Property and Facility Management Division
The Hong Kong Institute of Surveyors

Benchmarking of Management Fees for Office Buildings in Hong Kong

Research Project 2008-09

The Hong Kong Polytechnic University
香港理工大學

PREFACE

Hong Kong is one of the renowned finance centres in the Far East, with large number of commercial properties catered for its active business activities. These commercial properties including those of office premises not only produce income to its owners, but also bring a prestigious image to Hong Kong as a whole. Therefore, property and facility managers have to play an important role of managing and maintaining these properties, with a view to providing a good asset investment in the long run.

The management fees of these properties depend largely on the standard of the management and maintenance services corresponding to its grading, efficiency, customer expectations, materials durability, building size, age and any special features, etc. The research has focused on the essential components which greatly affect the management fees for the offices of different grading (i.e., Grade A, B, and C as defined by the Rating and Valuation Department, Hong Kong SAR Government) and the study of its close associated relationships. It is hoped that the result will serve as useful database for the practitioners in the Industry.

With the successful completion of the research of management fees in residential properties, the Institute has entrusted this project to Dr. K.K. Lo and Mr. William K.H. Wong of the Department of Building and Real Estate, Hong Kong Polytechnic University. We are grateful for their devotion and hard work in collaboration with the Research Working Group of the Property and Facility Management Division. The research report cannot be successfully completed without the generous support and kind help from the Management Companies, Developers and Owners who have provided a lot of useful information and sensitive data.

The final Report is by no means exhaustive due to its certain limitations and constraints. It should be subject to further review for detailed study of more sampling and vigorous model testing. In meantime, any comments or views for improvements are greatly appreciated. All feedback would be incorporated in the future research for the benefits of the members.

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Chairman,
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February, 2010.

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The study was funded by the Property and Facility Management Division, (PFMD), the Hong Kong Institute of Surveyors (HKIS). Accordingly, this study report is only accountable to PFMD of HKIS.

Any further conjectures of the data or results contained in the booklet are not allowed unless a written approval is obtained from the Hong Kong Polytechnic University.

The study team comprising with Dr. K.K. Lo and Mr. William K.H. Wong, MPhil (Reading), MHKIS, AAPI, ACIS, wishes to express their appreciation to the Chairman and the Council Members of the PFMD, particularly Mr. Kenneth Chan (Chairman), Professor Eddie C.M. Hui, Messrs. Charles Hung, Dick Kwok, Alan Wong, and Gary Yeung, whose supports in liaising with professionals in the property and facility management industry for data collecting and constant feedback on the study. Furthermore, the team also extends to acknowledge their gratitude to the members of the following professionals and organizations whose unselfish assistance in providing very useful and resourceful data presented and exhibited in this study for completion of the report:

Names are listed in alphabetical order and not in order of priority

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EXECUTIVE SUMMARY

In Hong Kong, there were 9.794 million m^2 as office use (Census and Statistics 2006). This type of properties is not only able to produce constant income to the property owners as well as capital appreciation but also serve as a key landmark for one of the international financial centres in the world. To achieve the mentioned purposes, good quality of property and facility management for these buildings is of prime importance.

The objective of this study is to identify the benchmark values of management fees for three grades of office premises in Hong Kong in order to reflect the quality of management performance which forms the basis for management fee determination.

Three grades of office premises which Rating and Valuation Department of the Government of Hong Kong Special Administration Region, i.e., Grades A, B and C, adopts were used for study in this project.

This study focuses on 5 Management and Maintenance Components (MMCs) which are most relevant to the property and facility management professionals, namely, electricity, cleaning and waste disposal, building work, building services, and security charges.

For Grade A office premises, there is a moderate negative association between the unit rate of management fee and building size but a rather mild negative relationship between the unit rate of management fee and building age. These indicate that the increase in building size and building age may not be necessarily in raising the unit rate of management fee, probably due to economy of scale. For Grade B office premises, no significant association is noted between the unit rate of management fee and building size but a rather weak positive association between the unit rate of management fee and building age. These show that the unit rate of monthly management fee may slightly inflate with the increase of building age as older buildings may be required a bit more of maintenance work but inflate insignificantly with the increase of building size. On the other hand, there are negative associations between the unit rate of management fee and building size, and building age for Grade C office premises. These depict that an increase in building size may not be necessarily in raising the unit rate of management fee, and an increase of building age may likely be in reduction of unit rate instead of increasing in unit rate, probably due to the low standard of available facilities and level of management and maintenance services to the occupants.

The benchmarking process has taken consideration of the expenditures of Management and Maintenance Components (MMCs) together with various factors, for instance, building size (GFA in m^2), age, and opening hour, that might affect the management fee level among different grades of office buildings. The monthly mean values for management fees which the report recommends as benchmark monthly management fees for Grade A, B and C office premises are \$55.61/m^2, \$46.26/m^2 and \$24.74/m^2 respectively. Their ranges of monthly management fees are from \$40.06/m^2 to \$80.86/m^2, \$34.59/m^2 to \$64.64/m^2 and \$11.96/m^2 to \$46.67/m^2 for Grade A, B and C office premises respectively.

The study involves the collection of data through questionnaire surveys from different management agents and companies. There were a total of 52 sets of valid data received within which 20, 16 and 16 sets were from Grade A, B and C office premises respectively. From the statistical point of view, the larger is the sample size, the more feasible is the generalization of the study could possible attain. Accordingly, despite the result of this study which had been able to produce information for the benchmarking of office premises' management fees, it is strongly recommended to conduct a much larger-scale survey based on the existing framework of this study to obtain a more comprehensive result

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

SECTION **Page**

TABLE OF CONTENTS (Cont'd)

LIST OF TABLES

LIST OF TABLES (Cont'd)

LIST OF FIGURES

LIST OF FIGURES (Cont'd)

LIST OF FIGURES (Cont'd)

LIST OF FIGURES (Cont'd)

BENCHMARKING OF MANAGEMENT FEES FOR OFFICE BUILDINGS IN HONG KONG

SECTION 1 - INTRODUCTION

1.1 Background of Study

According to Census and Statistics (2006), there were 9.794 million m^2 as office use in Hong Kong. This type of buildings is not only able to produce constant incomes to the property owners as well as capital appreciation but also serve as a vital landmark for one of the global financial centres in the world. To achieve the mentioned purposes, good quality of property and facility management services for the buildings is of prime importance.

The management fee is considered as a main resource for managing the premises in a state of good working conditions throughout the building life. The level of charging management fee depends very much on the standard of management and facilities' performance towards the premises in relation to their attractiveness, services efficiency, building size and feature, building age, opening hour and durability of building materials and etc.

Currently, there are various Management and Maintenance Components (MMCs) affecting the levels of management fees, for instance, security, building facilities, repairs and maintenance, cleaning, electricity, water, insurance, gardening and landscaping, staff costs and etc. In view of numerous components as well as such factors as building size, age opening hour and etc., governing the levying of management fees, it is, therefore, desirable to make an attempt to identify, if possible and practicable, and to benchmark the levels of management fees to minimize costs and maximize the effective use of management fees in the interest of all parties concerned.

Moreover, different grades of office buildings shall dictate the quality performance of property and facility management services, thus their management fee levels are to be determined and benchmarked on fair, open and rational basis. It is our intention to adhere to the grading of office premises that is adopted by the Rating and Valuation Department (R&V), the Government of Hong Kong Special Administrative Region (HKSAR), such as Grade A, B and C office buildings as the basis of our study for the purpose of benchmarking the management fees.

The benchmarking process has taken consideration of a number of attributing factors, mainly building size (GFA), age, and opening hour that would affect the management fee levels across different grades of office buildings. By way of performing the benchmarking process, it provides a yardstick for formulating a comprehensive and acceptable fee structure as reference for professional practices in the industry.

1.2 Objectives of Study

a) to identify common Management and Maintenance Components (MMCs) of management fees amongst the three grades of office buildings (Grades A, B, and C);
b) to ascertain the current average charge for each individual component pertaining to the management fees;
c) to reveal the variances of different components within the management fee structure;
d) to illustrate the movement trends in the management fee levels and its MMCs for each grade of office buildings;
e) to establish the benchmarks for charging the management fees across different grades of office buildings; and
f) to recommend benchmarks for management fees amongst the three grades of office buildings as cross reference to the current practices in the industry.

This project was undertaken with the aim of promoting a better understanding of the basis of charging management fees, and streamlining a standard of determining management fees for office buildings in Hong Kong at an acceptable level to the landlords and occupants (tenants/multi-owners).

This report formed part of a wider investigation covering every item of Management and Maintenance Components (MMCs) in the management fee structure; providing clarifications and comments on the nature and extent of the issues and problems; and offering rational conclusions to substantiate the findings.

This research project was wholly funded by the Property and Facility Management Division (PFMD) of the Hong Kong Institute of Surveyors (HKIS), and was undertaken by Dr. K.K. Lo of Department of Building and Real Estate of the Hong Kong Polytechnic University and Mr. William Wong with full supports from a group of leading professionals in the industry, whose contributions are gratefully acknowledged.

1.3 Methods of Study

The study of benchmarking the management fees was performed merely in four main stages: the background study of management fee structure; design of the questionnaire and fieldwork; sample surveys to the three grades of office buildings in different locations with the analysis of results; and identify the findings as to indicate the relationship of various factors for benchmarking the management fee levels across different grades of office buildings.

SECTION 2 - MECHANISM OF BENCHMARKING PROCESS

2.1. Property and Facility Management Process

It is essential to examine the philosophy underlying the charges of management fees in the attitudes of landlords and occupants (tenants/individual owners). The main benefits to landlords are seen by their abilities to recover fully the operational costs and to be able to maintain a standard of services and works necessary to protect the assets and rental values.

The main advantage to occupants is the administrative benefits of not having to manage the building by themselves, but they still keep their premises in good presentation, and achieve the advantage of economy and some certainty for occupants on the housekeeping elements.

In practice, management fee is part of the costs to occupants for covering landlords against the actual and anticipated expenditures on the protection, maintenance and replacement of those parts of the structures, finishes and equipment of the property for which no occupant is directly responsible. Normally, it applies to the common areas as defined by the Deed of Mutual Covenants (DMCs). Such costs are being calculated and apportioned in accordance with the terms of the DMCs between the landlords and occupants (tenants/individual owners).

2.2 Property and Facility Management Models

2.2.1 Direct Management by Landlord

This applies to many large property development companies who require having more direct control over their properties in terms of cash flow and income. However, the desire for increased competitiveness and productivity has caused landlords to examine the cost-effectiveness of continuing to manage directly by them.

Such arrangements may still not be entire cost-effective, some landlords have sought to reconcile their desire for direct control with their need for profitability by setting up subsidiary companies, which effectively become their own managing agents. Since these subsidiary companies are separate legal entities, their costs are recoverable from the occupants as a management fee item. However, this practice does not necessarily provide for the true independence which some occupants prefer.

2.2.2 Managing Agent

Sometimes, it is more cost-effective for landlords to contract out day-to-day management matters to outside agents – usually, but not exclusively, firms of surveyors which provide specialist expertise and resources dedicated to management of buildings.

Normally the costs of managing agents will be recoverable as included as part of the management fees. This has advantages in terms of resources and specialist expertise in areas such as building surveying, investment, agency, property taxation, planning and development,

particularly in larger firms of agents who manage several hundred properties with all necessary computer equipment and software system. It is the agent to bear the cost of setting up and maintaining such resources and keep efficient to maximise their own profit.

The managing agents have a duty to act impartially between the landlord and occupants, regardless of their appointments made by the landlord. They appear to be a duty of care to both parties and in any event, they must be seen to be acting reasonably at all times.

2.2.3 Owners' Corporation

Where the properties are owned on an individual holding basis, the organisational structure of a property and facility management usually takes the form of Owners' Corporation (formerly Owners' Incorporation) overwhelmingly in Hong Kong, which is managed as being any conventional company. This type of management style is set up to manage property on behalf of all individual owners of the property, each of whom will have a shareholding in the company.

The control of those management services to common areas is assigned to an Owners' Corporation as a management company, and each of the individual owners has a share in that company usually proportional to the size of property ownership, commonly known as management shares or undivided shares under legal titleship. A separate deed of covenants, named Deed of Mutual Covenants (DMCs) currently adopted and enforced in Hong Kong governs the setting up of the management company including its shareholding and ownership, and its parameters of operation to oversee common areas of the building which requires a common maintenance approach and policy to landscaping, car-parking areas, exterior fabric of the buildings, common insurance, management, and other services that may be appropriate to the scale and nature of the development.

The shareholders in the management company form a committee amongst themselves to supervise and implement the services, and also administer the accounts of all fees. Owners are encouraged to elect their representatives to represent all owners of the building by way of a Management Committee. The Management Committee is a governing body similar to the board of directors in a company as a decision-making and works with the management company. This may not be so cost-effective in terms of resources and specialist expertise, therefore most such management companies are empowered to appoint a separate managing agent to monitor and oversee the services as required in the interest of all individual owners within the buildings.

The Management Committee assumes all responsibilities and accountabilities of the property and facility management services for the common parts within the premises. Under the administration of the Committee, owners can supervise the management companies, and terminate the services of those managing agents that had been found not performing satisfactorily (Chan *et al.* 2001).

2.3 Issues of Management Fees

2.3.1 Backgrounds of Management Fees

All occupants in mixed-used premises will not enjoy the benefit of the management services to the same extent; offices located above the ground floor shops may benefit from a full range of common services and facilities such as lifts and window cleaning, whilst the shops may only benefit from general repairs and maintenance to the exterior of the property and benefit from other common services such as refuse disposal, fire alarm system, etc. Ground floor occupants may not use a lift as most deliveries are made via the street, lane or unloading areas on the ground level, so they may not pay for a lift or their upkeep of the common parts to which they do not have access.

For large mixed-use commercial premises, there is a wider range of common services to different occupants using the building at different times and for different periods, such office occupants may occupy the premises only during normal office hours from Monday to Friday; retail occupants need additional business hours every day, even remain open for considerably extended periods. Such extended hours of use may result in additional costs in the provision of common services, including additional utilities consumption and enhanced security arrangements during the extended hours of occupying the premises. This may not be reasonable for sharing the same proportion of such additional costs between the occupants of different nature or style of business. When any occupants require common services outside the normal period, they may be required to pay specifically for those additional costs, as it is they who receive the direct benefit and not the other occupants.

2.3.2 Understandings of Levying Management Fees

The collection of management fees depends very much upon the extent of common services to be provided within the terms of the agreements between occupants and landlords who expect to what extent the costs incurred from the occupants can be recovered, therefore the scale of charging the fees may not be standardised.

Obviously common services will vary according to the type of building, its needs and use in relation to the conditions, operation and time of access from the buildings, so the fees can vary enormously. Further, the size of staff provided for the availability of common services, for example, building managers, cleaners and engineers etc. will also be considered in determining the fees scale.

Whether or not the management of property and facilities services are undertaken in-house or by managing agents, the costs incurred are likely to be recoverable from the occupants through the levy of management fees.

2.4. Components of Management Fees

Young (1992) reckoned that management fees are the mechanism by which landlords recover from occupants the expenditures on the repairs and maintenance of the buildings, plants and machinery, and the provision of services.

The charging of management fees are mainly governed by the contractual agreements and the intentions of the parties when entering into the DMCs arrangement. In simple terms the landlord is obliged to provide services specified within the DMCs and those further required by the law. Otherwise, in the absence of specific wordings, the inclusion of an item within the management fee clause does not necessarily place an obligation on the landlord to provide that service (Young 1992).

Young (1992) further advocated that occupants are only liable to reimburse the landlord the costs of offering services so far as the DMCs allows, they may be landlord's expenditures that fall outside the terms of DMCs and would not be recoverable, hence a landlord cannot recover all his or her costs for the provision of common services.

In general, the overall management and maintenance costs pertaining to the management fees mainly consist of the following categories.

2.4.1 Building Management and Maintenance Services

In the context of maintenance to building fabrics and building services facilities, i.e., building works and building services works respectively, a building and its facilities shall be kept to an appropriate and acceptable standard at a reasonable cost and with the minimum of inconvenience to the occupiers. During the economic life of a building, the accumulated amounts spent on maintenance are likely to be significant when compared with the initial or capital costs.

Building works refer to general repairs to building fabrics including any structural components, such as walls, floors, ceilings and windows and plumbing and drainage. Building services works embrace the general repairs to electrical systems, air-conditioning systems, lighting system, water supply systems, lift and escalator systems within the building and etc.

Being an essential part of property and facility management services, maintenance and repairs to the building and facilities services took within a range of 16.31% to 26.05% of the total management fee during the cause of this study amidst the three grades of office buildings for keeping the premises in a state of good condition (Table 5.1 in page 66 refers).

The allocation, organisation and management of these outgoings are important aspects of facility and property management services, and the quality of implementation is likely to have an effect on net income and capital value. Well-implemented maintenance works would ensure all owner/occupiers can enjoy the occupation of properties with their property values being preserved and even sustained future growth.

There are two main ways of meeting non-recurring capital expenditures, either to meet them as they arise, or to set aside reserve monies in the form of a fund, for instance, Reserve or Sinking Funds (Paragraph 2.4.3.2 refers). Such funds will be used by the landlord as operating finance with nominal interest accrued, or are established as a deposit fund or trust to hold the monies. The reserve monies are only intended to be used on "major" works that cover replacement capital costs on plant, air-conditioning systems and lifts, also external redecoration as well.

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2.4.2 Human Services Management

The effectiveness of any work organisation relies very much upon the efficient use of its human resources to cater for services and facilities management. Such services merely refer to the housekeeping jobs that include cleaning, security, electricity and water and etc. The extent of the range of these recoverable items have apparently associated with the grade of office building linked to the level of sophistication in the services provided and the landlords' preference for details.

The organisation of on-site operations is contingent upon budget constraints, the services offered, the facilities available, the size of the building, the number of occupants in the premises, and the client requirements.

The most basic level of cleaning is to provide adequate hygienic protection for occupants inside the premises. It may be more economical for some cleaning work to be contracted rather than done by in-house personnel. Close control is exercised according to frequency, materials, methods and job performance. General cleaning work may also involve pest control particularly in office premises with pantry.

Commercial waste management is similar to domestic waste management. Daily cleaning includes the collection of waste and cleaning of common areas including toilets under the arrangement of frequency schedules.

Security prevention includes the use of security hardware and software in the prevention and detection of crime such as gate barriers, shutters, grilles, locks, safes and electronic aided strong rooms. Security management consists of all operation-related design and planning, such as a permit control system, lost and found, confidential documents keeping, emergency planning, disaster and salvage operations, bomb threats, evidence collection and statement compilation.

Security services may be arranged by in-house or contract-out with staffing on the basis of different hour-shifts. Security staff is responsible for ensuring all common areas such as corridors, podiums, staircases, rooftop and car parks are clear and crime-free. They may also identify building defects such as leaks and faulty lighting, as well as handling of emergencies, fire-fighting and porter services.

2.4.3 Financial Services Management

2.4.3.1 Insurance

The buildings are insured against damages by fire or other risks such as flooding impacts, subsidence and etc. There are also professional fees for rebuilding services, consequential loss, and the effect of business interruption to the occupants therein.

Insurance costs shall normally be for the full estimated costs of replacement, or rebuilding with supporting and keeping watertight adjoining buildings exposed by the damages, demolition of unsafe portions; compliance with additional requirements of the planning authority or building regulations, and loss of rental incomes for the period of replacement and rebuilding works. In times of rising costs every year, such costs will be annually adjusted by means of indexing with reference to an index of building costs (Scarrett 1983).

Other insurance coverage, like public liability insurance, occupiers' liabilities insurance, contents and etc. shall be taken out. The problems of insurance are related to those premises only where the landlord insured and recovered the premium from the occupants.

2.4.3.2 Reserve or Sinking Funds

Other than normal provision of services and facilities, occupants are often charged with a multiplicity of anticipated future expenditures such as replacement and renewal of plant and equipment, e.g., lift services, air-conditioning system, building structures and etc. It so happened because during the life cycle of a building, large items of equipment or fabric are needed for replacement or upgrading, the costs of which might be recoverable from the occupants through the management fee.

The basic purpose of a 'Reserve or Sinking Fund' is to provide for anticipated expenditures in respect of replacing and renewal of plants and equipments in one-off payment. There has the advantage of having funds on which to draw to pay for such work, whereas the occupants are not required to meet their proportion of the costs of the work in one lump sum on occasion in any one year in which substantial works are carried out regularly or unexpectedly.

Strictly speaking, a Sinking Fund is a replacement fund by which the landlord aims to build up a fund to pay for repairs and replacements of major items of fabric, plant and equipment. The fund is usually to be accumulated over the anticipated life of the item, and may often include costs that might be expended beyond the term of the occupation under either the ownership or tenancy. Whereas, a Reserve Fund is intended to equalise expenditures in respect of regularly recurring items so as to avoid fluctuations in the amount of management fee payable each year, for example, internal or external redecorations which might be taken every or 5 years (Forrester and Gibb (2008)).

Forrester and Gibb (2008) reckoned that a Sinking Fund is intended for large replacement items which might occur within the building life cycle, whilst a Reserve Fund is to even out

the actual and anticipated expenditures yearly during the term of the occupation in the premises. However, there is less clarity to clearly distinguish between sinking funds and reserve funds, as long as any unexpended balance of the funds is the financial resource to fund works without the need to borrow money for upholding the life of the premises at a particular time.

SECTION 3 - IMPLEMENTATION OF BENCHMARKING PROCESS

3.1 Characteristics of Benchmarking Process

APQC (2001) defined benchmarking process to be the process of comparing and measuring one organisation against others within the same industry to gain information on philosophies, practices, and measures that help one organisation take action to improve its performance. In simple term, benchmarking process is the practice of admitting that others are doing at something promisingly which is worthwhile for matching.

As a tool of establishing the norm for performance in terms of financial, organisational, innovation and change management, and customer focus, it is mainly concerned with formalising the notions of things might cost, how long they might take and what they expect. Its objective is to identify current performance in relation to best practice in the areas of concern to the organisation.

Benchmarking is used to measure the effectiveness of in-house practice against external practice in related organisations and against an organisation identified as achieving the best practice in the area under scrutiny. It also provides management to make decisions on policies and procedures in relation to how services should be procured, i.e., they should be outsourced or retained in-house.

The key objectives of benchmarking in our study are to minimise discrepancies on the fee scale between different grades of office property; to ensure management fees that are 'not for profit, not for loss' and are cash neutral to the owners income stream; and to encourage transparency and communication in relation to the provision of services, their quality and cost through the following means:

1) Identify the scopes;
2) Establish measures of performance;
3) Agree on those to benchmark;
4) Collect information and data;
5) Analyse findings and determine gaps; and
6) Set goals for improvement.

There are many types, or applications of benchmarking: (i) metric benchmarking is the initial step that identifies a gap in performance by gathering numerical data and then analysing it; (ii) internal benchmarking is to gain an understanding of internal performance standard inside an organisation; (iii) competitive benchmarking determines the organisation's place within its industry for sustaining its competitive advantage in the market place; and (iv) strategic benchmarking is the analysis of emerging trends in markets, process, technology, and distribution to identify opportunities for strategic change in core business processes.

In relation to our research exercise, it appears competitive benchmarking to be acceptable and appropriate approach to compare management fees paid by tenants/individual owners amongst different grades of multi-let/owned office buildings of varying sizes and ages in various locations upon the survey details of different cost components for analysis. In any circumstances, understanding the trends through benchmarking can produce interesting results which help focus on the management action.

3.2 Benchmarking Model for Office Buildings

3.2.1 Criteria for Benchmarking Process

The research findings are based on information gathered from a sample of three grades of office buildings with apportionments of each individual component pertaining to overall management fees chargeable to the occupants. There are criteria used to form part of benchmarking model for our study in the following manners:

1. Grade of Office Buildings - Grades A, B and C;
2. Measurement of Management Fee - on the basis of unit rate ($/m^2) per month;
3. Opening hour - duration times open to the occupants on daily basis;
4. Age of building - included recently occupied and aged buildings;
5. Time frame of data - within 4 years between 2005 to 2008 inclusive; and
6. Gross Floor Area (GFA) to be adopted as a common basis for analysis purposes.

