeting(OS: operating)

5.3.6.3 Contract Team provides Contract Coordinator with report on any technical submissions. (OS: operating)

5.3.6.4 Contract Manager forwards draft Tender Paper to Senior Financial Manager. (OS: operating)

5.3.7 Recommendation of Acceptance of Tender

5.3.7.1 Project Quantity Surveyor provides Contract Coordinator and Quantity Surveyor with final tender report and cost schedules two weeks before tender approval date. (CS: Monitoring)

5.3.7.2 Contract Manager submits final Tender Paper and tender report to Comm. Secy. via Assistant Director and Deputy Director (Construction) to Housing Development Tender Board for clearance and to Tender committee for approval. (MS: Approving)

5.3.8 Recommendation of Revision of Project Development budget

5.3.8.1 Project Manager seeks Building Committee approval for revised Project Development Budget (PDB) prior to tender award. (MS: Approving)

5.4 Tender acceptance

5.4.1 Preparing Letter of acceptance

5.4.1.1 After approval of revised by Project Development Budget by Building Committee, Contract Manager prepares the Letter of Acceptance based on the standard format (OS: operating)

5.4.1.2 Contract Manager passes the acceptance letter to Chief Quantity Surveyor to check the letter and the post tender correspondence attached to the letter is contractually in order. (CS: Monitoring)

5.4.1.3 Contract Manager forwards a copy of the letter of acceptance to Senior Manager and Quantity Surveyor. (records keeping) (CS: Monitoring)

5.4.2 Procedures for preparation of contract documents

5.4.2.1 Project Quantity Surveyor arranges for the compilation and binding of all documents. (OS: operating)

5.4.2.2 Project Quantity Surveyor prepares sufficient bound copies of Contract documents. (Record keeping) (OS: operating)

5.4.2.3 Contract Coordinator arranges for the binding of all contract drawings into a separate contract document. Contract Coordinator prepares one bound original set and one bound duplicate set of contract drawings and send to Senior Survey Officer/Clerical Officer for contract signing arrangement. (OS: operating)

5.4.3 Contract Signing

5.4.3.1 Quantity Surveyor arranges the contract signing ceremony with the Divisional Head and the contractor. (OS: co-operating)

5.4.3.2 Senior Survey Officer/Clerical Officer forwards original copy of contract document to Senior Finance Manager and distributes all certified true copies of contract documents to Contract Team. (OS: co-operating)

5.4.3.3 Senior Survey Officer/Clerical Officer forwards original contract drawings to the Comm.Secy. and forward duplicate set of contract drawings to the contractor. (record keeping) (OS: co-operating)

Hong Kong Land Tender Procedural Guide

Rules and Procedures in tender stage

5.1 Preparation of tender documents

5.1.1 Preparation of Tender Drawings

5.1.1.1 The consultant architect and Structural Engineer should prepare the design drawing. (OS: operating)

5.1.1.2 If some work cannot be detailed or drawings cannot be completed for billing, Project Manager decides on the drawing issue programme to be specified in the contract 2 weeks before tender-in date. (MS: Directing)

5.1.2 Preparation of other tender documents

5.1.2.1 Consultant QS compiles BQs for tendering (OS: operating)

5.1.2.2 PQS finalize with consultant QS the nature and value of any Prime Cost Sum and/or Provisional Sums to be included in the contract. (OS: Co-operating)

5.1.2.3 Consultant QS provides PQS with updated estimate of contract for completing contract particulars. (OS: operating)

5.1.2.4 PQS prepare and forward the contract particulars and calculation of liquidated damages to PM for approval. (MS: approving)

5.1.2.5 PQS prepare the list of elements of works of safety concern according to the Hong Kong Land construction safety programme and include this into the contract document. (OS: operating)

5.1.2.6 Consultant QS prepare list of elements requiring Warranties to be included in the Contract. (OS: operating)

5.1.3 Completion of Tender Arrangement

5.1.3.1 Project Manager decides the whole tender programme. (MS: Directing)

5.1.3.2 Project Manager compiles a draft of tender document for approval by all project team members. (OS: Operating)

5.2 Invite Tenders

5.2.1 Before tender-out date

5.2.1.1 The Project Manager shall prepare a list of suitable tenderers 3 weeks before the tender out date. (OS: operating)

5.2.1.2 In the event that project consultants have been appointed, the Project Manager must receive written evaluations and recommendations from the consultants concerning suitable tenderers. (OS: Advising) The list of suitable tenderers may be based on expertise, responsibility, integrity, workmanship standards, size, competence for the work contemplated, and any other appropriate factors.