3.2.2 Grade of Office Building

As far as the study is concerned, the standards and classification of building grade as defined by the Rating and Valuation Department (R&V) of the Hong Kong Special Administrative Region Government (HKSAR) were adopted for this study as follows:

Grade A office being the office with modern with high quality finishes; flexible layout; large floor plates; spacious, well decorated lobbies and circulation areas; effective central air-conditioning; good lift services zoned for passengers and goods deliveries; professional management; parking facilities normally available.

Grade B office being the office with ordinary design with good quality finishes; flexible layout; average-sized floor plates; adequate lobbies; central or free-standing air-conditioning; adequate lift services, good management; parking facilities not essential.

Grade C office being the office with plain and basic finishes; less flexible layout; small floor plates; basic lobbies; generally without central air-conditioning; barely adequate or inadequate lift services; minimal to average management; no parking facilities.

3.2.3 Sample Size and Collection

Invitations to participate in the study were sent to numerous leading property management companies including managing agents. Accordingly, they were made by an introductory letter with noting the full supports of PFMD of the HKIS, and accompanied with a questionnaire format for data collection, there contained a clause to the effect that information provided would not be attributed to a particular source. A sample of survey questionnaire is attached at Appendix A for reference

The sample of buildings was randomly chosen on the basis of building size, daily opening hour and building age to maximise the responses within the timescale allowed for the model. The response rate was moderate. However, a total of 52 sets of valid data consisting of 20 from the Grade A, 16 from Grade B and 16 from Grade C were collected ranging from 2005 to 2008, which gave relatively limited quantities of data for analysis and interpretations in the benchmarking process. The tables as shown below indicate the overall ranges of available data obtained under different grades of office buildings.

Table 3.2.3(a) Sample Size for Grade A Office Buildings

By Building GFA	No.	By Building Age	No.
Less than 30,000 m^2	5	Less than 11 years	5
30,000 m^2 – 45,000 m^2	5	11 years - 18 years	5
45,001 m^2 – 60,000 m^2	5	19 years - 24 years	5
Over 60,000 m^2	5	Over 24 years	5
Total No. of Sample Buildings	20	Total No. of Sample Buildings	20

Table 3.2.3(b) Sample Size for Grade B Office Buildings

By Building GFA	No.	By Building Age	No.
Less than 10,000 m^2	5	Less than 11 years	3
10,000 m^2 – 21,000 m^2	4	11 years - 18 years	4
21,001 m^2 – 30,000 m^2	4	19 years - 26 years	4
Over 30,000 m^2	3	Over 26 years	5
Total No. of Sample Buildings	16	Total No. of Sample Buildings	16

Table 3.2.3(c) Sample Size for Grade C Office Buildings

By Building GFA	No.	By Building Age	No.
Less than 7,000 m^2	5	Less than 13 years	4
7,000 m^2 – 25,000 m^2	5	13 years - 18 years	7
Over 25,000 m^2	6	Over 18 years	5
Total No. of Sample Buildings	16	Total No. of Sample Buildings	16

3.2.4 Database Structure and Breakdown

Data on the current level of each individual Management and Maintenance Component (MMC) pertaining to the charges of overall management fees was sought directly from various styles of management companies by the research staff using the structured questionnaire as shown in Appendix A. General information on how the management fees operate in practice was also collected during follow-up interviews with the managerial staff of the companies to supplement the descriptive analysis, whenever appropriate and necessary.

In this regard, direct interview technique was used as supplementary to a postal survey to obtain, clarify the accuracy and adequacy of information required for presentation, and to provide a continuous check on those responses from the returns of all data.

3.2.5 Analyses of Survey Results

One vital objective of the study was to identify movement trends in each MMC of the overall management fees in the current practice. Where possible, data was referenced to a timescale, thus allowing comparison to be made. Care was also taken to identify variations in practice which related to the criteria used in the course of selection of the samples and compilation of the data.

The analyses mainly included the process of calculating the arithmetic mean value of overall monthly management fees and their individual MMCs. Through horizontal averaging over 4 budget years from 2005 to 2008, and vertical averaging across different groupings, i.e., size, age and hour, the monthly mean values of management fees and their MMCs are arrived at separately as a cross reference to the overall monthly mean values derived from the total number of sample buildings.

Whereas, by means of performing horizontal correlations of the monthly mean values of all sample buildings to their sizes and ages, it had reflected the extent of impacts through positive or negative variance. The correlation coefficients either positive or negative were found to indicate the strengths of linear relationships in terms of significance between two variables, e.g., x and y. Pearson product-moment coefficient of correlation which is commonly used to measure the strength of relationship between x and y is denoted by the symbol, r, and computed as shown in the following equation: (Mendenhall *et al.* 1986).

$$r = \frac{S_{xy}}{\sqrt{S_{xx}S_{yy}}} \qquad (1)$$

A positive correlation coefficient represents a certain linkage between two variables which are changed in the same direction, whereas any negative coefficient shows the relationship of two variables, by which one variable moves in an opposite direction to the other. Zero means no relationship between two variables at all (Mendenhall *et al.* 1986).

As such, the benchmark values of all MMCs pertaining to the overall management fees are recommended to be as a focal point of yardstick for adoption or implementation, which shall be subject to further adjustments, if and whenever required.

3.2.6 Limits to the Interpretation of Data

It was felt that the analysis had attempted to exclude distortions, non-sensible deviations and other doubtful data whenever identified during the compilation process. However, some difficulties had been encountered in getting further verifications on the accuracy and relevancy of the data. It has to rely on a limited quantity of data which in turn placed considerable limits on the interpretation of the data.

In view of limited availability of sampling data among each category of the office buildings, it was the most ideal approach to present each category of office premises under different layers of the building sizes and ages separately for better presentable breakdowns and sensible analyses as appeared in Tables 3.2.3(a), (b) and (c) respectively.

Furthermore, all sample buildings are commonly a mix of retails, offices and other commercial activities, there would be some degree of complicated or undefined areas in the accurate apportionments for the shares of overall management fees across different portions of uses within the buildings. As far as the study is mainly concerned with office premises which normally take major parts of the buildings, the data gathered from them have to be assumed as conclusive and reliable for detailed analysis and inference purposes, regardless of any unrealised and unfair apportionment.

SECTION 4 - ANALYSES OF FINDINGS

4.1 Analyses of Monthly Management Fees

4.1.1 Grade A Office Buildings

From a sample of 20 Grade A office buildings ranging from the lowest monthly mean value of management fees at $\$40.06/m^2$ to the highest monthly mean value of $\$80.86/m^2$ within the building sizes from 20,000 m^2 to 122,000 m^2 over the years of 2005 to 2008, this had given rise to an overall monthly mean value of management fees at $\$55.61/m^2$ as shown in Table 4.1(a) and Fig. 4.1(b).

Having regard to the relationship between the monthly mean value of unit rate of management fees and building size on increasing GFA, the negative correlation coefficient (r=-0.5318 at p=0.05) in Table 4.1(b) reflected that there was a moderate negative linkage between the GFA of office buildings and the unit rate of management fee.

Through correlation between the monthly mean value and building age within the sampled group of buildings ranging from 2.5 years to 33 years, a negative correlation coefficient (r=-0.2508 at p=0.05) in Table 4.1(b) represented there was a rather mild negative relationship between these variables, which implied the unit rate of management fees reduced insignificantly corresponding to the buildings on their rising up ages over time.

4.1.2 Grade B Office Buildings

A sample of 16 Grade B office buildings was collected ranging from the lowest monthly mean value of management fees at $\$34.59/m^2$ to the highest one of $\$64.64/m^2$ within the building sizes from 1,964 m^2 to 79,820 m^2 over the years 2005 to 2008, which led to have an overall monthly mean value of $\$46.26/m^2$ as per Table 4.1(a) and Fig. 4.1(b).

In Table 4.1(b), an insignificant positive correlation coefficient (r=0.0167 at p=0.05) was resulted in indicating the building size has insignificant linkage between the building size and the unit rate of management fees.

It was further noted that the building age ranging from 11 years to 31 years as appeared in Table 4.1(a) revealed a very mild positive correlation coefficient (r=0.1241 at p=0.05), as shown in Table 4.1(b), thus reflecting the levying level of overall management fees was probably determined by the up-running age of the premises.

4.1.3 Grade C Office Buildings

An overall monthly mean value of management fees at \$24.74/m^2 in Table 4.1(b) and Fig. 4.1(b) was achieved from a total of 16 Grade C office buildings within a range of building size from 2,072 m^2 to 43,664 m^2 from the lowest monthly mean value at \$11.96/m^2 to the highest one at \$46.67/m^2 throughout the building ages from 8 to 35 years as per Table 4.1(a). A negative correlation coefficient (r=-0.3619 at p=0.05) in Table 4.1(b) showed that the unit rate of management fees did not proportionate to the increasing size of the premises, the greater the GFA in size might not require to raise the unit rate of management fees.

By the breakdown of building age for Grade C office premises ranging from 8 to 35 years, a negative correlation coefficient (r=-0.4252 at p=0.05) in Table 4.1(b) revealed there would not probably be a higher unit rate of management fees for the premises with upward building age. Perhaps the upkeeping standard of the premises might not be considered to be a prime concern to the occupants and landlords.

Table 4.1(a) Sampling Ranges of Monthly Management Fees

Range	No. of Buildings	Building Size	Building Age	Range of Monthly Mean Value
Grade A	20 Buildings	20,000 m^2 to 122,000 m^2	2.5 years to 33 years	\$40.06/m^2 to \$80.86/m^2
Grade B	16 Buildings	1,964 m^2 to 79,820 m^2	11 years to 31 years	\$34.59/m^2 to \$64.64/m^2
Grade C	16 Buildings	2,072 m^2 to 43,664 m^2	8 years to 35 years	\$11.96/m^2 to \$46.67/m^2

Comparatively speaking, the negative correlation coefficients as appeared in Table 4.1(b) indicated there were relatively stronger negative association between the unit rate of management fees and the building size (r=-0.5318 at p=0.05) than the age (r=-0.2508 at p=0.05) for Grade A office premises. Whilst for Grade C office premises, the magnitudes of negative association between the unit rate of management fees and building size (r=-0.3619 at p=0.05), and age (r=-0.4252 at p=0.05) showed no substantial difference. It was also surprised to learn that a mild, even insignificant association, happened to the unit rate between the building size (r=0.0167 at p= 0.05) and age (r=0.1241 at p= 0.05) in Grade B office premises.

It would be reckoned from the above correlation process that Grade A premises are presumably built with superior quality, design, materials and technology to reduce much human resource costs for management operations, whereas only the basic facilities and services are provided to the Grade C premises which may not need much operating costs to keep up higher standard of the building services and facilities. On the other hand, the unit rate of management fees level would gradually be higher upon the larger building size and older age in the Grade B office premises as they might require services and facilities at better standards than in Grade C but less than in Grade A.

Table 4.1(b) **Mean Values and Correlation Coefficients of Monthly Management Fees for Grade A/B/C Office Buildings**

	Grade A	Grade B	Grade C
Overall Monthly Mean Value*	$55.61/m^2	$46.26/m^2	$24.74/m^2
Correlation With Building Size (*r*)	-0.5318	0.0167	-0.3619
Correlation With Building Age (*r*)	-0.2508	0.1241	-0.4252

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.1(b) **Mean Values of Monthly Management Fees for Grade A/B/C Office Buildings**

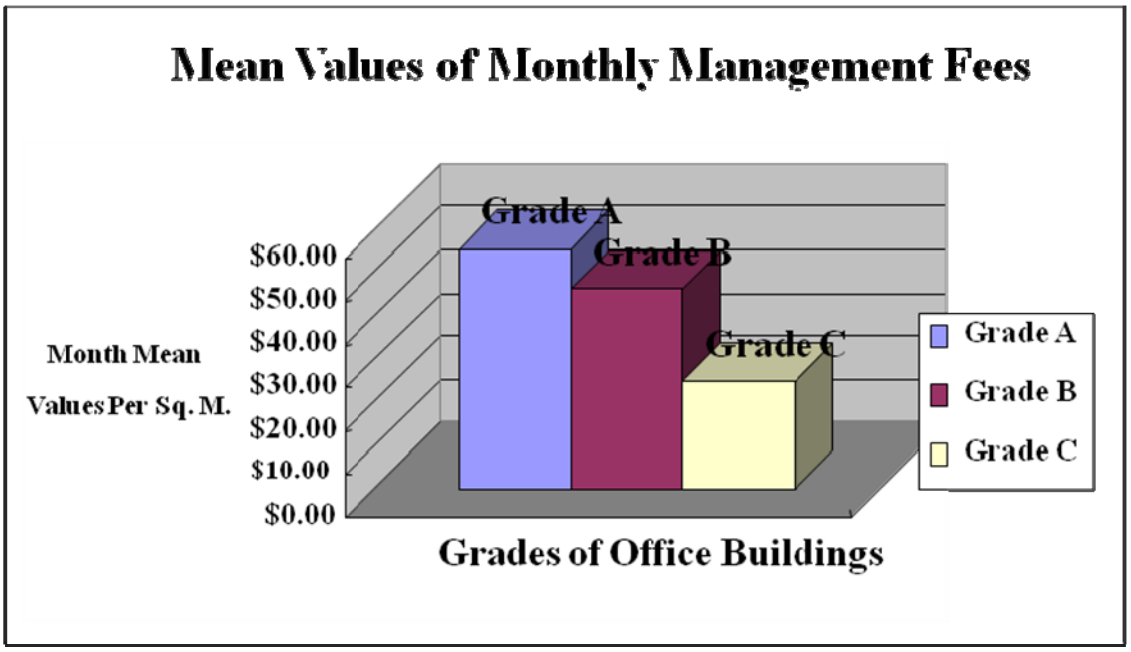
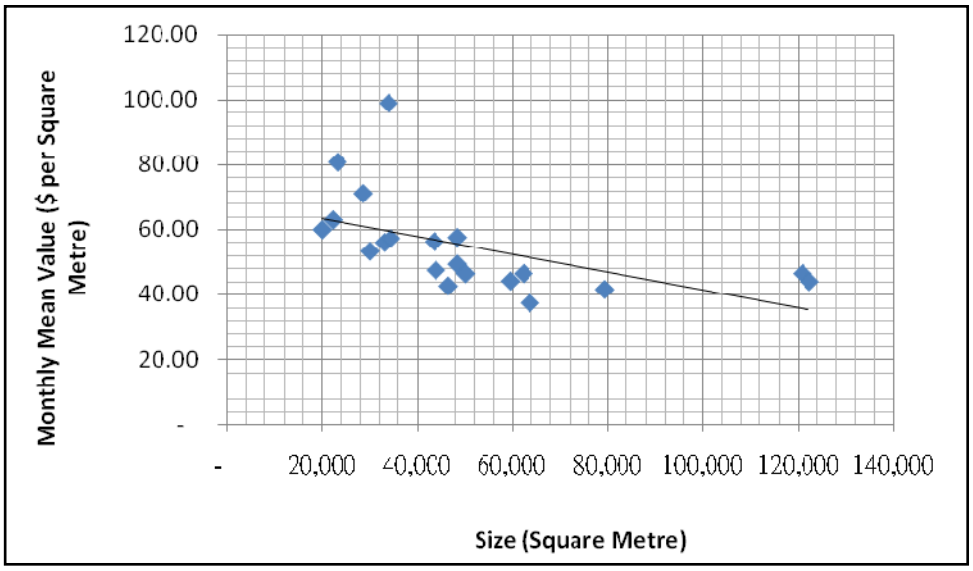
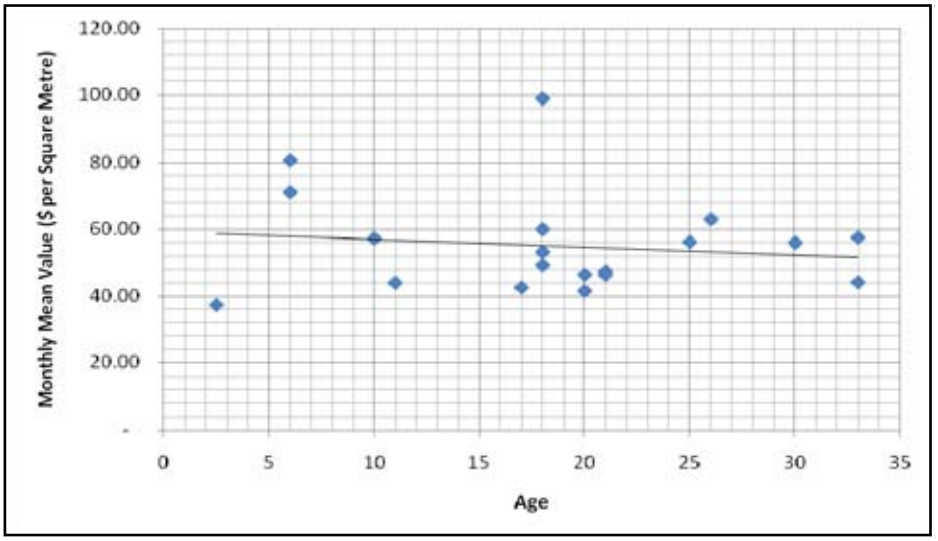


Fig. 4.1(c)(a) **Pearson Correlation Coefficient for Size and Mean Values of Monthly Management Fees (Grade A Office Buildings)**



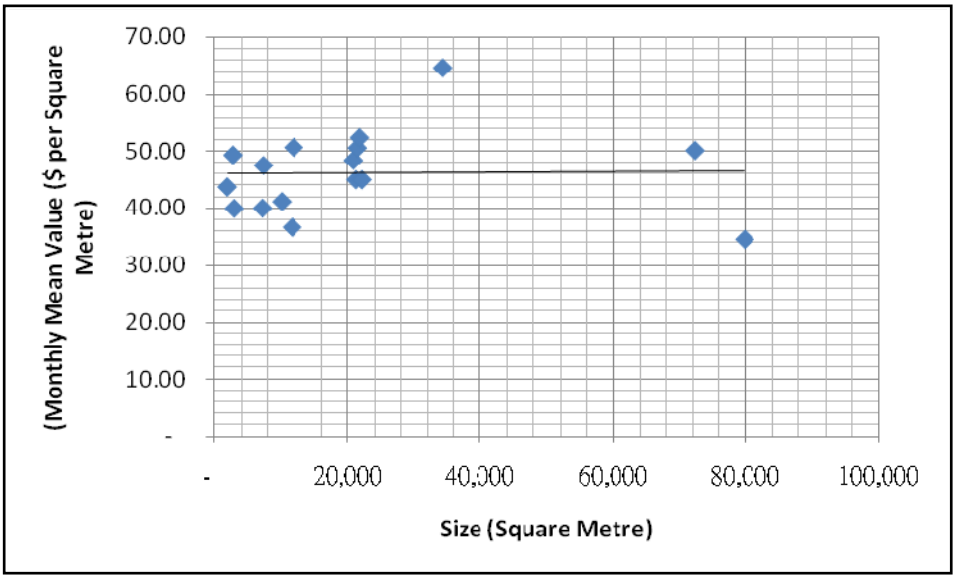
(r=-0.5318 at p=0.05)

Fig. 4.1(c)(b) **Pearson Correlation Coefficient for Age and Mean Values of Monthly Management Fees (Grade A Office Buildings)**



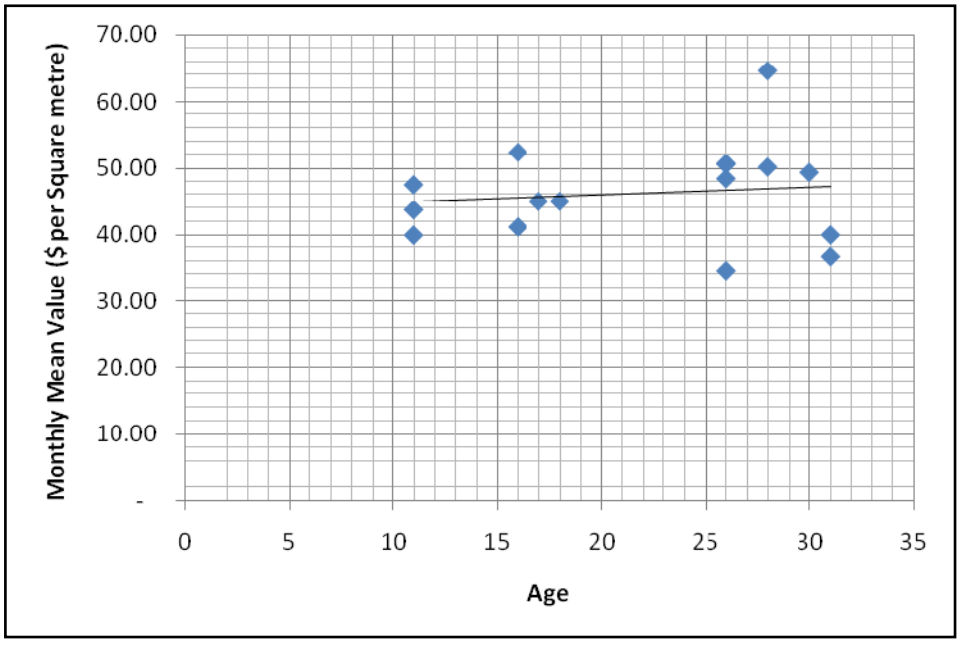
(r=-0.2508 at p=0.05)

Fig. 4.1(c)(c) **Pearson Correlation Coefficient for Size and Mean Values of Monthly Management Fees (Grade B Office Buildings)**



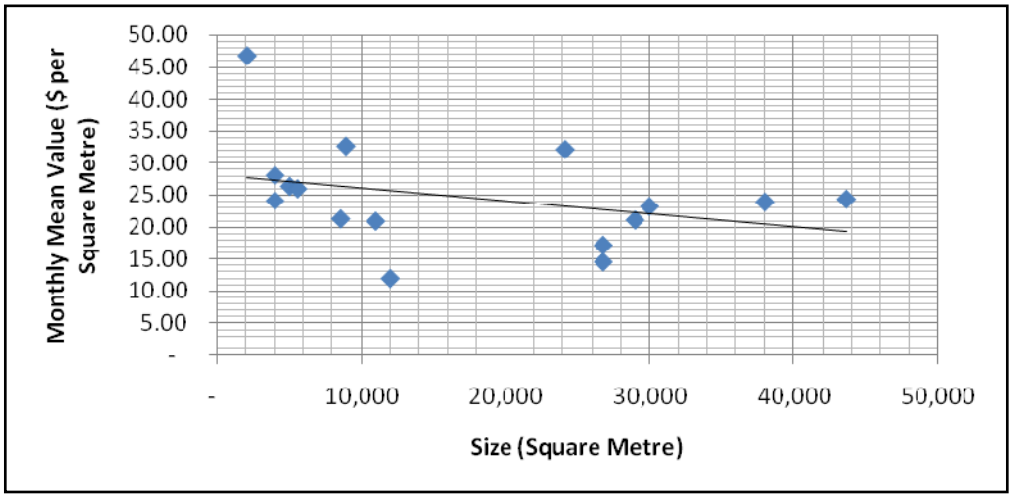
(r=0.0167 at p=0.05)

Fig. 4.1(c)(d) **Pearson Correlation Coefficient for Age and Mean Values of Monthly Management Fees (Grade B Office Buildings)**



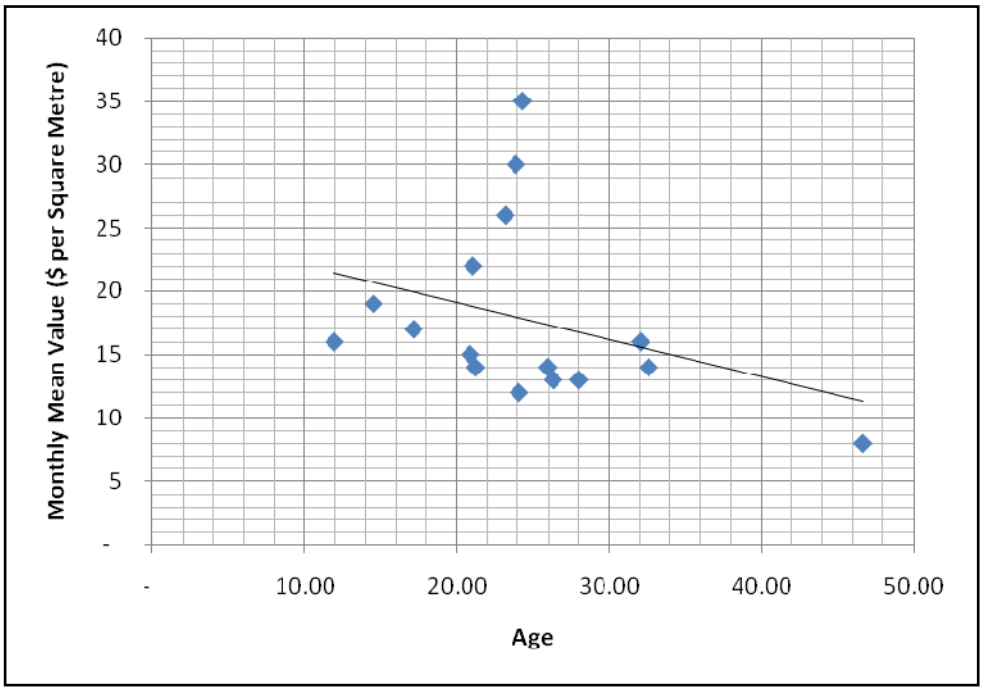
(r=0.1241 at p=0.05)

Fig. 4.1(c)(e) **Pearson Correlation Coefficient for Size and Mean Values of Monthly Management Fees (Grade C Office Buildings)**



(r=-0.3619 at p=0.05)

Fig. 4.1(c)(f) **Pearson Correlation Coefficient for Age and Mean Values of Monthly Management Fees (Grade C Office Buildings)**



(r=-0.4252 at p=0.05)

4.2 Analyses of Individual Management and Maintenance Components (MMCs) Pertaining to Monthly Management Fees

Having obtained the overall monthly mean values and correlation coefficients of unit rate of monthly management fees amongst different grades of office buildings, it is more precisely to identify those components pertaining to the monthly management fees. In current practices within the industry, it has been revealed that the management fee structure normally composes of 13 Management and Maintenance Components (MMCs) as shown in Table 5.1 of page 66 to cover all basic and essential items of expenditures for property and facility management services.

In order to concentrate much emphasis on those which had played most key roles towards the property and facility management professionals, it is considered to select 5 salient items of 13 MMCs in terms of their essentiality, cost effectiveness, variability, quality and efficiency of pledged services in industry for detail analyses and illustration purposes; namely, Electricity, Cleaning and Waste Disposal, Building Works, Building Services Works and Security Services charges. Whilst the other remaining 8 MMCs are excluded for the detail study in view of their relative minor significant nature and numerous variations of services and facilities provided amongst each grade of office buildings, for example, Ambassador Services; Transport Shuttle Services; and etc. in Staff Costs components and Gardening and Landscaping components respectively.

Upon having selected 5 items of MMCs, each individual MMC is expressed in unit rate per GFA on a monthly basis for further analysis purposes. Hence, the overall monthly mean value and correlation coefficient of each MMC with respect to the size, age and opening hour are derived to quantify the analysed results in the following manner.

4.2.1 Electricity Charges

4.2.1.1 Grade A Office Buildings

The electricity charges took most of the overheads costs pertaining to the management fees for basic daily management operations. An overall monthly mean value of $\$17.24/m^2$, or 30.00% of the total expenditures was achieved from a set of 20 sampled buildings over 2005 to 2008 ranging from the lowest monthly mean value of $\$6.50/m^2$ to $\$26.67/m^2$ as shown in Table 4.2.1(a).

A negative correlation coefficient (r=-0.5386 at p=0.05) in Table 4.2.1(a) indicated that the larger the size of the premises, there might not be a gradual rise of unit rate in the expenditure of electricity, probably there were other factors including building design and materials of energy saving, and various efficient measures for saving the consumption level. Fig. 4.2.1(a1) refers.

On the other hand, there was a positive relationship between the unit rate of electricity charges and opening hour of office premises as revealed by a mild positive correlation coefficient (r=0.3460 at p=0.05) in Table 4.2.1(a). It seemed reasonable to believe that the longer the opening hours, more electricity supplies were needed to provide services and facilities upon an increase in occupants during the prolonged opening hours. Fig. 4.2.1(a2) refers.

Table 4.2.1(a) Mean Values and Correlation Coefficient of Monthly Electricity Charges for Grade A Office Buildings (By Size and Opening Hour)

Grouping By Size	Monthly Mean Value	Grouping By Opening Hour	Monthly Mean Value	(% of Total)
less than 30,000 m^2	$21.76/$m^2$	**Less than 11 hours**	$13.48/$m^2$	---
30,000 m^2 - 45,000 m^2	$19.37/$m^2$	**From 11 to 13 hours**	$16.25/$m^2$	---
45,001 m^2 - 61,000 m^2	$12.56/$m^2$	**From 14 to 16 hours**	$17.47/$m^2$	---
Over 61,000 m^2	$13.39/$m^2$	**Over 16 hours**	$19.90/$m^2$	---
Correlation Coefficient (r)	**-0.5386**	**Correlation Coefficient (r)**	**0.3460**	**---**
Overall Monthly Mean Value*	**$17.24/$m^2$**			**(30.00%)**
Range of Monthly Mean Value	**$6.50/$m^2$ to $26.67/$m^2$**			

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.1(a1) Mean Values of Monthly Electricity Charges for Grade A Office Buildings (By Size)

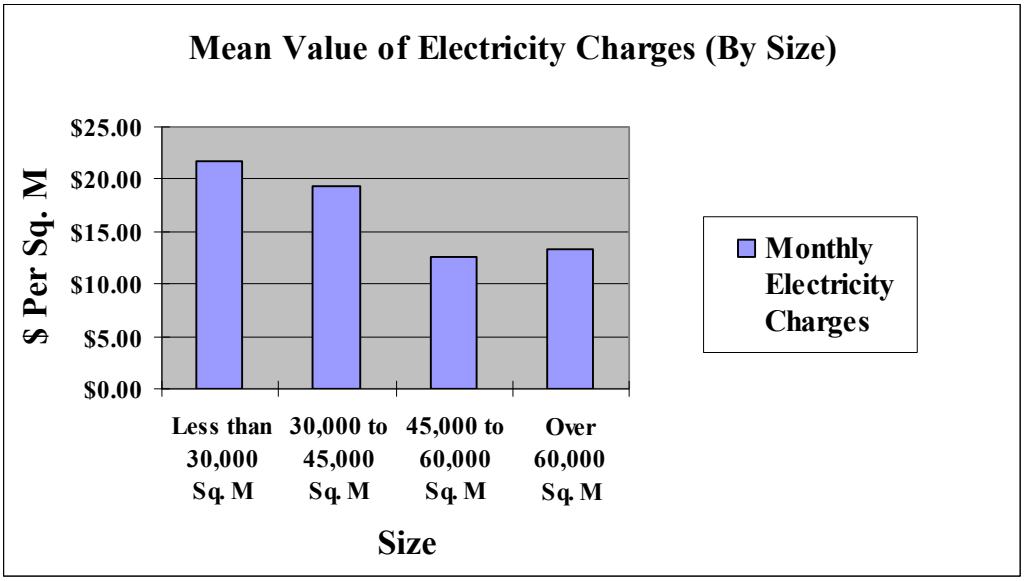
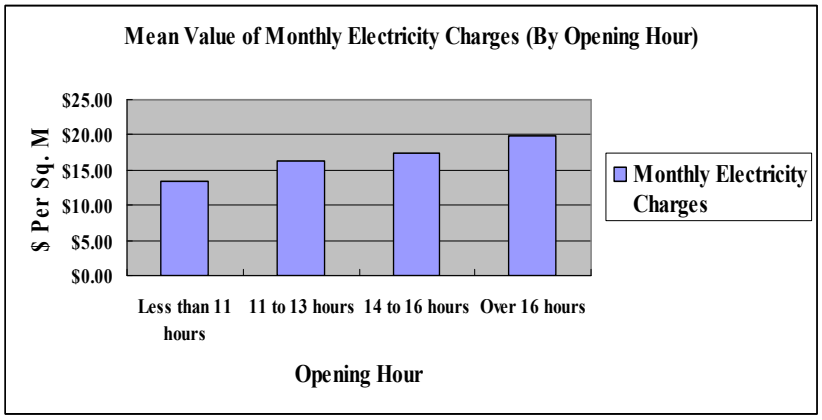


Fig. 4.2.1(a2) **Mean Values of Monthly Electricity Charges for Grade A Office Buildings (By Opening Hour)**



4.2.1.2 Grade B Office Buildings

A sample of 16 Grade B office buildings over 4 years from 2005 to 2008 within a range of monthly mean values from \$5.36/m^2 to \$23.81/m^2 had given rise to an overall monthly mean value of \$15.31/m^2 as shown in Table 4.2.1(b).

There was a mild positive association between the building size and electricity consumption, indicating that buildings of greater floor areas would most likely to have slightly higher unit rate of electricity consumption as reflected by a weak positive correlation coefficient (r=0.1666 at p=0.05) in the Table 4.2.1(b) and Fig. 4.2.1(b1).

However, a moderate negative correlation coefficient, (r=-0.4077 at p=0.05) as appeared in Table 4.2.1(b) and Fig. 4.2.1(b2) revealed the longer opening hours did not necessarily have to cause higher unit rate of electricity consumption, depending much upon the occupancy situations in the premises and the expected provision of facilities and services after normal opening hours.

Table 4.2.1(b) **Mean Values and Correlation Coefficient of Monthly Electricity Charges for Grade B Office Buildings (By Size and Opening Hour)**

Grouping By Size	Monthly Mean Value	Grouping By Opening Hour	Monthly Mean Value	(% of Total)
less than 10,000 m^2	\$15.29/m^2	**Less than 10 hours**	\$20.11/m^2	---
10,000 m^2 - 21,000 m^2	\$14.70/m^2	**From 10 to 12 hours**	\$15.76/m^2	---
21,001 m^2 - 30,000 m^2	\$15.46/m^2	**From 13 to 15 hours**	\$17.17/m^2	---
Over 30,000 m^2	\$17.83/m^2	**Over 15 hours**	\$10.27/m^2	---
Correlation Coefficient (r)	**0.1666**	**Correlation Coefficient (r)**	**-0.4077**	---
Overall Monthly Mean Value*	**\$15.31/m^2**			**(33.10%)**
Range of Monthly Mean Value	**\$5.36/m^2 to \$23.81/m^2**			

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.1(b1) Mean Values of Monthly Electricity Charges for Grade B Office Buildings (By Size)

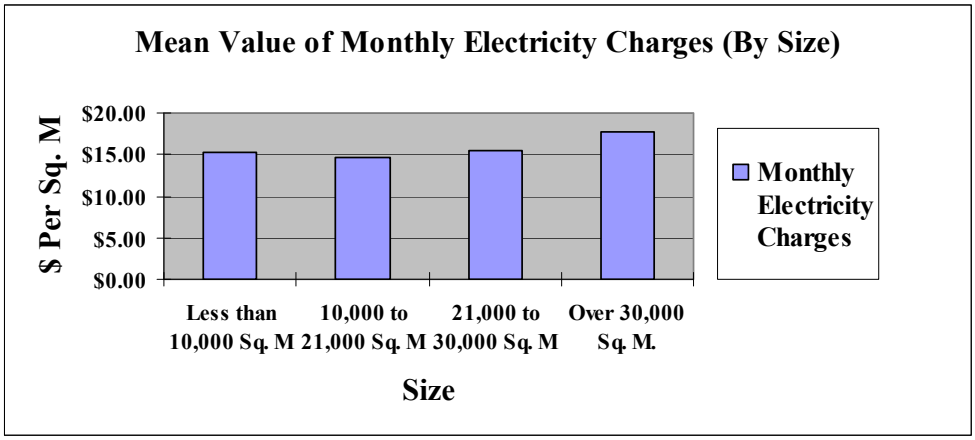
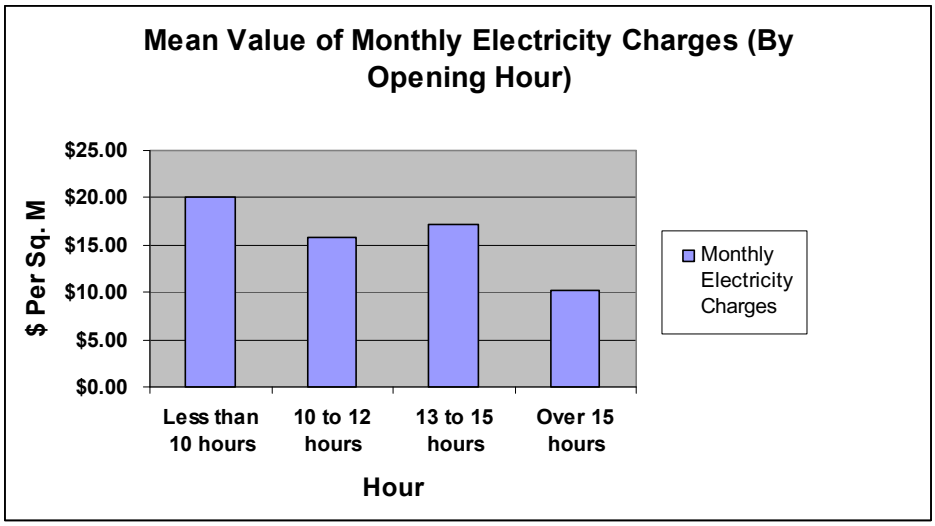


Fig. 4.2.1(b2) Mean Values of Monthly Electricity Charges for Grade B Office Buildings (By Opening Hour)



4.2.1.3 Grade C Office Buildings

It was noted an overall monthly mean value of electricity charges at \$5.55/m^2 was arrived at from a range of lowest monthly mean values of \$2.16/m^2 to the highest one of \$13.29/m^2 within a total of 16 sampled Grade C office buildings over 4 years as shown in Table 4.2.1(c).

In the case of Grade C office buildings, the unit rate of monthly electricity charges was likely to decrease corresponding to a rise in the floor area of the premises. This mild negative association between the unit rate of electricity charges and building size has been indicated by

the negative correlation coefficient, (r=-0.1509 at p=0.05) in the Table 4.2.1(c) and Fig. 4.2.1(c1).

In the event of having more occupants stayed in Grade C office premises for longer periods after normal opening hours, the situation might cause to increase the electricity expenses on running the premises for convenience and accessibility to the occupants during prolonged opening hours. Such phenomenon was illustrated by the mild positive correlation coefficient (r=0.1831 at p=0.05) in the Table 4.2.1(c) and Fig. 4.2.1(c2).

Table 4.2.1(c) Mean Values and Correlation Coefficient of Monthly Electricity Charges for Grade C Office Buildings (By Size and Opening Hour)

Grouping By Size	Monthly Mean Value	Grouping By Opening Hour	Monthly Mean Value	(% of Total)
less than 7,000 m^2	$5.64/$m^2$	**Less than 11 hours**	$4.63/$m^2$	---
7,000 m^2 - 25,000 m^2	$4.71/$m^2$	**From 11 to 18 hours**	$4.14/$m^2$	---
Over 25,000 m^2	$3.61/$m^2$	**Over 18 hours**	$5.18/$m^2$	---
Correlation Coefficient (r)	**-0.1509**	**Correlation Coefficient (r)**	**0.1831**	---
Overall Monthly Mean Value*	**$5.55/$m^2$**			**(22.43%)**
Range of Monthly Mean Value	**$2.16/$m^2$ to $13.29/$m^2$**			

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.1(c1) Mean Values of Monthly Electricity Charges for Grade C Office Buildings (By Size)

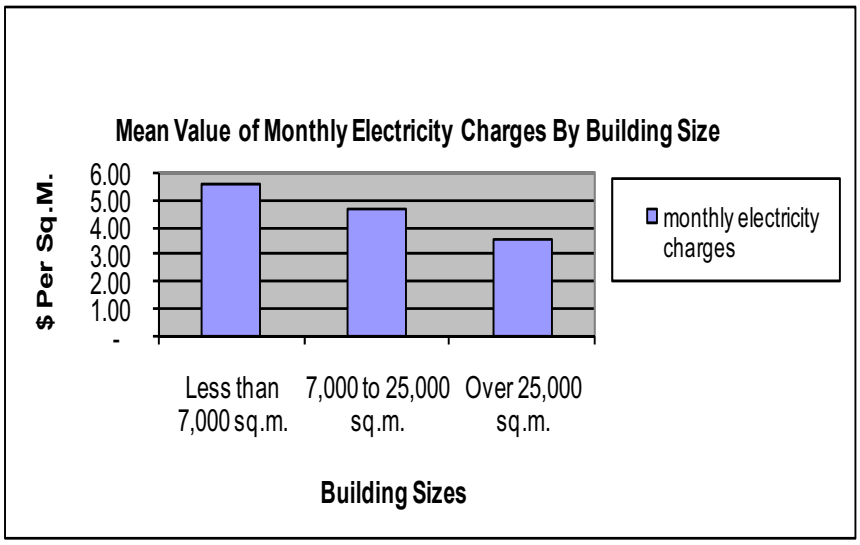
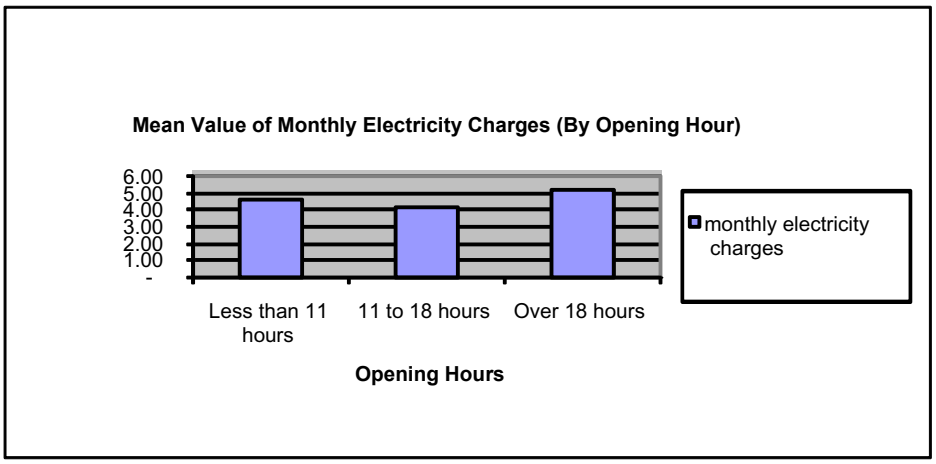


Fig. 4.2.1(c2) Mean Values of Monthly Electricity Charges for Grade C Office Buildings (By Opening Hour)



4.2.1.4 Comparison of Mean Values for Monthly Electricity Charges amongst Grade A/B/C Office Buildings (By Year)

A minor fluctuation in the movement of mean values of monthly Electricity Charges over the past four years for Grade A office buildings represented a nearly constant trend of expenses on electricity charges throughout the periods as illustrated Table 4.2.1(d). Whereas the variation range of mean values for monthly electricity charges appeared more visibly both in Grade B and C office premises throughout the same period.

On the other hand, the electricity charges paid for Grade A and B office buildings were greatly higher than that of Grade C over the 4 years from 2005 to 2008 as illustrated in the Figures 4.2.1(d1) and 4.2.1(d2), most probably due to major differences in construction design, style and facilities between each other.

Table 4.2.1(d) Mean Values of Monthly Electricity Charges for Grade A/B/C Office Buildings (By Year)

Office Building	**Grade A**		**Grade B**		**Grade C**	
Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of Total)**
2005	$\$17.49/m^2$	---	$\$13.26/m^2$	---	$\$3.85/m^2$	---
2006	$\$15.13/m^2$	---	$\$16.01/m^2$	---	$\$4.03/m^2$	---
2007	$\$17.09/m^2$	---	$\$15.89/m^2$	---	$\$5.50/m^2$	---
2008	$\$17.37/m^2$	---	$\$18.12/m^2$	---	$\$5.21/m^2$	---
Overall Monthly Mean Value*	**$\$17.24/m^2$**	**(31.00%)**	**$\$15.31/m^2$**	**(33.10%)**	**$\$5.55/m^2$**	**(22.43%)**

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.1(d1) **Mean Values of Monthly Electricity Charges for Grade A/B/C Office Buildings (From 2005 to 2008)**

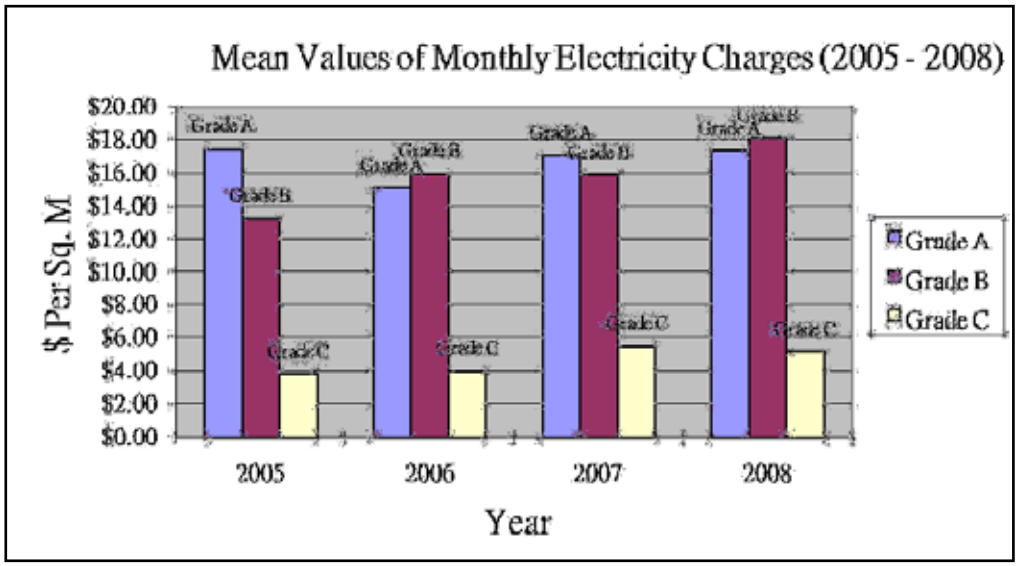
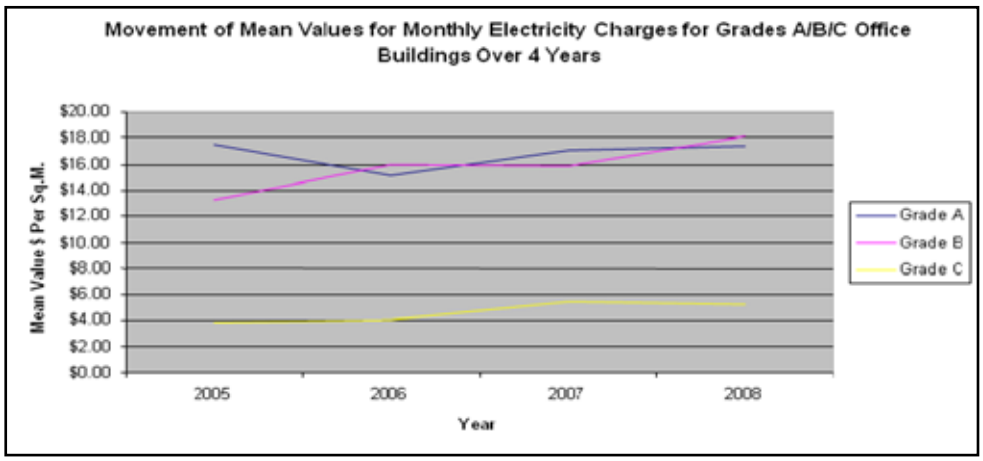


Fig. 4.2.1(d2) **Movement of Mean Values for Monthly Electricity Charges for Grade A/B/C Office Buildings (From 2005 to 2008)**



4.2.2 Cleaning and Waste Disposal Charges

4.2.2.1 Grade A Office Buildings

From a group of 20 sampled Grade A office buildings ranging from the lowest monthly mean value of \$1.55/m^2 to the highest one at \$11.39/m^2, an overall monthly mean value was found at \$4.31/m^2, approximately about 7.75% of the total management expenses as appeared in Table 4.2.2(a), which seemed to be a less significant portion within the total expenditures.