5.2.1.3 The proposed tenderers on the list should be asked to confirm in writing that they are interested in tendering prior to the finalization of the list. The final list shall include a minimum of 3 tenderers and must be approved in writing by the Executive Director, Projects. (MS: Approving)

5.2.1.4 When preparing the list of suitable tenderers, in addition to the factors listed above, the following factors should be considered:

- financial standing, both current and historical
- Similar projects completed, particularly concerning size, scope and duration.
- General experience and reputation.
- Management structure as appropriate for the contract.
- The tenderer's capacity at the time of the contract

5.2.1.5 The prospective tenderers should return these forms prior to any prequalification meeting. The Project Manager should then question the prospective tenderer with knowledge of the company and also expand on the project details during the meeting. (OS: Operating)

5.2.2 Tender Notification & invitation

5.2.2.1 The duration between tender-out and tender-in should be 21 days unless otherwise approved by Project Director. (MS: Approving))

5.2.3 Action during tender period

5.2.3.1 Tenderer should show whether there is a need to defer the tender program and the Project Manager should make decision on the deferral. (MS: Approving)

5.2.3.2 The Project Manager should issue letter of invitation to all tenderer to collect the tender. (OS: operating)

5.2.3.3 If the tenderer does not collect the tender, the Project Manager should find another tenderer to fill up the original list based on the advice of consultant team. (OS: Operating, Advising)

5.2.4 Tender Addenda (if any)

5.2.4.1 PQS collates all tender addenda information and seeks agreement from Project Manager (MS: Approving)

5.2.4.2 PQS issues the addenda to all tenderers (OS: Operating)

5.2.4.3 PQS informs Project Manager any tenderers who have not collected the tender addenda before tender-in date. (OS: Advising)

5.2.4.4 PQS prices the tender documents and produce tender estimate. (OS: operating)

5.3 Evaluation of Tenders

5.3.1 Tender Evaluation System

5.3.1.1 All tenders should be opened at the same time and as soon as possible after the deadline for submission and in the presence of the Executive Director, Projects, the Project Manager and the PQS. (OS: Operating, CS: Supervising)

5.3.1.2 Any tender received after the deadline for submission may only be opened at the discretion of the Executive Director, Projects or the Project Manager, provided that it is opened at the same time as all other tenderers. (MS: Approving)

5.3.1.3 Details of the submitted tender sums shall be recorded and signed/witnessed by all those present. (CS: supervising)

5.3.1.4 The review of all tenderers should be performed in strict confidence. No information or details concerning any tender including pricing should be disclosed to any third party other than the architect or other project consultants used by HKL for the purpose of reviewing the tender.

5.3.2 Re-tendering

5.3.2.1 Project Manager may consider recommending for re-tendering under one of the following circumstances: (MS: recommending)

(a) There is a large scope change

(b) There is a large event which require the project to be stopped.

5.3.3 Distribution of Tenders for Examination

5.3.3.1 PQS forwards financial information submitted by tenderers to Financial department for examination. (OS: Receiving)

5.3.3.2 PQS forwards the 3 lowest tenders to Consultant QS for examination (OS: Advising)

5.3.4 Notification to Tenderer

- No prescribed rules and procedures

5.3.5 Evaluation of Submitted Tenders

5.3.5.1 Project Manager interviews tenderers for technical and contractual clarification. (OS: operating)

5.3.5.2 The PQS will promptly carry out a detailed evaluation of the submitted tenders and issue an initial tender report to the Project Manager, the consultant architect for advising on all relevant costings and contractual matters. (OS: operating, advising, MS: recommending)

5.3.5.3 Separately, the appropriate consultants shall carry out initial technical evaluations of the tender submissions and issue an initial evaluation report to the Project Manager with suggested lists of clarification items for each tender. (OS: operating)

5.3.5.4 The Project Manager shall immediately schedule tender review meetings with the lowest tenderers as determined appropriate. At these meetings, the list of clarification items shall be discussed and the tenderer will be required to provide a written response for each item to the Project Manager and appropriate project consultants. (OS: operating)

5.3.6 Preparation of Tender Paper

5.3.6.1 PQS should prepare the cost and contractual aspect of the tender paper and other consultants should prepare the technical and architectural aspect of the tender paper. (OS: Operating)

5.3.7 Recommendation of Acceptance of Tender

5.3.7.1 Once all clarification items have been resolved with respect to each of the lowest tenderers, or at the time the Project Manager decides appropriate, the PQS shall issue a final tender report on financial and contractual matters, and then the appropriate project consultants shall issue a final recommendation of acceptance report to the Project Manager.
(OS: operating, advising)

5.3.7.2 Project Manager should submit final tender paper to Executive Director, Project for approval. (MS: approving)

5.3.8 Recommendation of Revision of Project Development Budget

5.3.8.1 Project Manager should seek Chief Executive's approval for revised Project Development budget prior to tender award. (MS: approving)

5.4 Tender Acceptance

5.4.1 Preparing Letter of Acceptance

5.4.1.1 Upon receipt of the written approval form the Executive Director, Projects, or the appropriate HKL Senior Management, the consultant architect or Project Manager, as appropriate, shall issue a letter of acceptance to the approved tenderer. (OS: operating)

5.4.1.2 Once the letter of award has been issued by the appropriate HKL owning company and confirmed in writing by the tenderer, the unsuccessful tenderers should be promptly advised in writing that their tenderers were not accepted. (OS: operating)

5.4.2 Procedures for preparation of contract booklet

5.4.2.1 After issue of letter of acceptance, PQS arranges for the compilation and binding of all documents, except drawings, into a "Contract Booklet". (OS: operating)

5.4.2.2 PQS prepares sufficient bound copies of Contract Booklet including, original, one duplicate and requisite number of certified true copies. (record keeping) (OS: operating)

5.4.3 Contract Signing

5.4.3.1 The Marketing department arranges the contract signing ceremony. (OS: operating)

Note: MS: Managing system

OS: Operating system

CS: Control system