The cleaning and waste disposals mainly included daily, weekly and monthly schemes. The level of charges was closely related to the arrangement of cleaning and waste disposals schedules, rather than with the building size. A mild negative correlation coefficient (r=-0.2378 at p=0.05) indicated the unit rate of Cleaning and Waste Disposal Charges had less relationship with the building size.

There could probably be higher charges due to the disposals debris and wasted materials and after-works cleanings in the event of major renovation and upgrading works to the premises during a particular period of time. A rise in the expenses in 2008 might be caused by frequent cleaning and disposal schemes due to seasonal needs, or occurrence of major building upgrading works as reflected in Table 4.2.2(a) and Fig. 4.2.2(a2).

Table 4.2.2(a) Mean Values and Correlation Coefficient of Monthly Cleaning and Waste Disposal Charges for Grade A Office Buildings (By Size and Year)

Grouping By Size	Monthly Mean Value	(% of Total)	Grouping By Year	Monthly Mean Value	(% of Total)
less than 30,000 m^2	$4.56/$m^2$	---	**2005**	$4.31/$m^2$	---
30,000 m^2 - 45,000 m^2	$4.36/$m^2$	---	**2006**	$4.40/$m^2$	---
45,001 m^2 - 61,000 m^2	$3.98/$m^2$	---	**2007**	$4.30/$m^2$	---
Over 61,000 m^2	$4.54/$m^2$	---	**2008**	$4.61/$m^2$	---
Overall Monthly Mean Value*	**$4.31/$m^2$**	**(7.75%)**	**Overall Monthly Mean Value***	**$4.31/$m^2$**	**(7.75%)**
Correlation Coefficient (*r*)	**-0.2378**		**---**	**---**	
Range of Monthly Mean Value	**$1.55/$m^2$ - $11.39/$m^2$**				

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.2(a1) Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade A Office Buildings (By Size)

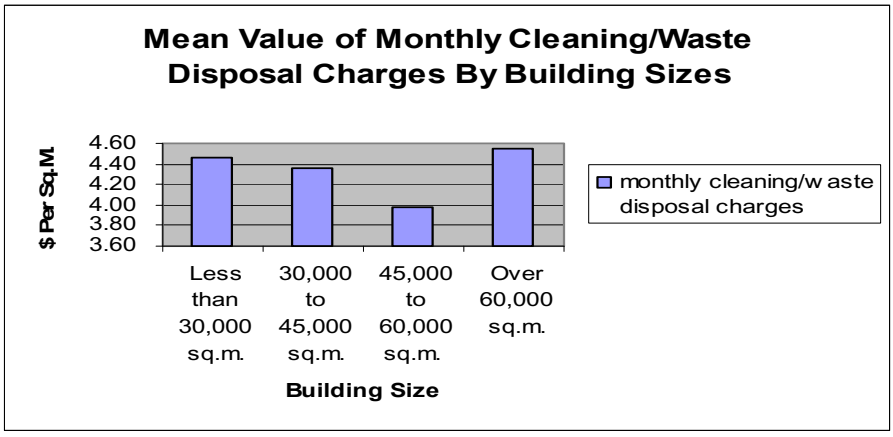
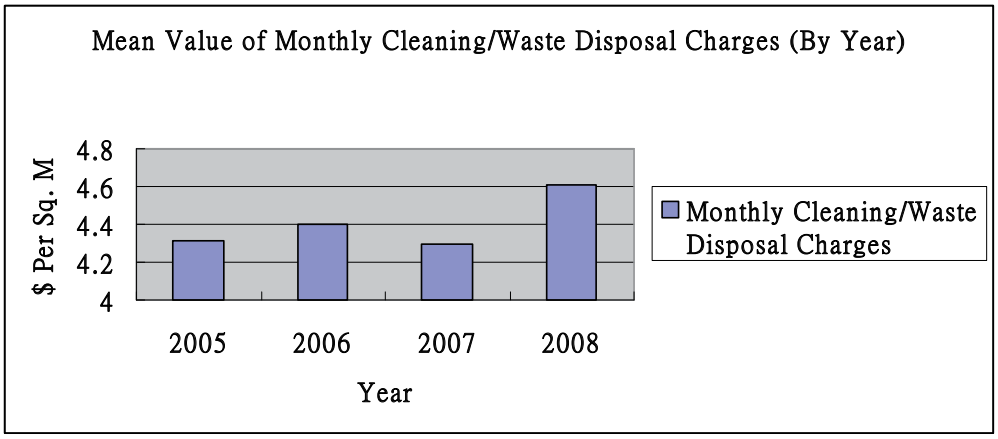


Fig. 4.2.2(a2) Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade A Office Buildings (By Year)



4.2.2.2 Grade B Office Buildings

An overall monthly mean value of $\$3.65/m^2$ was arrived at from a group of 16 sampled Grade C office buildings ranging from the lowest monthly mean value of $\$1.55/m^2$ to $\$8.55/m^2$ over a period of 4 years from 2005 to 2008 as illustrated in Table 4.2.2(b) and Fig. 4.2.2(b1)

In Table 4.2.2(b), a negative correlation coefficient (r =-0.3277 at p=0.05) showed there was a moderate negative relationship between the unit rate of cleaning and waste disposal charges and the building size, indicating larger premises did not necessarily lead to push up the charges for the item.

From the years 2005 to 2008, the expenses of cleaning and waste disposal did not vary too much throughout these periods as per Table 4.2.2(b) and Fig. 4.2.2(b2) respectively.

Table 4.2.2(b) Mean Values and Correlation Coefficient of Monthly Cleaning and Waste Disposal Charges for Grade B Office Buildings (By Size and Year)

Grouping By Size	Monthly Mean Value	(% of Total)	Grouping By Year	Monthly Mean Value	(% of Total)
less than 10,000 m^2	$\$3.16/m^2$	---	**2005**	$\$3.04/m^2$	---
10,000 m^2 - 21,000 m^2	$\$3.45/m^2$	---	**2006**	$\$3.23/m^2$	---
21,001 m^2 - 30,000 m^2	$\$4.39/m^2$	---	**2007**	$\$3.67/m^2$	---
Over 30,000 m^2	$\$2.12/m^2$	---	**2008**	$\$3.17/m^2$	---
Overall Monthly Mean Value*	**$\$3.65/m^2$**	**(7.89%)**	**Overall Monthly Mean Value***	**$\$3.65/m^2$**	**(7.89%)**
Correlation Coefficient (r)	**-0.3277**		---	---	
Range of Monthly Mean Value	**$\$1.50/m^2$ - $\$8.55/m^2$**				

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.2(b1) **Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade B Office Buildings (By Size)**

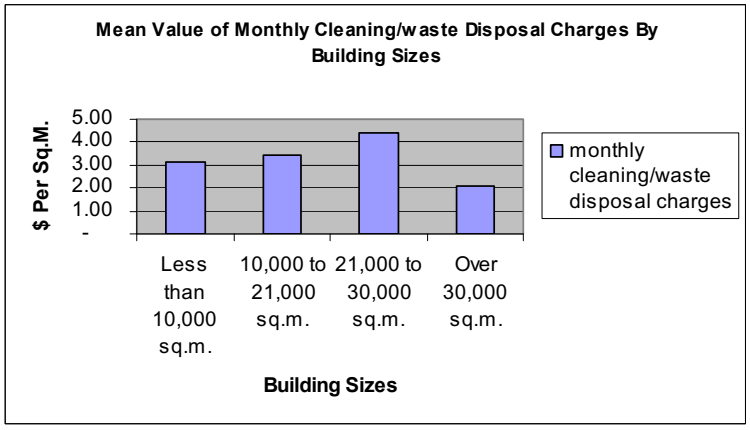
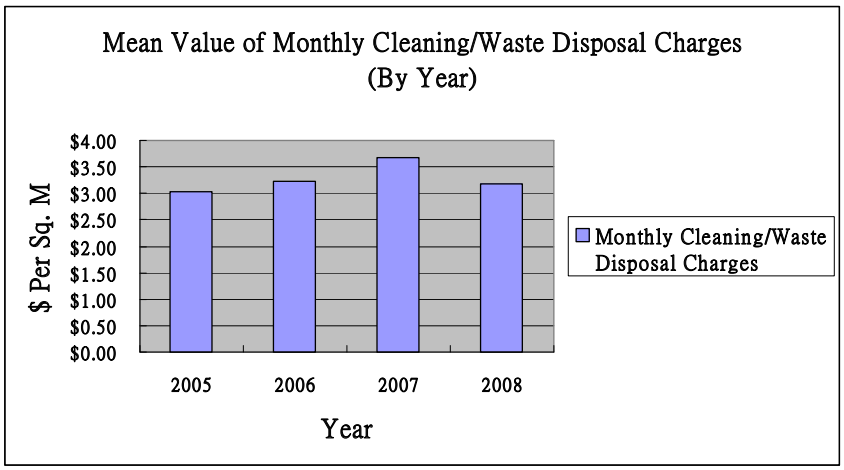


Fig. 4.2.2(b2) **Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade B Office Buildings (By Year)**



4.2.2.3 Grade C Office Buildings

A sample of 16 Grade C office buildings ranging from the lowest monthly mean value of \$1.14/m^2 to the highest at \$3.62/m^2 over 4 years from 2005 to 2008 resulted in having an overall monthly mean value of \$2.07/m^2, which formed 8.37% of the management fees. Table 4.2.2(c) refers

The cleaning and waste disposal charges in Grade C premises had a negative correlation coefficient (r=-0.3017 at p=0.05) between the unit rate of expenses and the building size as

indicated in Table 4.2.2(c), this probably represented the larger the building size would have caused less impact on the charge level.

Over the period of 4 years from 2005 to 2008, there was a moderate variation of cleaning and waste disposal charges only in 2005 when compared with the other 3 years. See Fig. 4.2.2(c2).

Table 4.2.2(c) **Mean Values and Correlation Coefficient of Monthly Cleaning and Waste Disposal Charges for Grade C Office Buildings (By Size and Year)**

Grouping By Size	Monthly Mean Value	(% of Total)	Grouping By Year	Monthly Mean Value	(% of Total)
less than 7,000 m^2	$2.32/$m^2$	---	**2005**	$1.79/$m^2$	---
7,000 m^2 - 25,000 m^2	$2.47/$m^2$	---	**2006**	$2.21/$m^2$	---
Over 25,000 m^2	$1.62/$m^2$	---	**2007**	$2.17/$m^2$	---
---	---	---	**2008**	$2.37/ m^2	---
Overall Monthly Mean Value*	**$2.07/$m^2$**	**(8.37%)**	**Overall Monthly Mean Value***	**$2.07/$m^2$**	**(8.37%)**
Correlation Coefficient (*r*)	**-0.3017**		---	---	
Range of Monthly Mean Value	**$1.14/$m^2$ - $3.62/$m^2$**				

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.2(c1) **Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade C Office Buildings (By Size)**

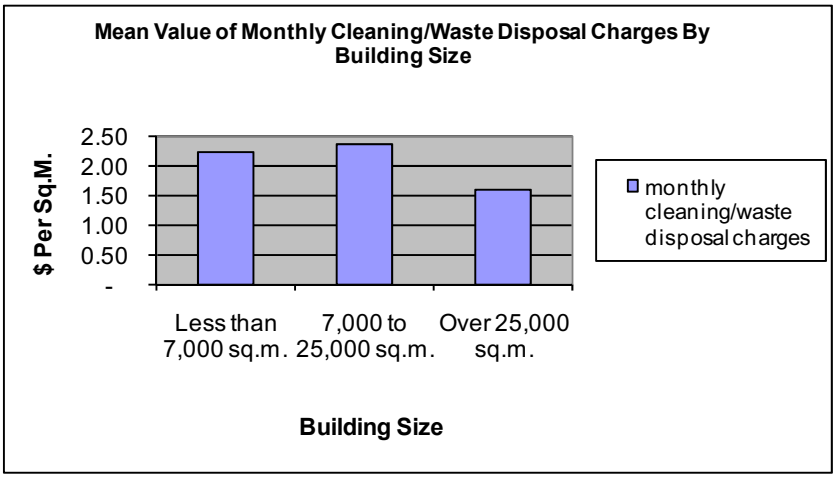
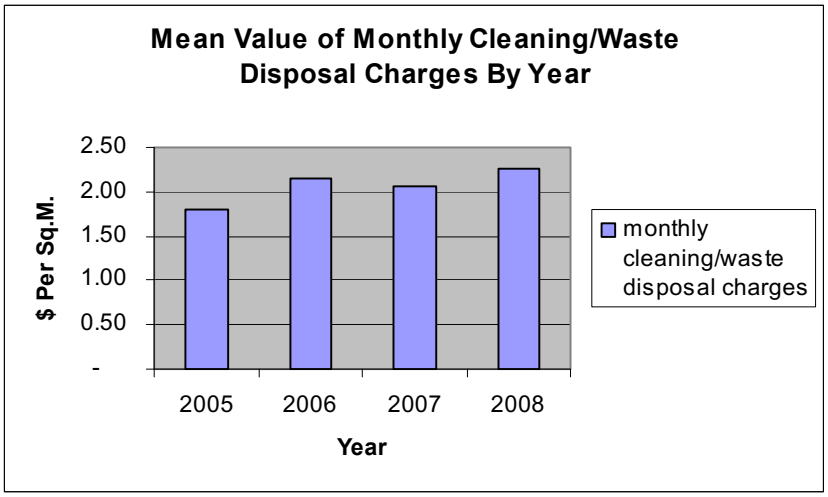


Fig. 4.2.2(c2) **Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade C Office Buildings (By Year)**



4.2.2.4 Comparison of Mean Values for Monthly Cleaning and Waste Disposal Charges amongst Grade A/B/C Office Buildings (By Year)

As far as the cleaning and waste disposal charges are concerned, Table 4.2.2(d), Figures 4.2.2(d1) and 4.2.2(d2) as below revealed that there was a slightly variation in the level of expenses amongst Grade A, B and C office buildings over the same period of 4 years, their minor differentiations were most probably mainly due to the change of occupancy conditions during the survey period or seasonal fluctuation.

Table 4.2.2(d) **Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade A/B/C Office Buildings (By Year)**

Office Building	**Grade A**		**Grade B**		**Grade C**	
Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of Total)**
2005	$\$4.31/m^2$	---	$\$3.04/m^2$	---	$\$1.79/m^2$	---
2006	$\$4.40/m^2$	---	$\$3.23/m^2$	---	$\$2.21/m^2$	---
2007	$\$4.30/m^2$	---	$\$3.67/m^2$	---	$\$2.17/m^2$	---
2008	$\$4.61/m^2$	---	$\$3.17/m^2$	---	$\$2.37/ m^2$	---
Overall Monthly Mean Value*	**$\$4.31/m^2$**	**(7.75%)**	**$\$3.65/m^2$**	**(7.89%)**	**$\$2.07/m^2$**	**(8.37%)**

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.2(d1) **Mean Values of Monthly Cleaning and Waste Disposal Charges for Grade A/B/C Office Buildings (From 2005 to 2008)**

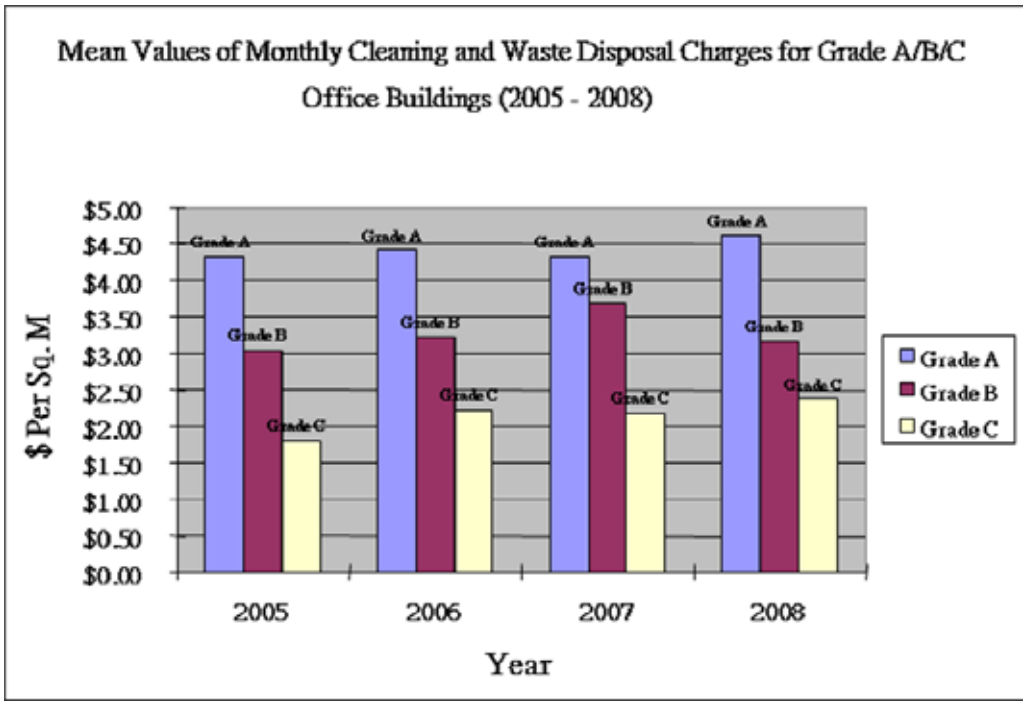
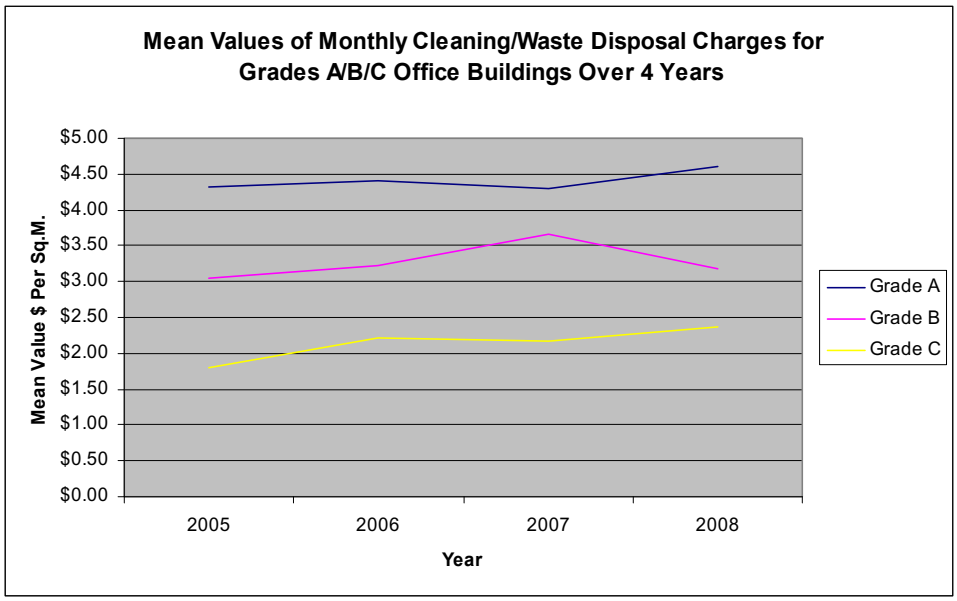


Fig. 4.2.2(d2) **Movement of Mean Values for Monthly Cleaning and Waste Disposal Charges for Grade A/B/C Office Buildings (From 2005 to 2008)**



4.2.3 Building Works Charges

4.2.3.1 Grade A Office Buildings

An overall monthly mean value of building works charges was arrived at $\$2.28/m^2$, or 4.10% of the total expenditures pertaining to management fees from 20 sampled buildings ranging from the lowest monthly mean value of $\$0.49/m^2$ to the highest one of $\$9.12/m^2$ over the years from 2005 to 2008, as revealed in Table 4.2.3(a), Figures 4.2.3(a1), 4.2.3(a2) and 4.2.3(a3).

Building works are mainly composed of works to be taken in order to upkeep or upgrade the buildings through repairs and maintenance and so on, larger floor areas will certainly be subject to higher risk of building works to maintain the premises at a required standard. A positive correlation coefficient (r=0.4549 at p=0.05) in Table 4.2.3(a) showed a positive relationship between the unit rate of the Building Works Charges and building size. This represented when there was an increase in the floor areas; they were likely subject to spend more expenses to keep their appearance, efficient and quality services to an optimum level.

When premises become aged over time, they needed more attentions to maintain their outlook, durability and quality over the building life cycle to avoid further depreciation and deterioration process, constant check-up and updating works might have resulted in boosting the expenses, which was also revealed by a positive correlation coefficient (r=0.1767 at p=0.05) in Table 4.2.3(a).

Table 4.2.3(a) Mean Values and Correlation Coefficient of Monthly Building Works Charges for Grade A Office Buildings (By Size, Age and Year)

Grade A Office Buildings	**Building Works include (a)+(b) +(c)**		**(a) Building Fabrics**		**(b) Plumbing and Drainage**		**(c) Others**	
Range of Monthly Mean Value	**$0.49/m² to $9.12/m²**		**$0.41/m² to $7.01/m²**		**$0.06/m² to $0.79/m²**		**$0.01/m² to $1.31/ m²**	
Grouping By Size	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
Less than 30,000 m²	$1.65/m²	---	$0.67/m²	---	$0.29/m²	---	$0.79/m²	---
30,000 m² - 45,000 m²	$1.85/m²	---	$0.79/m²	---	$0.28/m²	---	$0.78/m²	---
45,001 m² - 61,000 m²	$2.70/m²	---	$1.54/m²	---	$0.46/m²	---	$0.73/m²	---
Over 61,000 m²	$3.11/m²	---	$2.22/m²	---	$0.38/m²	---	$0.54/m²	---
Overall Monthly Mean Value*	**$2.28/m²**	**(4.10)**	**$1.23/m²**	**(53.94)**	**$0.35/m²**	**(15.35)**	**$0.70/m²**	**(30.71)**
Correlation Coefficient (*r*)	**0.4549**		**0.6509**		**0.0601**		**0.5092**	
Grouping By Age	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
Less than 11 years	$2.95/m²	---	$1.75/m²	---	$0.18/m²	---	$2.09/m²	---
11 - 18 years	$1.38/m²	---	$0.78/m²	----	$0.28/m²	---	$0.36/m²	---
19 - 24 years	$1.48/m²	---	$0.78/m²	---	$0.44/m²	---	$0.21/m²	---
Over 24 years	$3.58/m²	---	$1.78/m²	---	$0.68/m²	---	$1.14/m²	---
Overall Monthly Mean Value*	**$2.28/m²**	**(4.10)**	**$1.23/m²**	**(53.94)**	**$0.35/m²**	**(15.35)**	**$0.70/m²**	**(30.71)**
Correlation Coefficient (*r*)	**0.1767**		**0.0944**		**0.6074**		**0.3221**	
Grouping By Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
2005	$2.04/m²	---	$1.12/m²	---	$0.38/m²	---	$0.64/m²	---
2006	$2.12/m²	---	$1.30/m²	---	$0.36/m²	---	$0.60/m²	---
2007	$2.18/m²	---	$1.31/m²	---	$0.36/m²	---	$0.50/m²	---
2008	$2.74/m²	---	$1.15/m²	---	$0.30/m²	---	$1.02/m²	---
Overall Monthly Mean Value*	**$2.28/m²**	**(4.10)**	**$1.23/m²**	**(53.94)**	**$0.35/m²**	**(15.35)**	**$0.70/m²**	**(30.71)**

* Overall Monthly Mean Value which is the monthly mean value taken from the value of each month over the sample years is the sum of (a)+(b)+(c).

Fig. 4.2.3(a1) Mean Values of Monthly Building Works Charges for Grade A Office Buildings (By Size)

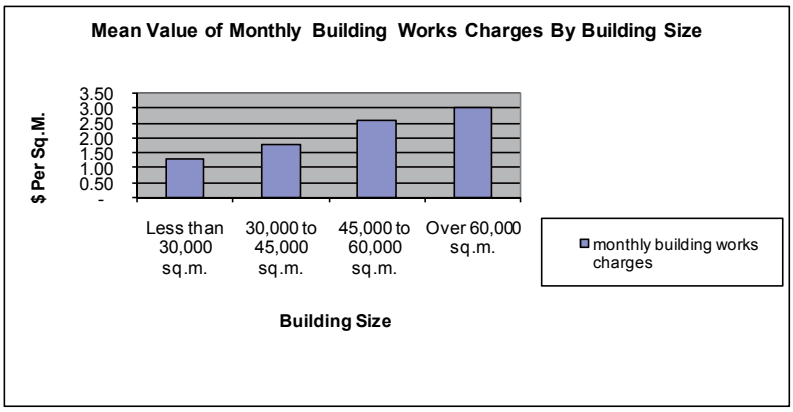


Fig. 4.2.3(a2) Mean Values of Monthly Building Works Charges for Grade A Office Buildings (By Age)

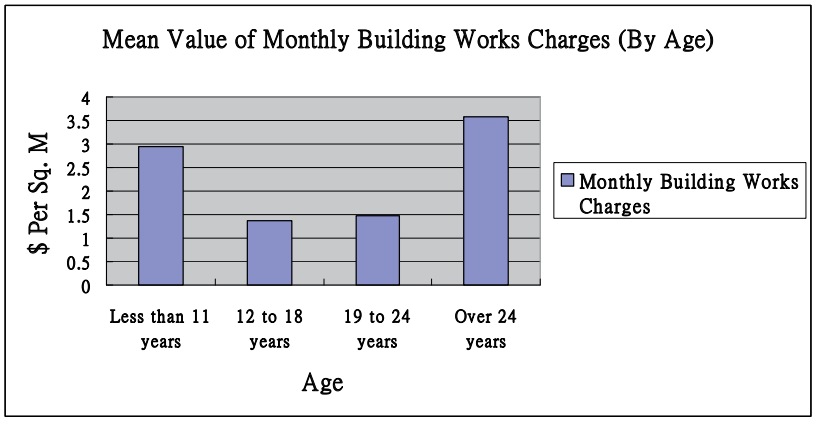
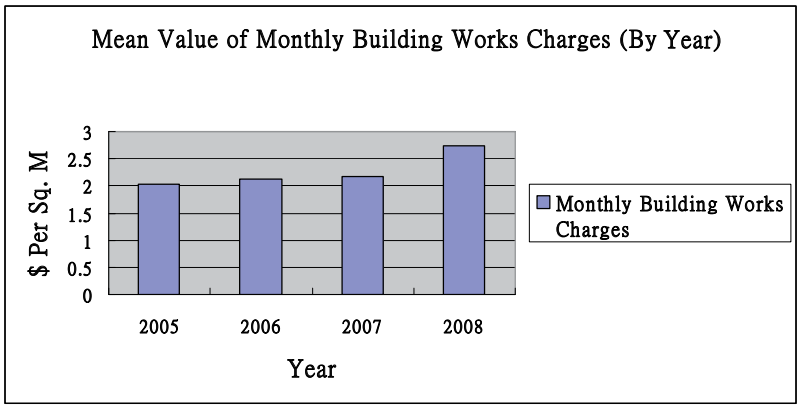


Fig. 4.2.3(a3) Mean Values of Monthly Building Works Charges for Grade A Office Buildings (By Year)



4.2.3.2 Grade B Office Buildings

Based on a set of 16 sampled buildings within a range of the lowest monthly mean value of $\$1.82/m^2$ to the highest one of $\$11.65/m^2$ from 2005 to 2008, an overall monthly mean value was fetched at $\$5.87/m^2$, or 12.69% of the total expenditures pertaining to management fees. See Table 4.2.3(b) and Figures 4.2.3(b1), 4.2.3(b2), and 4.2.3(b3) for reference.

Grade B premises are presumably less prestige and efficient in performance in terms of finishing and facilities provided than those of Grade A premises. A very weak negative correlation coefficient (r=-0.0918 at p=0.05 in the Table 4.2.3(b)) revealed there was a rather slight negative relationship between the unit rate of Building Works Charges and building size. As such, the large building size might probably not necessarily cause in an increase in the building works charges, unlike those situations of Grade A office buildings.

However, the buildings are still subject to the risk of deterioration, and wear and tear over time, the building works charges would lie on the upwards movement in relation to succeeding budgetary years. It was reasonably believed that the increasing age of premises would need a little bit more spending on the aspect of building works to upkeep their conditions, as reflected by the rather mild positive correlation coefficient (r=0.1911 at p=0.05 in the Table 4.2.3(b)) as below.

Table 4.2.3(b) Mean Values and Correlation Coefficient of Monthly Building Works Charges for Grade B Office Buildings (By Size, Age and Year)

Grade B Office Buildings	**Building Works include (a)+(b)+(c)**		**(a) Building Fabrics**		**(b) Plumbing and Drainage**		**(c) Others**	
Range of Monthly Mean Value	**$1.82/m² to $11.65/m²**		**$1.52/m² to $8.61/m²**		**$0.30/m² to $3.03/m²**		**N/A**	
Grouping By Size	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
Less than 10,000 m²	$6.34/m²	---	$3.93/m²	---	$3.45/m²	---	N/A	---
10,000 m² - 21,000 m²	$6.26/m²	---	$3.08/m²	---	$2.35/m²	---	N/A	---
21,001 m² - 30,000 m²	$5.96/m²	---	$2.32/m²	---	$1.68/m²	---	N/A	---
Over 30,000 m²	$5.92/m²	---	$2.95/m²	---	$1.97/m²	---	N/A	---
Overall Monthly Mean Value*	**$5.87/m²**	**(12.69)**	**$3.78/m²**	**(62.00)**	**$2.09/m²**	**(38.00)**	N/A	**---**
Correlation Coefficient (*r*)	**-0.0918**		**-0.0750**		**-0.1933**		N/A	
Grouping By Age	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
Less than 11 years	$5.27/m²	---	$2.65/m²	---	$0.62/m²	---	N/A	---
11 – 18 years	$5.25/m²	---	$2.48/m²	----	$2.77/m²	---	N/A	---
19 – 26 years	$6.19/m²	---	$4.57/m²	---	$2.62/m²	---	N/A	---
Over 26 years	$4.95/m²	---	$2.80/m²	---	$3.25/m²	---	N/A	---
Overall Monthly Mean Value*	**$5.87/m²**	**(12.69)**	**$3.78/m²**	**(62.00)**	**$2.09/m²**	**(38.00)**	N/A	**---**
Correlation Coefficient (*r*)	**0.1911**		**0.2514**		**-0.1724**		N/A	
Grouping By Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
2005	$4.78/m²	---	$2.61/m²	---	$0.89/m²	---	N/A	---
2006	$6.19/m²	---	$4.00/m²	---	$1.89/m²	---	N/A	---
2007	$5.63/m²	---	$4.53/m²	---	$3.81/m²	---	N/A	---
2008	$6.84/m²	---	$3.94/m²	---	$1.73/m²	---	N/A	---
Overall Mean Value*	**$5.87/m²**	**(12.69)**	**$3.78/m²**	**(62.00)**	**$2.09/m²**	**(38.00)**	N/A	**---**

* Overall Monthly Mean Value which is the monthly mean value taken from the value of each month over the sample years is the sum of (a)+(b)+(c).

Fig. 4.2.3(b1) **Mean Values of Monthly Building Works Charges for Grade B Office Buildings (By Size)**

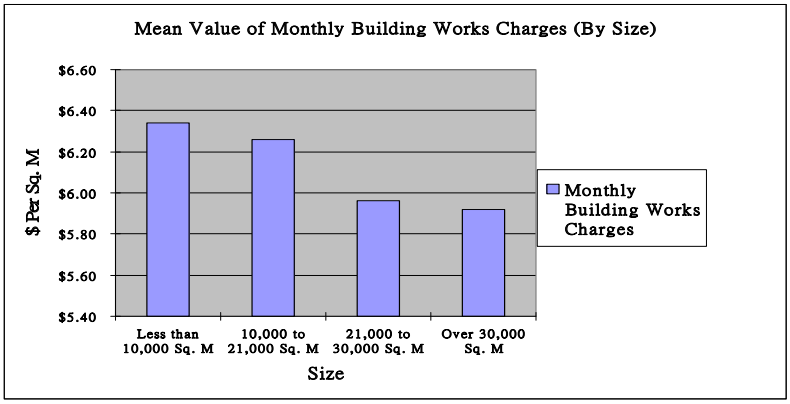


Fig. 4.2.3(b2) **Mean Values of Monthly Building Works Charges for Grade B Office Buildings (By Age)**

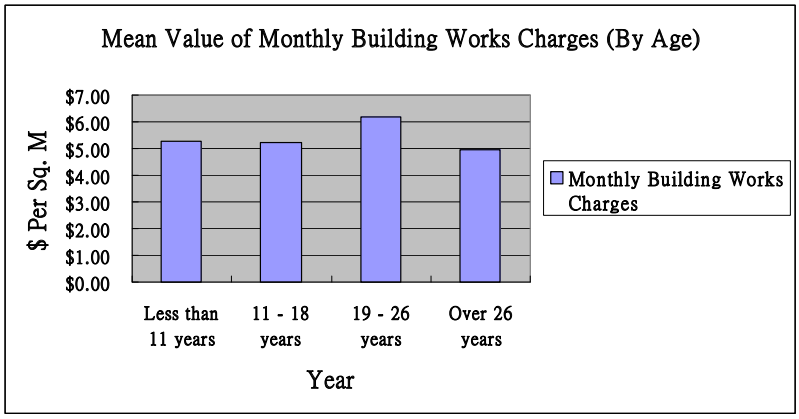
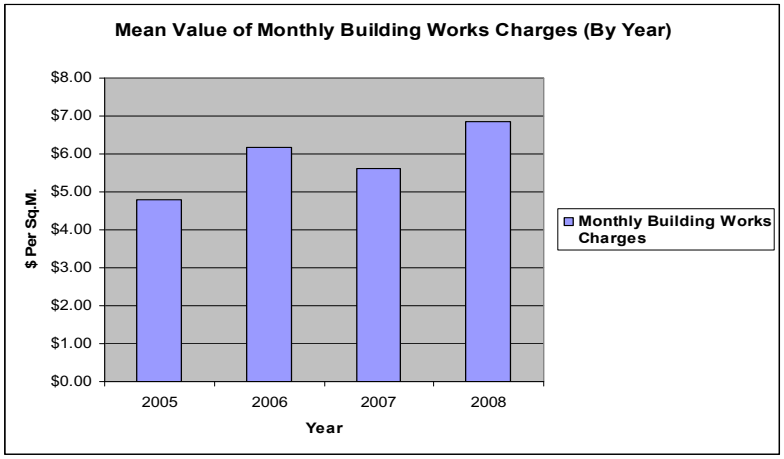


Fig. 4.2.3(b3) **Mean Values of Monthly Building Works Charges for Grade B Office Buildings (By Year)**



4.2.3.3 Grade C Office Buildings

An overall monthly mean value of \$1.08/m^2, or 4.37% of the total management fees, was obtained from 16 sampled buildings ranging from the lowest monthly mean value of \$0.19/m^2 to \$2.34/m^2 as shown in Table 4.2.3(c).

It happened that Grade C office premises, which appear to be less demanding in terms of conditions and quality than those of Grade A and B office premises, did not deserve large volume and high quality of building works to upkeep their conditions. It had a moderate negative correlation significant (r=-0.5664 at p=0.05) in Table 4.2.3(c) and Fig. 4.2.3(c1) which illustrated that there was a negative association with the charges towards the building size.

The charges rose up slightly corresponding to an increase in the building age because of more building works for repairs, replacements and reinstatements to prevent from further wear and tear of the premises over time. The very weak positive correlation coefficient (r=0.04514 at p=0.05) was justifiable to represent a rather weak positive relationship between the charges and building age. See Table 4.2.3(c) and Fig. 4.2.3(c2) respectively.

Over the years from 2005 to 2008, there was not much variation in the range of building works expenses for the Grade C office buildings, indicating no major repair work to those sampled office premises. Table 4.2.3(c) and Fig. 4.2.3(c3) refer.

Table 4.2.3(c) Mean Values and Correlation Coefficient of Monthly Building Works Charges for Grade C Office Buildings (By Size, Age and Year)

Grade C Office Buildings	**Building Works = (a)+(b) +(c)**		**(a) Building Fabrics**		**(b) Plumbing and Drainage**		**(c) Others**	
Range of Monthly Mean Value	**$0.19/m² to $2.34/m²**		**$0.15/m² to $1.86/m²**		**$0.05/m² to $0.47/m²**		**N/A**	
Grouping By Size	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
Less than 7,000 m²	$1.19/m²	---	$0.85/m²	---	$0.34/m²	---	N/A	---
7,000 m² - 25,000 m²	$1.14/m²	---	$1.03/m²	---	$0.11/m²	---	N/A	---
Over 25,000 m²	$0.42/m²	---	$0.31/m²	---	$0.14/m²	---	N/A	---
Overall Monthly Mean Value*	**$1.08/m²**	**(4.37)**	**$0.89/m²**	**(79.35)**	**$0.19/m²**	**(20.65)**	N/A	**---**
Correlation Coefficient (*r*)	**-0.5664**		**-0.7760**		**-0.8088**		N/A	
Grouping By Age	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
Less than 13 years	$1.14/m²	---	$0.87/m²	---	$0.29/m²	---	N/A	---
13 – 18 years	$0.63/m²	---	$0.36/m²	----	$0.27/m²	---	N/A	---
Over 18 years	$1.01/m²	---	$0.98/m²	---	$0.03/m²	---	N/A	---
Overall Monthly Mean Value*	**1.08/m²**	**(4.37)**	**$0.89/m²**	**(79.35)**	**$0.19/m²**	**(20.65)**	N/A	**---**
Correlation Coefficient (*r*)	**0.1911**		**0.2514**		**-0.1724**		N/A	
Grouping By Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**	**Monthly Mean Value**	**(% of BW)**
2005	$1.01/m²	---	$0.82/m²	---	$0.17/m²	---	N/A	---
2006	$1.04/m²	---	$0.92/m²	---	$0.12/m²	---	N/A	---
2007	$1.13/m²	---	$0.92/m²	---	$0.21/m²	---	N/A	---
2008	$1.10/m²	---	$0.86/m²	---	$0.22/m²	---	N/A	---
Overall Monthly Mean Value*	**$1.08/m²**	**(4.37)**	**$0.89/m²**	**(79.35)**	**$0.19/m²**	**(20.65)**	N/A	**---**

* Overall Monthly Mean Value which is the monthly mean value taken from the value of each month over the sample years is the sum of (a)+(b)+(c)

Fig. 4.2.3(c1) **Mean Values of Monthly Building Works Charges for Grade C Office Buildings (By Size)**

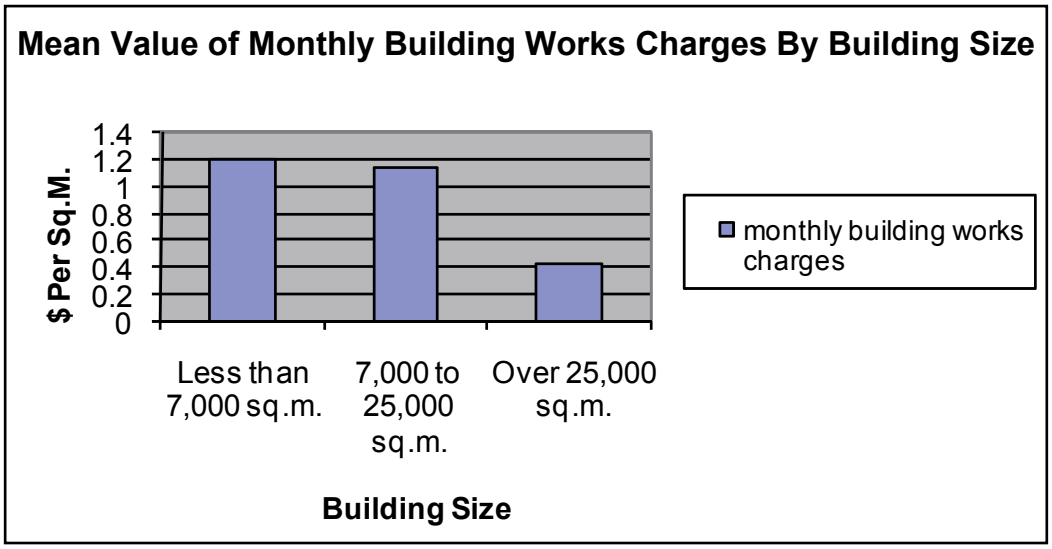


Fig. 4.2.3(c2) **Mean Values of Monthly Building Works Charges for Grade C Office Buildings (By Age)**

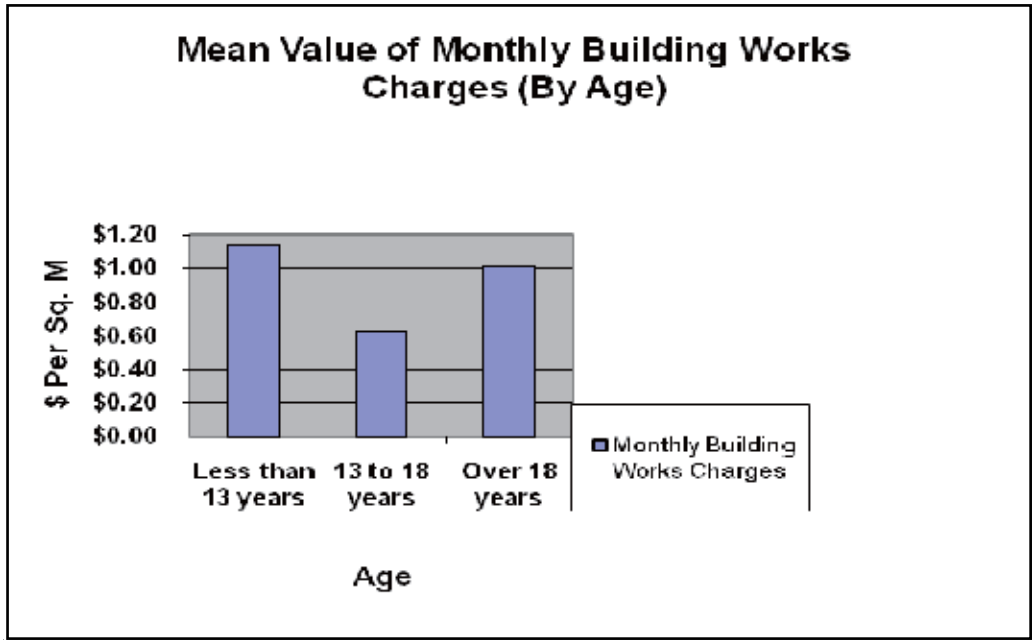
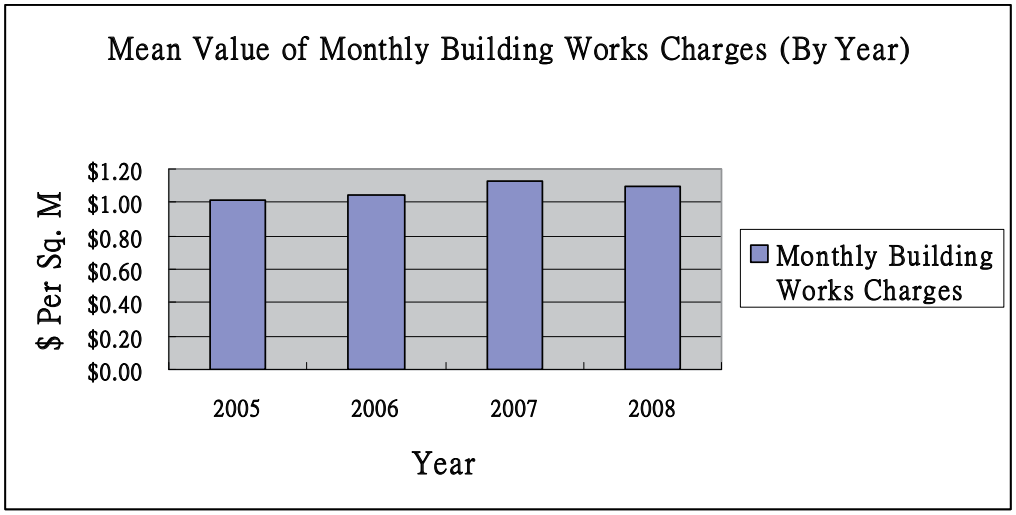


Fig. 4.2.3(c3) Mean Values of Monthly Building Works Charges for Grade C Office Buildings (By Year)



4.2.3.4 Comparison of Mean Values for Monthly Building Works Charges amongst Grade A/B/C Office Buildings (By Year)

From the Table 4.2.3(d), Figures 4.2.3(d1) and 4.2.3(d2) below, the building works expenses for Grade C office buildings still remained much less than those of Grade A, and half of that of Grade B. This phenomenon was most probably due to the relative inferiority in the provision of standard and quality of services in Grade C premises

Table 4.2.3(d) Mean Values of Monthly Building Works Charges for Grade A/B/C Office Buildings (By Year)

Office Building	**Grade A**		**Grade B**		**Grade C**	
Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of Total)**
2005	$\$2.04/m^2$	---	$\$4.78/m^2$	---	$\$1.01/m^2$	---
2006	$\$2.12/m^2$	---	$\$6.19/m^2$	---	$\$1.04/m^2$	---
2007	$\$2.18/m^2$	---	$\$5.63/m^2$	---	$\$1.13/m^2$	---
2008	$\$2.74/m^2$	---	$\$6.84/m^2$	---	$\$1.10/m^2$	---
Overall Monthly Mean Value*	**$\$2.28/m^2$**	**(4.10)**	**$\$5.87/m^2$**	**(12.69)**	**$\$1.08/m^2$**	**(4.37)**

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.3(d1) **Mean Values of Monthly Building Works Charges for Grade A/B/C Office Buildings (From 2005 to 2008)**

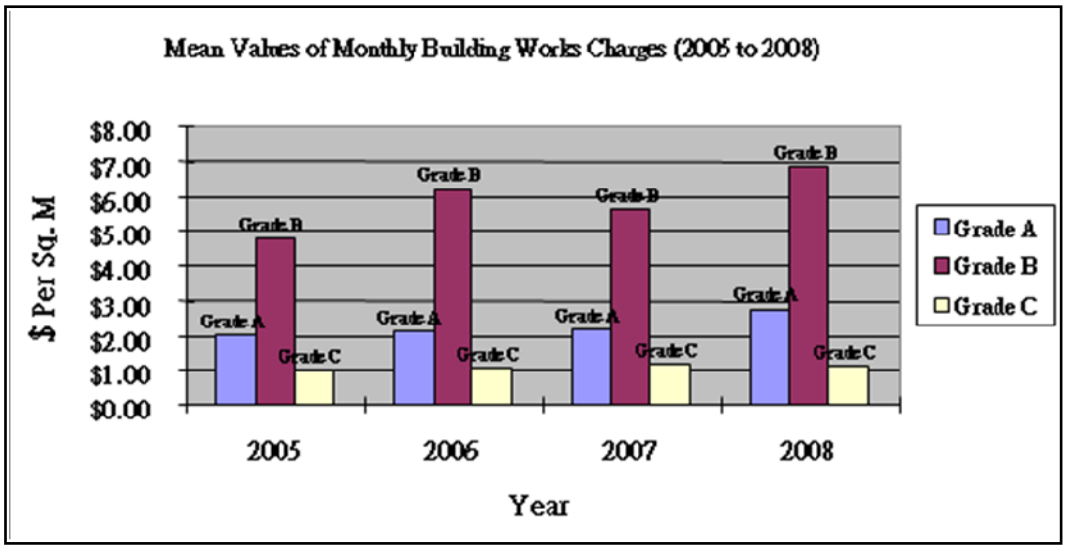
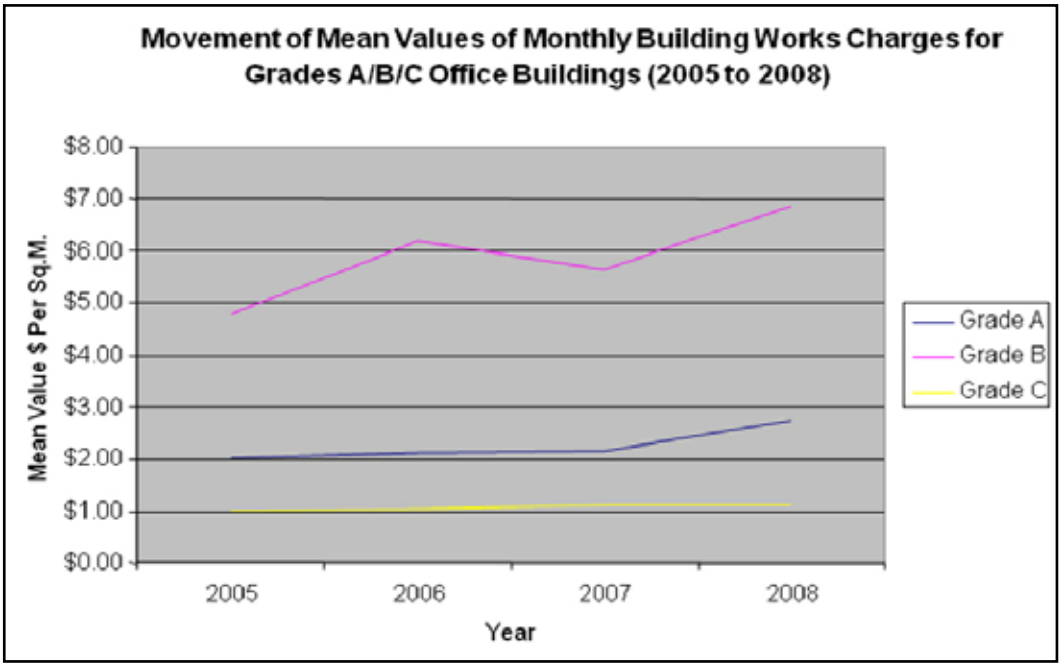


Fig. 4.2.3(d2) **Movement of Mean Values of Monthly Building Works Charges for Grade A/B/C Office Buildings (From 2005 to 2008)**



4.2.4 Building Services Charges

4.2.4.1 Grade A Office Buildings

The analysis had resulted in an overall monthly mean value of \$6.79/m^2, or 12.21% of the total expenditures, among 20 sampled buildings within a range of the lowest monthly mean value of \$1.24/m^2 to the highest one of \$19.46/m^2 as revealed in Table 4.2.4(a).

Building Services were one of the vital items to provide occupants for their convenience, comfortability and efficiency within the premises. The maintenance costs of HVAC system, electrical installations, lifts and escalators as well as other related expenses closely run with the building size. Hence, the unit rate of Building Services Charges would be on a rise mildly with respect to the larger building size as revealed by a mild positive correlation coefficient (r=0.2622 at p=0.05) in Table 4.2.4(a) and Fig. 4.2.4(a1).

Furthermore, higher unit rate of maintenance costs for the older buildings might also be needed for upholding the premium service standard within the life cycle of buildings, a moderate positive correlation coefficient of r=0.4934 at p=0.05 in Table 4.2.4(a) and Fig. 4.2.4(a2) indicated the Building Services Charges would rise up corresponding to the ongoing age of the buildings.

Table 4.2.4(a) Mean Values and Correlation Coefficient of Monthly Building Services Charges for Grade A Office Buildings (By Size, Age and Year)

Grade A Office Buildings	**Building Services Works include (a)+(b)+(c)+(d)**		**(a) HVAC**		**(b) Electrical System**		**(c) Lifts and Escalators**		**(d) Others**	
Range of Monthly Mean Value	**$1.24/m² to $19.46/m²**		**$0.19/m² to $7.92/m²**		**$0.18/m² to $7.84/m²**		**$0.81/m² to $3.20/ m²**		**$0.04/m² to $0.50/m²**	
Grouping By Size	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
Less than 30,000 m²	$4.50	---	$1.16	---	$0.23	---	$2.17	---	$0.29	---
30,000 m² - 45,000 m²	$6.62	---	$1.04	---	$0.41	---	$3.32	---	$1.85	---
45,001 m² - 61,000 m²	$8.12	---	$1.94	---	$1.23	---	$3.80	---	$0.88	---
Over 61,000 m²	$8.50	---	$4.85	---	$0.55	---	$2.27	---	$0.52	---
Overall Monthly Mean Value*	**$6.79**	**(12.21)**	**$2.32**	**(34.18)**	**$0.61**	**(8.98)**	**$2.96**	**(43.59)**	**$0.90**	**(13.25)**
Correlation Coefficient (*r*)	**0.2622**		**0.0326**		**0.5386**		**0.4638**		**-0.1125**	
Grouping By Age	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
Less than 11 years	$6.10	---	$0.98	---	$0.58	---	$3.34	---	$1.20	---
11 - 18 years	$5.41	---	$0.85	---	$0.29	---	$2.62	---	$1.63	---
19 - 24 years	$4.20	---	$1.35	---	$0.45	---	$2.42	---	$0.55	---
Over 24 years	$10.53	---	$5.21	---	$1.01	---	$3.30	---	$0.64	---
Overall Monthly Mean Value*	**$6.79**	**(12.21)**	**$2.32**	**(34.18)**	**$0.61**	**(8.98)**	**$2.96**	**(43.59)**	**$0.90**	**(13.25)**
Correlation Coefficient (*r*)	**0.4934**		**0.7968**		**0.1083**		**0.2662**		**-0.6045**	
Grouping By Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
2005	$6.66	---	$2.47	---	$0.45	---	$2.63	---	$1.10	---
2006	$6.70	---	$2.31	---	$0.68	---	$3.11	---	$0.83	---
2007	$7.01	---	$2.18	---	$0.17	---	$2.87	---	$1.06	---
2008	$6.83	---	$2.32	---	$1.21	---	$3.20	---	$0.67	---
Overall Monthly Mean Value*	**$6.79**	**(12.21)**	**$2.32**	**(34.18)**	**$0.61**	**(8.98)**	**$2.96**	**(43.59)**	**$0.90**	**(13.25)**

* Overall Monthly Mean Value which is the monthly mean value taken from the value of each month over the sample years is the sum of (a)+(b)+(c)+(d).

Fig. 4.2.4(a1) **Mean Values of Monthly Building Services Charges for Grade A Office Buildings (By Size)**

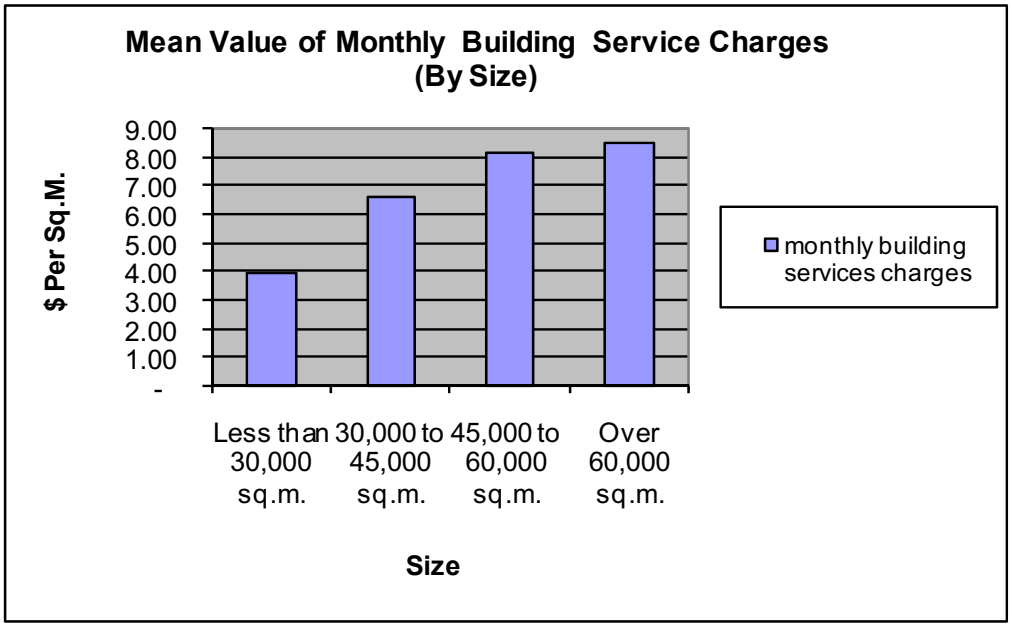


Fig. 4.2.4(a2) **Mean Values of Monthly Building Services Charges for Grade A Office Buildings (By Age)**

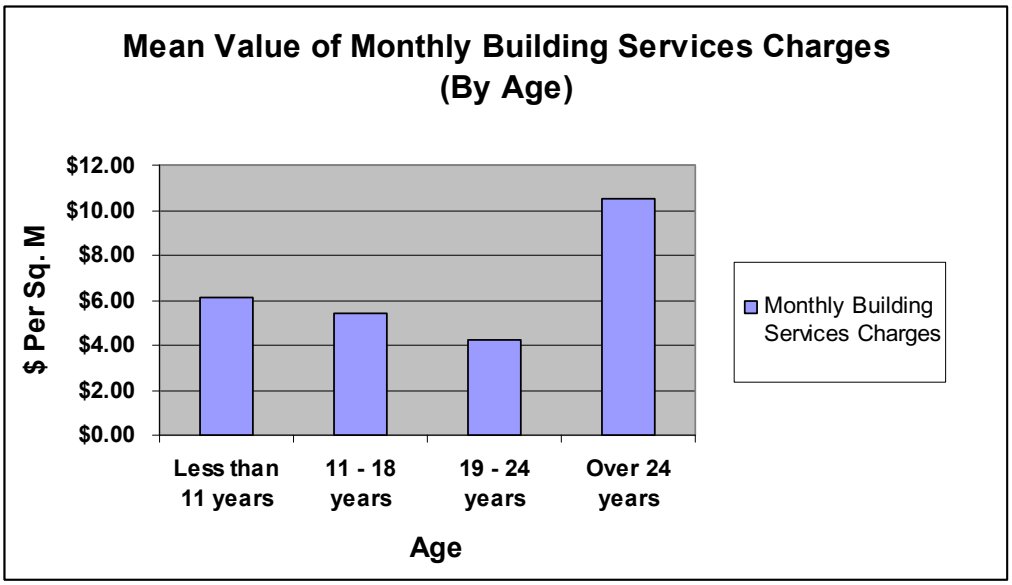
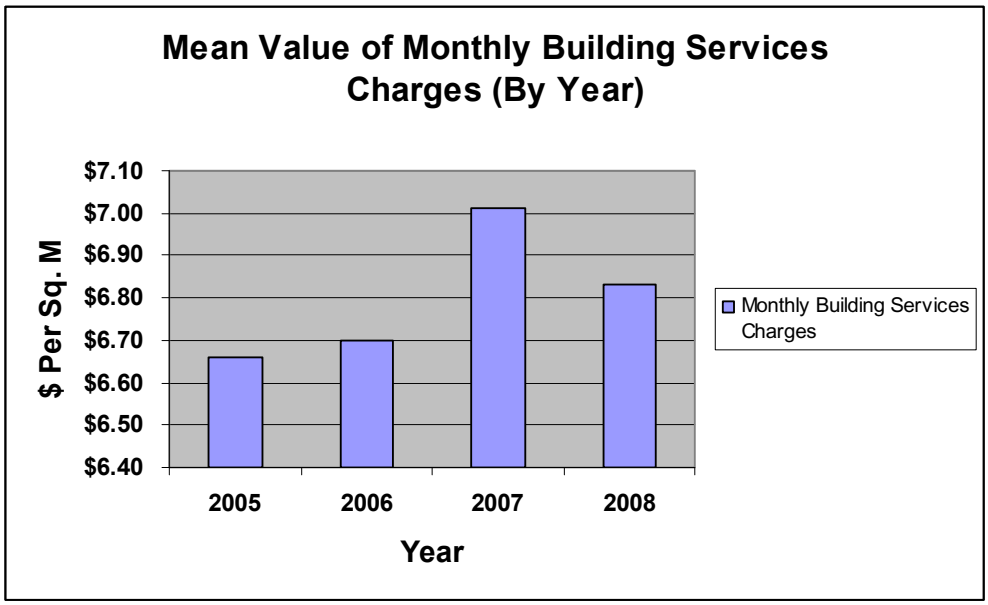


Fig. 4.2.4(a3) **Mean Values of Monthly Building Services Charges for Grade A Office Buildings (By Year)**



4.2.4.2 Grade B Office Buildings

An overall monthly mean value of Building Services charges at $\$6.18/m^2$, or 13.36% of the total expenses, was achieved from a sample of 16 buildings ranging from the lowest monthly mean value of $\$2.73/m^2$ to the highest one $\$11.65/m^2$ under different groupings of building size, and age over the past 4 years. Table 4.2.4(b) refers.

There were positive correlation coefficients for the unit rate of monthly building services charges with respective to the building size and age. This illustrated more maintenance costs for building services upon rising building size and age in order to keep a required standard and quality of services including HVAC system, lightings, gas, water supplies and other associates for the well-beings of occupants inside the premises. In terms of their magnitudes of association, building size (r=0.3178 at p=0.05) was shown to be stronger than that of age (r=0.1335 at p=0.05). See Table 4.2.4(b) associated with Figures 4.2.4(b1) and 4.2.4(b2).

Table 4.2.4(b) Mean Values and Correlation Coefficient of Monthly Building Service Charges for Grade B Office Buildings (By Size, Age and Year)

Grade B Office Buildings	**Building Services Works = (a)+(b)+(c)+(d)**		**(a) HVAC**		**(b) Electrical System**		**(c) Lifts and Escalators**		**(d) Others**	
Range of Monthly Mean Value	**$2.73/m² to $11.65/m²**		**$1.72/m² to $7.33/m²**		**$0.35/m² to $1.51/m²**		**$0.57/m² to $2.45/ m²**		**$0.08/m² to $0.35/m²**	
Grouping By Size	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
Less than 10,000 m²	$5.31	---	$1.60	---	$0.81	---	$2.22	---	$0.63	---
10,000 m² - 21,000 m²	$5.96	---	$2.42	---	$0.65	---	$2.26	---	$0.59	---
21,001 m² - 30,000 m²	$6.34	---	$2.14	---	$0.71	---	$3.06	---	$0.43	---
Over 30,000 m²	$7.36	---	$3.12	---	$0.93	---	$2.60	---	$0.75	---
Overall Monthly Mean Value*	**$6.18**	**(13.36)**	**$2.33**	**(37.70)**	**$0.79**	**(12.78)**	**$2.47**	**(39.97)**	**$0.59**	**(9.55)**
Correlation Coefficient (*r*)	**0.3178**		**0.0517**		**0.0034**		**-0.4973**		**0.4399**	
Grouping By Age	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
Less than 11 years	$5.16	---	$1.38	---	$0.68	---	$2.76	---	$0.43	---
11 - 18 years	$5.84	---	$2.35	---	$0.85	---	$2.20	---	$0.52	---
19 - 26 years	$6.49	---	$3.16	---	$0.72	---	$2.62	---	$0.01	---
Over 26 years	$7.47	---	$2.47	---	$0.93	---	$2.52	---	$1.52	---
Overall Monthly Mean Value*	**$6.18**	**(13.36)**	**$2.33**	**(37.70)**	**$0.79**	**(12.78)**	**$2.47**	**(39.97)**	**$0.59**	**(9.55)**
Correlation Coefficient (*r*)	**0.1335**		**0.1009**		**-0.1977**		**-0.6656**		**0.2988**	
Grouping By Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
2005	$6.67	---	$2.34	---	$0.81	---	$2.60	---	$8.82	---
2006	$6.27	---	$2.21	---	$0.87	---	$2.99	---	$0.31	---
2007	$5.47	---	$2.36	---	$0.77	---	$1.88	---	$0.80	---
2008	$6.35	---	$2.24	---	$0.71	---	$2.48	---	$0.46	---
Overall Monthly Mean Values*	**$6.18**	**(13.36)**	**$2.33**	**(37.70)**	**$0.79**	**(12.78)**	**$2.47**	**(39.97)**	**$0.59**	**(9.55)**

* Overall Monthly Mean Value which is the monthly mean value taken from the value of each month over the sample years is the sum of (a)+(b)+(c)+(d).

Fig. 4.2.4(b1) **Mean Values of Monthly Building Services Charges for Grade B Office Buildings (By Size)**

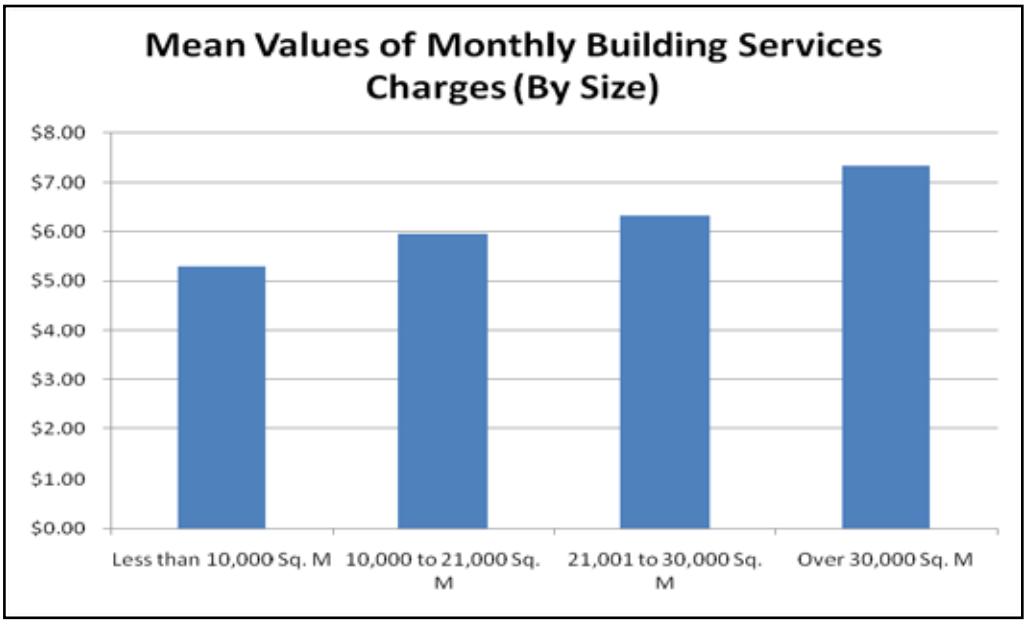


Fig. 4.2.4(b2) **Mean Values of Monthly Building Services Charges for Grade B Office Buildings (By Age)**

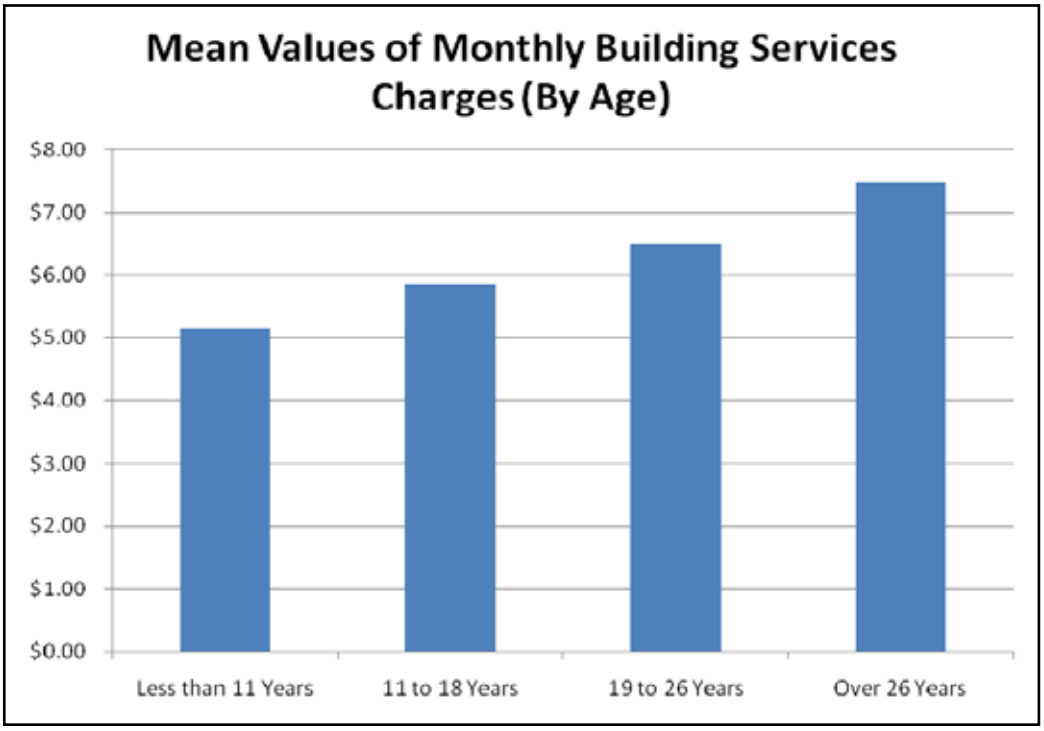
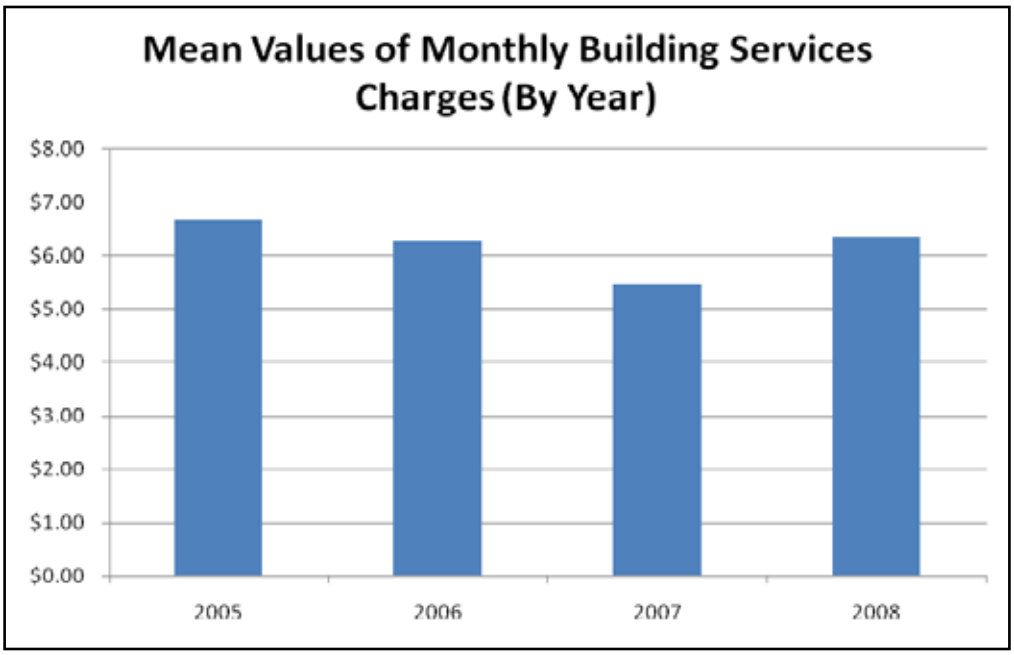


Fig. 4.2.4(b3) **Mean Values of Monthly Building Services Charges for Grade B Office Buildings (By Year)**



4.2.4.3 Grade C Office Buildings

As regards the Grade C office buildings, an overall monthly mean value of $\$3.01/m^2$ or 12.17% of the total expenditures, was obtained from a group of 16 sampled buildings within a range from the lowest monthly mean value of $\$1.82/m^2$ to the highest one of $\$8.68/m^2$, which was found relatively less than that of Grades A and B as revealed from Table 4.2.4 (c).

It happened the unit rate of monthly Building Services Charges had positive relationship with the building size and age, this situation showed a likely mild rise in the expenses would be expected when there was an increase of building size and age, which was illustrated by the positive correlation coefficient (r=0.3741 at p=0.05) for the charges with respect to building size, and (r=0.1589 at p=0.05) to the building age in Table 4.2.4(c), Figures 4.2.4(c1) and 4.2.4(c2) respectively.

Table 4.2.4(c) Mean Values and Correlation Coefficient of Monthly Building Services Charges for Grade C Office Buildings (By Size, Age and Year)

Grade C Office Buildings	**Building Services Works include (a)+(b)+(c)+(d)**		**(a) HVAC**		**(b) Electrical System**		**(c) Lifts and Escalators**		**(d) Others**	
Range of Monthly Mean Value	**$1.82/m² to $8.68/m²**		**$0.32/m² to $1.56/m²**		**$0.15/m² to $0.69/m²**		**$1.07/m² to $5.12/ m²**		**$0.27/m² to $1.31/m²**	
Grouping By Size	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
Less than 7,000 m²	$2.27	---	$0.68	---	$0.58	---	$0.92	---	$0.55	---
7,000 m² - 25,000 m²	$2.80	---	$0.79	---	$0.21	---	$1.32	---	$0.35	---
Over 25,000 m²	$3.40	---	$0.42	---	$0.74	---	$2.00	---	$0.44	---
Overall Monthly Mean Value*	**$3.01**	**(12.17)**	**$0.61**	**(20.53)**	**$0.55**	**(17.17)**	**$1.42**	**(47.81)**	**$0.43**	**(14.49)**
Correlation Coefficient (*r*)	**0.3741**		**N/A**		**N/A**		**N/A**		**N/A**	
Grouping By Age	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
Less than 13 years	$2.28	---	$0.48	---	$0.85	---	$0.88	---	$0.15	---
13 - 18 years	$3.07	---	$0.65	---	$0.24	---	$2.08	---	$0.21	---
Over 18 years	$3.56	---	$0.67	---	$0.53	---	$1.38	---	$0.97	---
Overall Monthly Mean Value*	**$3.01**	**(12.17)**	**$0.61**	**(20.53)**	**$0.55**	**(17.17)**	**$1.42**	**(47.81)**	**$0.43**	**(14.49)**
Correlation Coefficient (*r*)	**0.1589**		**N/A**		**N/A**		**N/A**		**N/A**	
Grouping By Year	**Monthly Mean Value**	**(% of Total)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**	**Monthly Mean Value**	**(% of BS)**
2005	$2.50	---	$0.45	---	$0.49	---	$0.94	---	$0.96	---
2006	$2.34	---	$0.49	---	$0.43	---	$1.69	---	$0.25	---
2007	$3.02	---	$0.94	---	$0.54	---	$1.23	---	$0.36	---
2008	$4.10	---	$0.60	---	$0.58	---	$1.85	---	$0.19	---
Overall Monthly Mean Value*	**$3.01**	**(12.17)**	**$0.61**	**(20.53)**	**$0.55**	**(17.17)**	**$1.42**	**(47.81)**	**$0.43**	**(14.49)**

* Overall Monthly Mean Value which is the monthly mean value taken from the value of each month over the sample years is the sum of (a)+(b)+(c)+(d).

Fig. 4.2.4(c1) **Mean Values of Monthly Building Services Charges for Grade C Office Buildings (By Size)**

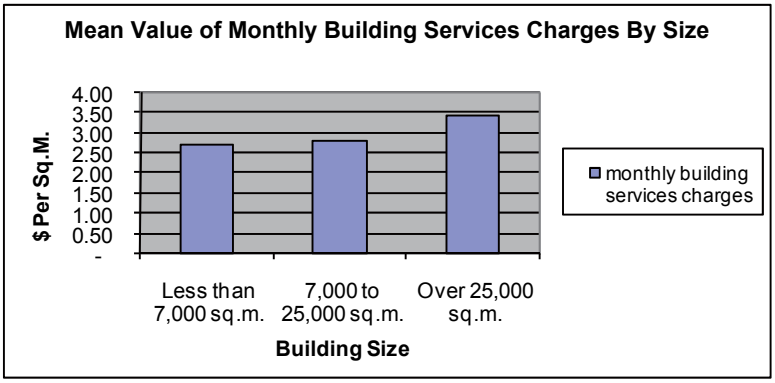


Fig. 4.2.4(c2) **Mean Values of Monthly Building Services Charges for Grade C Office Buildings (By Age)**

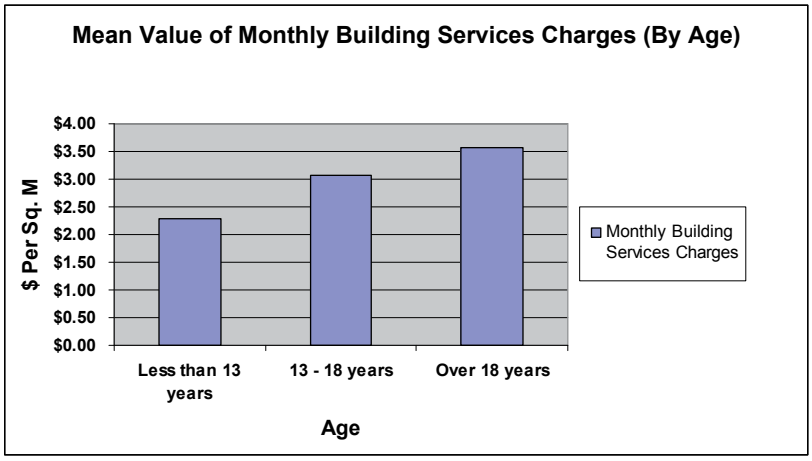
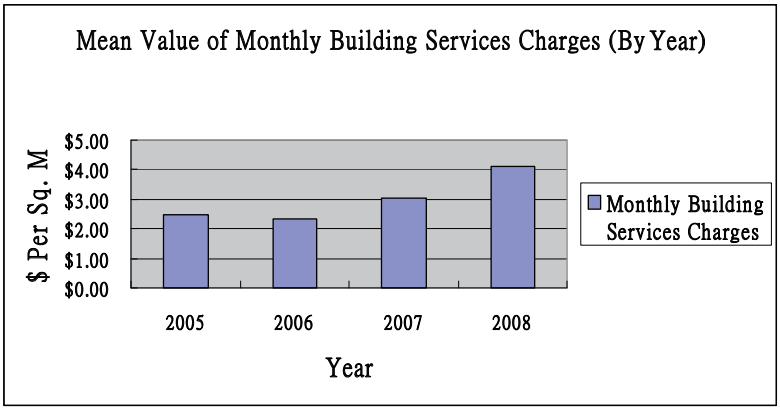


Fig. 4.2.4(c3) **Mean Values of Monthly Building Services Charges for Grade C Office Buildings (By Year)**



4.2.4.4 Comparison of Mean Values for Monthly Building Services Charges amongst Grade A/B/C Office Buildings (By Year)

Relatively speaking, the Grade A office buildings were expected to provide top quality of services and high standard of facilities than those of Grades B and C, which were illustrated by the movement trends of the respective monthly mean value as shown in Table 4.2.4(d) and Figures 4.2.4(d1) and 4.2.4(d2). There was only a slight difference by less than 10% in the charge level between Grades A and B, whilst a strong gap of more than double occurred when compared with Grade C. This would presumably be arisen from the superiority of construction design, material and facilities provided to both Grade A and B office premises but not Grade C office premises.

Table 4.2.4(d) Mean Values of Monthly Building Services Charges for Grade A/B/C Office Buildings (By Year)

Office Building	Grade A		Grade B		Grade C	
Year	Monthly Mean Value	(% of Total)	Monthly Mean Value	(% of Total)	Monthly Mean Value	(% of Total)
2005	$6.66/m^2	---	$6.67/m^2	---	$2.50/m^2	---
2006	$6.70/m^2	---	$6.27/m^2	---	$2.34/m^2	---
2007	$7.01/m^2	---	$5.47/m^2	---	$3.02/m^2	---
2008	$6.83/m^2	---	$6.35/m^2	---	$4.10/m^2	---
Overall Monthly Mean Value*	**$6.79**/m^2	**(12.23)**	**$6.18**/m^2	**(13.36)**	**$3.01**/m^2	**(12.17)**

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.4(d1) Mean Values of Monthly Building Services Charges for Grade A/B/C Office Buildings (From 2005 to 2008)

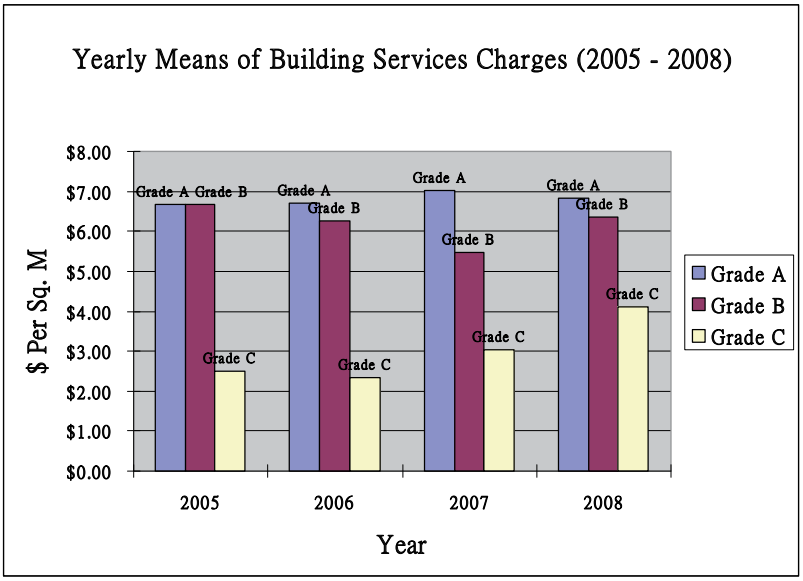
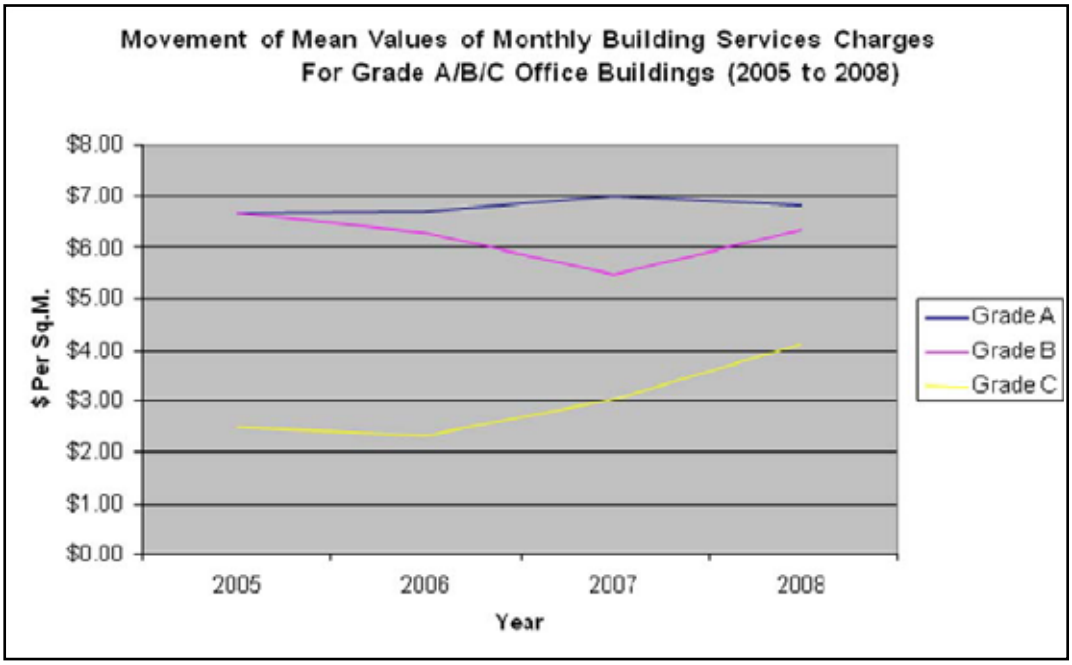


Fig. 4.2.4(d2) Movement of Mean Values for Monthly Building Services Charges for Grade A/B/C Office Buildings (From 2005 to 2008)



4.2.5 Security Services Charges

4.2.5.1 Grade A Office Buildings

The analysis gave rise to an overall monthly mean value of \$2.50/m^2 from a set of 20 sampled buildings ranging from the lowest monthly mean value of \$0.10/m^2 to the highest of \$12.68/m^2 as shown in Table 4.2.5(a).

The larger floor areas would require extensive surveillance by means of electronic and computerised equipments with adequate manpower to ensure a high quality security measures to all occupants in the premises, so a considerable level of resources must be spent. This had resulted in a proportional rise in the unit rate of security services corresponding to the increasing building size as revealed by a moderate positive correlation coefficient of r=0.3854 as shown in Table 4.2.5(a) and Fig. 4.2.5(a1) respectively.

However, a mild negative correlation coefficient (r=-0.1146) in Table 4.2.5(a) and Fig. 4.2.5(a2) reflected the charges were not relatively affected by the extended time of opening period to a certain extent, this might probably be caused by fewer occupants and most places are unattended, which did not require full scale of security manpower and equipments after normal opening hours.

The variations of security services charges appeared over the past four years might be due to upgrading the security system, or additional deployment of manpower to enhance the security requirements for the occupants during different budgetary years. See Table 4.2.5(a) and Fig. 4.2.5(a3).

Table 4.2.5(a) Mean Values and Correlation Coefficient of Monthly Security Services Charges for Grade A Office Buildings (By Size, Opening Hour and Year)

Grouping By Size	Monthly Mean Value	Grouping By Opening Hours	Monthly Mean Value	Grouping By Year	Monthly Mean Value	(% of Total)
less than 30,000 m^2	$1.23/$m^2$	**Less than 11 hours**	$2.63/$m^2$	**2005**	$1.22/$m^2$	---
30,000 – 45,000 m^2	$1.48/$m^2$	**11 - 13 hours**	$2.76/$m^2$	**2006**	$1.84/$m^2$	---
45,001 – 60,000 m^2	$2.05/$m^2$	**14 - 16 hours**	$1.02/$m^2$	**2007**	$1.85/$m^2$	---
Over 60,000 m^2	$2.56/$m^2$	**Over 16 hours**	$0.91/$m^2$	**2008**	$2.42/$m^2$	---
Correlation Coefficient (*r*)	**0.3854**	**Correlation Coefficient (*r*)**	**-0.1146**			
Overall Monthly Mean Value*	**$2.50/$m^2$**					**(4.50)**
Range of Monthly Mean Value	**$0.10/$m^2$ to $12.68/$m^2$**					

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.5(a1) Mean Values of Monthly Security Services Charges for Grade A Office Buildings (By Size)

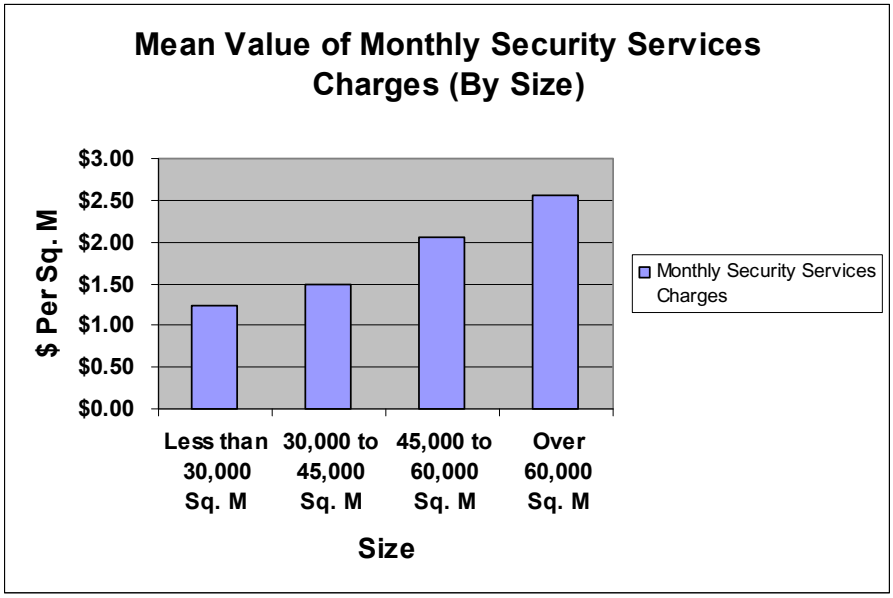


Fig. 4.2.5(a2) **Mean Values of Monthly Security Services Charges for Grade A Office Buildings (By Opening Hours)**

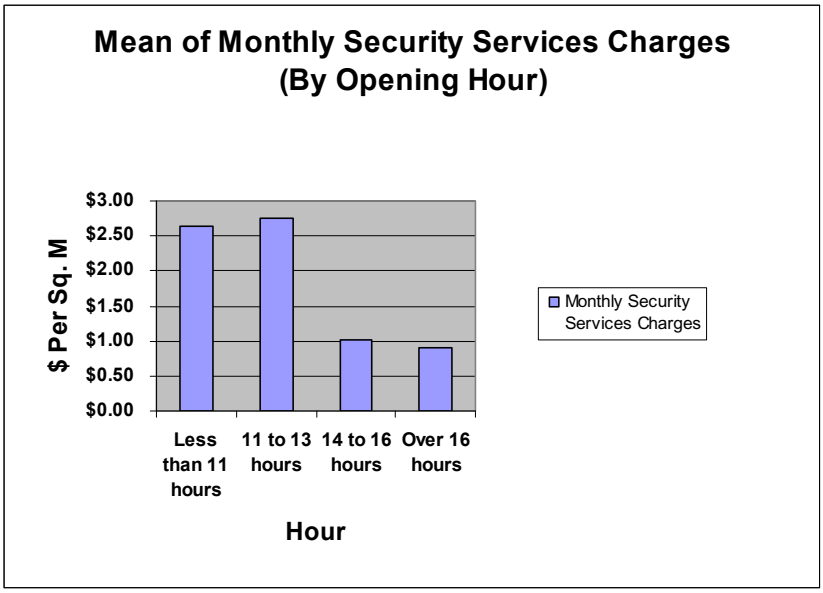
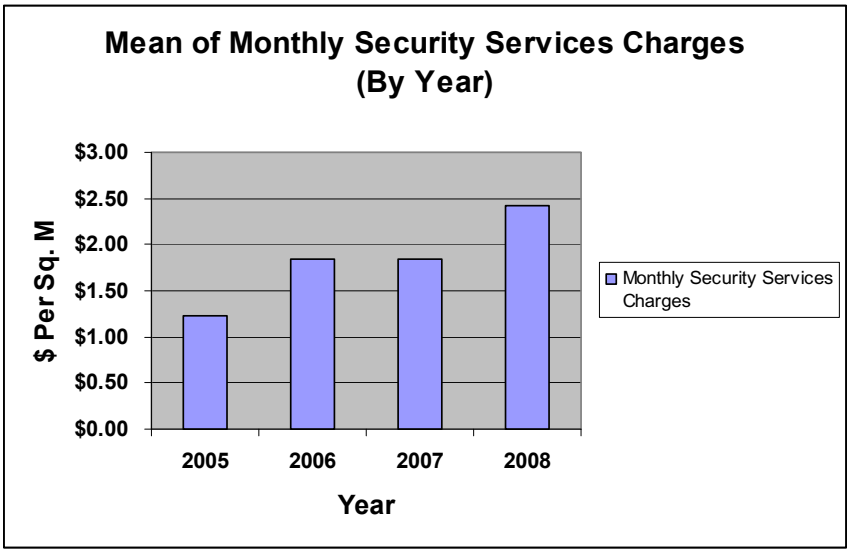


Fig. 4.2.5(a3) **Mean Values of Monthly Security Services Charges for Grade A Office Buildings (By Years)**



4.2.5.2 Grade B Office Buildings

Obviously, security services played a significant role in the daily management activities. An overall value of \$5.74/m^2 per month, or about 12.41% of the total maintenance expenses, was reckoned from a set of 16 sampled buildings ranging from the lowest monthly mean value of \$0.11/m^2 to the highest one of \$16.09/m^2 per month throughout 2005 to 2008. Table 4.2.5(b) refers.

A mild positive correlation coefficient (*r*) of 0.1449 as indicated in Table 4.2.5(b) and Fig. 4.2.5(b1) substantiated a rise in the unit rate of Security Services Charges associated with increasing the building size for providing a compatible quality of services in the Grade B office premises.

It so happened that during the prolonged opening hours, there might be few people with many unattended and locked areas within the buildings; the situation did not deserve a great amount of security services within the premises. In this regard, the unit rate of Security Services Charges was not directly linked to the duration of opening periods as revealed by a mild negative correlation coefficient, (*r*=-0.2851) in Table 4.2.5(b) and Fig. 4.2.5(b2).

The security services charges rose progressively from 2005 to 2008 indicating there might be an increase in security staff's salaries and other related items such as upgrading works, or operational reasons and etc, nothing concerned with the changes of building sizes and age. Table 4.2.5(b) and Fig. 4.2.5(b3) refer.

Table 4.2.5(b) Mean Values and Correlation Coefficient of Monthly Security Services Charges for Grade B Office Buildings (By Size, Opening Hour and Year)

Grouping By Size	**Monthly Mean Value**	**Grouping By Opening Hours**	**Monthly Mean Value**	**Grouping By Year**	**Monthly Mean Value**	**(% of Total)**
less than 10,000 m^2	\$3.56/m^2	**Less than 10 hours**	\$4.16/m^2	**2005**	\$1.98/m^2	---
10,000 – 21,000 m^2	\$4.15/m^2	**10 - 12 hours**	\$9.67/m^2	**2006**	\$2.08/m^2	---
21,001 – 30,000 m^2	\$4.29/m^2	**13 - 15 hours**	\$2.33/m^2	**2007**	\$5.86/m^2	---
Over 30,000 m^2	\$4.60/m^2	**Over 15 hours**	\$0.45/m^2	**2008**	\$6.71/m^2	---
Correlation Coefficient (*r*)	**0.1449**	**Correlation Coefficient (*r*)**	**-0.2851**	**---**		---
Overall Monthly Mean Value*	**\$5.74/m^2**					**(12.41)**
Range of Monthly Mean Value	**\$0.11/m^2 to \$16.09/m^2**					

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.5(b1) **Mean Values of Monthly Security Services Charges for Grade B Office Buildings (By Size)**

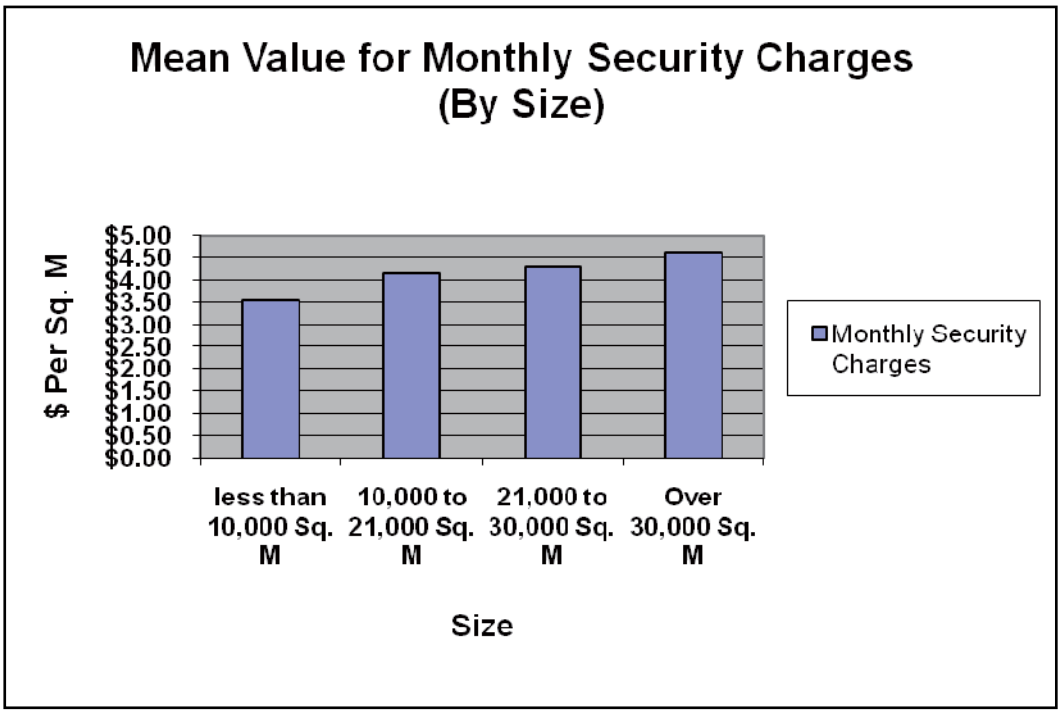


Fig. 4.2.5(b2) **Mean Values of Monthly Security Services Charges for Grade B Office Buildings (By Opening Hour)**

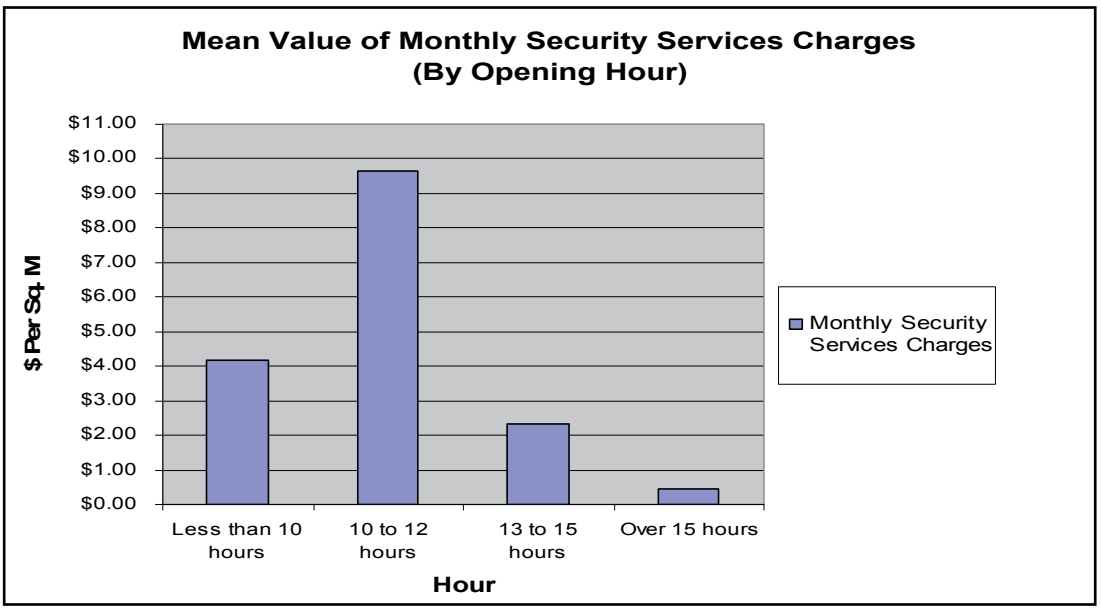
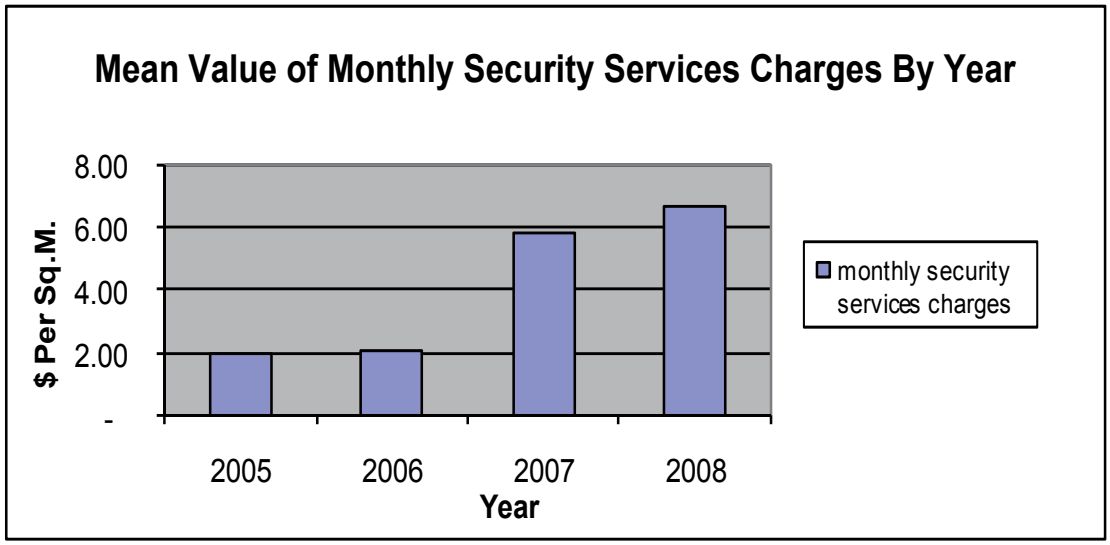


Fig. 4.2.5(b3) Mean Values of Monthly Security Services Charges for Grade B Office Buildings (By Year)



4.2.5.3 Grade C Office Buildings

Since there was less aided technology to enhance the security arrangements in the Grade C office buildings, staff might normally be the main sources to provide basic security services, which would depend very much upon the expectation of required standard by the occupants and landlords.

An overall monthly mean value of $\$5.85/m^2$, or 23.65% of the total maintenance expenditures, was obtained from a group of 16 sampled buildings within a range of the lowest monthly mean value of $\$0.07/m^2$ to the highest one of $\$15.98/m^2$ as appeared in Table 4.2.5(c).

In the study, there was an insignificant positive association between the unit rate of Security Services Charges and the building size as shown by a very weak positive correlation coefficient (r) of 0.01749 in Table 4.2.5(c) and Fig. 4.2.5(c1). This reflected the larger floor areas of the premises might not deserve an increase in the security services and facilities as far as the sample premises were concerned.

The longer the opening time, however, did not necessarily require more security staff probably due to a fall in occupancy rate and a rise in unattended or locked premises in the prolonged opening period. This was supported by a moderate negative correlation coefficient, r=-0.3481, as shown in Table 4.2.5(c) and Fig. 4.2.5(c2).

A gradual increase in security services charges over the last four years could be caused by upwards adjustments in staff salaries and other associated costs due to seasonal market conditions. Table 4.2.5(c) and Fig. 4.2.5(c3) refer.

Table 4.2.5(c) Mean Values and Correlation Coefficient of Monthly Security Services Charges for Grade C Office Buildings (By Size, Opening Hour and Year)

Grouping By Size	Monthly Mean Value	Grouping By Opening Hours	Monthly Mean Value	Grouping By Year	Monthly Mean Value	(% of Total)
less than 7,000 m^2	$4.79/$m^2$	**Less than 11 hours**	$7.57/$m^2$	**2005**	$4.45/$m^2$	---
7,000 – 25,000 m^2	$5.08/$m^2$	**11 - 18 hours**	$6.09/$m^2$	**2006**	$5.45/$m^2$	---
Over 25,000 m^2	$6.81/$m^2$	**Over 18 hours**	$3.01/$m^2$	**2007**	$5.85/$m^2$	---
---	---	---	---	**2008**	$6.51/$m^2$	---
Correlation Coefficient (*r*)	**0.01749**	**Correlation Coefficient (*r*)**	**-0.3481**	---		---
Overall Monthly Mean Value*	**$5.85/$m^2$**					**(22.47)**
Range of Monthly Mean Value	**$0.07/$m^2$ to $15.98/$m^2$**					

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.5(c1) Mean Value of Monthly Security Services Charges for Grade C Office Buildings (By Size)

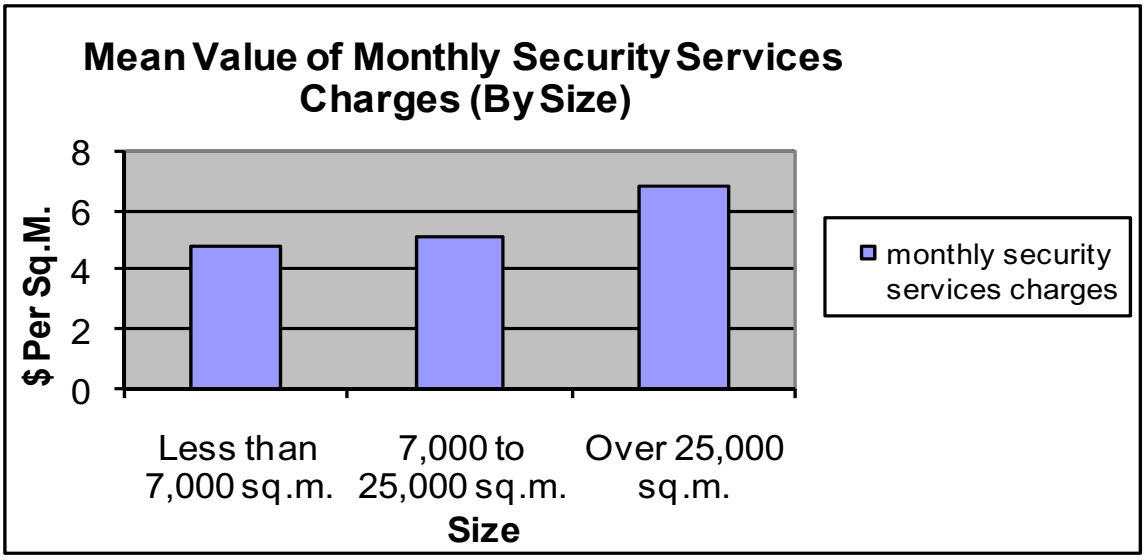


Fig. 4.2.5(c2) Mean Values of Monthly Security Services Charges for Grade C Office buildings (By Opening Hour)

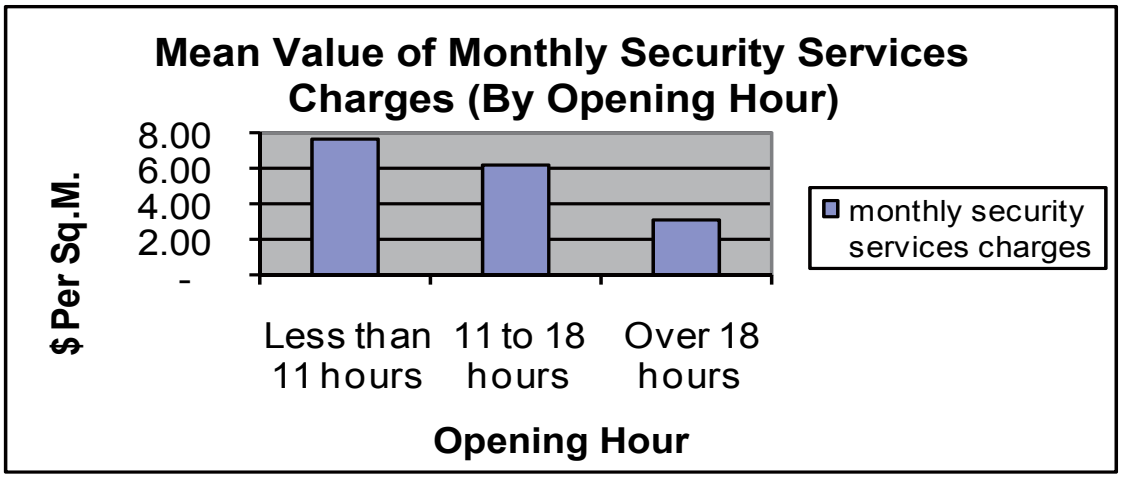
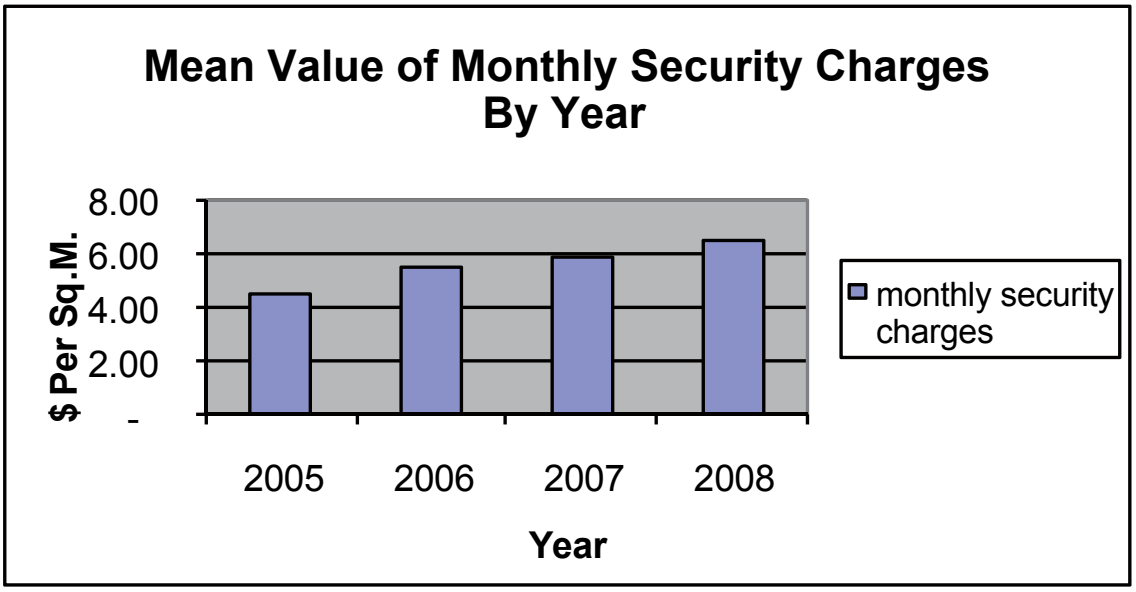


Fig. 4.2.5(c3) Mean Values of Monthly Security Services Charges for Grade C Office Buildings (By Year)



4.2.5.4 Comparison of Mean Values for Monthly Security Services Charges amongst Grade A/B/C Office Buildings (By Year)

Both Table 4.2.5(d), Figures 4.2.5(d1) and 4.2.5(d2) illustrated the Grade C office buildings demanded higher level of security services charges than those of Grade A over 4 years from 2005 to 2008, but only moderately exceeded those of Grade B in 2006, and similarly in 2007/2008. This would probably indicate that Grade A office premises had been aided with more high-technology security systems, whereas the Grade B office buildings most likely required both technology and staff resources, and human services could be the main source for security services for the Grade C office buildings.

Table 4.2.5(d) Mean Values of Monthly Security Services Charges for Grade A/B/C Office Buildings (By Year)

Office Building	Grade A		Grade B		Grade C	
Year	Monthly Mean Value	(% of Total)	Monthly Mean Value	(% of Total)	Monthly Mean Value	(% of Total)
2005	$1.22/m^2	---	$1.98/m^2	---	$4.45/m^2	---
2006	$1.84/m^2	---	$2.08/m^2	---	$5.45/m^2	---
2007	$1.85/m^2	---	$5.86/m^2	---	$5.85/m^2	---
2008	$2.42/m^2	---	$6.71/m^2	---	$6.51/m^2	---
Overall Monthly Mean Value*	**$2.50/m^2**	**(4.50)**	**$5.74/m^2**	**(12.41)**	**$5.85/m^2**	**(22.47)**

* Overall Monthly Mean Value is the monthly mean value taken from the value of each month over the sample years.

Fig. 4.2.5(d1) Mean Values of Monthly Security Services Charges for Grade A/B/C Office Buildings (From 2005 to 2008)

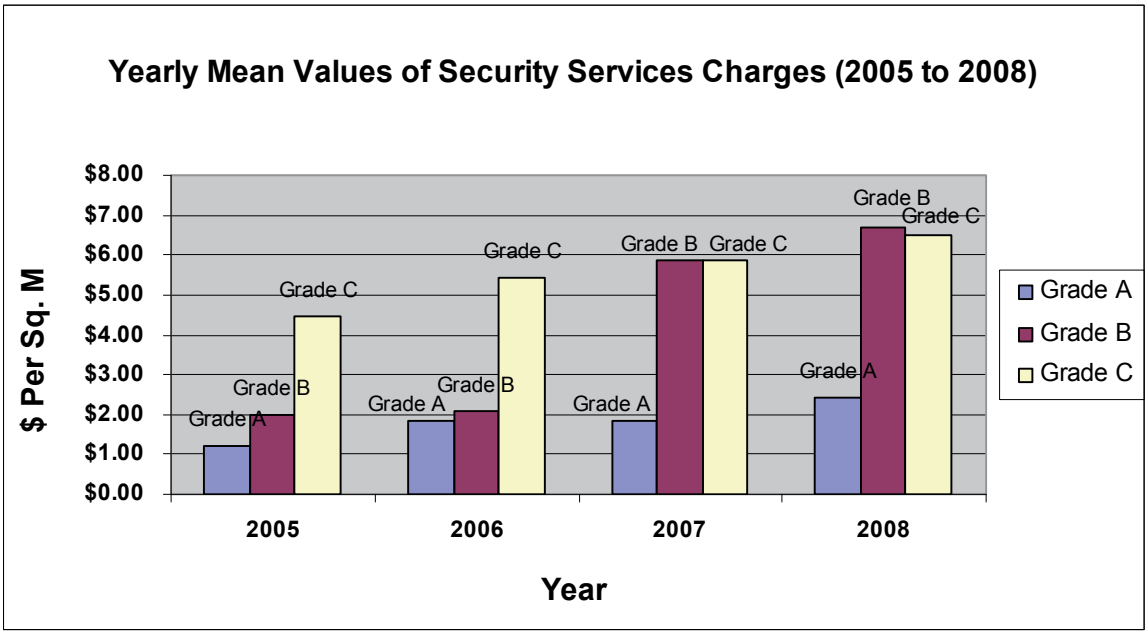
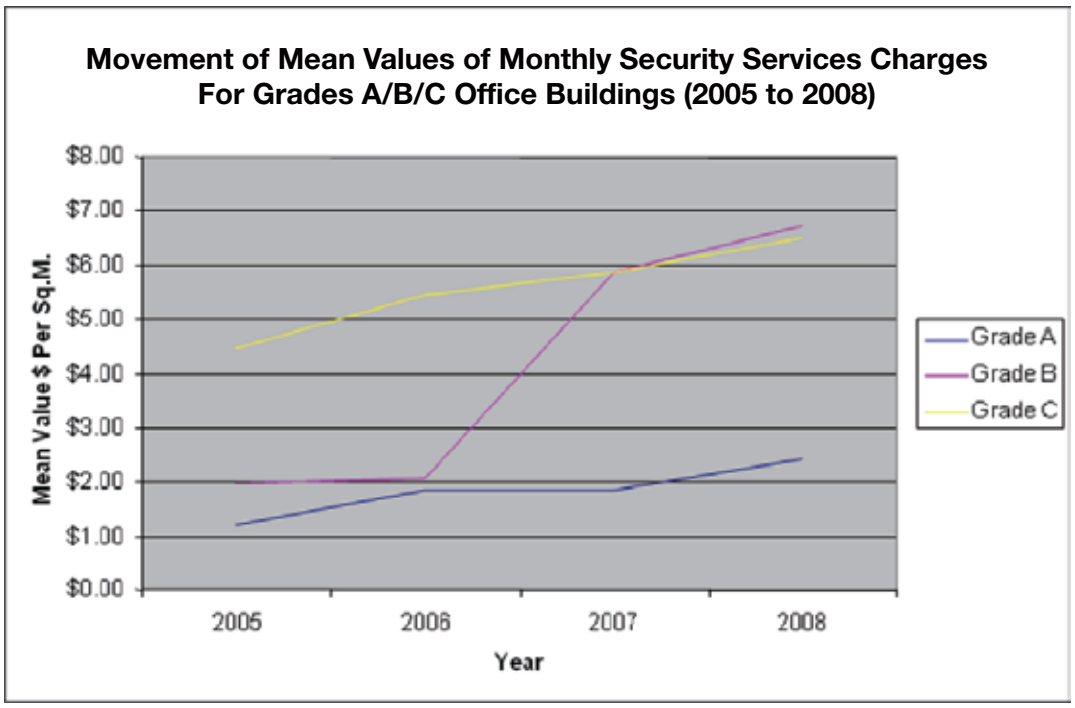


Fig. 4.2.5(d2) **Movement of Mean Values for Monthly Security Services Charges for Grade A/B/C Office Buildings (From 2005 to 2008)**



SECTION 5 - CONCLUSIONS AND RECOMMENDATIONS

5.1 Performance Results of Benchmarking Process

Having regard to the relevancy to the current practice in property and facility management professions, it has commonly been reckoned a total of 13 Management and Maintenance Components (MMCs) constituted major items of the overall management fees amongst three grades office buildings as listed out in Table 5.1 on page 66.

For the purpose of easy reference and comparison across these office buildings, the suggested benchmark values of monthly management fee for each grade of office premises, and its individual MMCs in value and percentage expressions are summarized in Table 5.1, Figures 5.1(a) and 5.1(b) respectively.

Based on the findings from data analysis, there was an indication that the building size, age, and opening hour had contributed as fundamental key factors that had affected considerably the pricing trends of overall management fees and each item of 13 MMCs throughout four years (from 2005 to 2008). As such, most of the resulting values had varied apparently across three grades of office buildings.

As shown in Table 5.1, the recommended benchmark monthly management fee of Grade A office premises ($55.61/m^2) was approximately 20% higher than that of Grade B premises ($46.26/m^2), but more than double of that of Grade C premises ($24.74/m^2). This had reflected a higher upfront fee was found justifiable for the premium quality of management services and facilities available in Grade A office premises, as they had traditionally been regarded superior in building construction and design to Grades B and C office premises.

From further breakdown of every item of 13 MMCs as expressed in percentage pertaining to the recommended benchmark monthly management fees within each grade of office buildings, the top three items of higher percentage in the Grade A office buildings were Electricity Charges (30%), Staff Costs (18.52%) and Building Services Charges (12.21%). This obviously represented certain degree of their significant associations with the impacts of building age, size and opening hour in the management fee structure. Probably, it was caused by the wider uses of high technology equipments that boosted the demand for more electricity consumption, and the requirement of providing prestigious quality and efficiency of management services to maintain their supremacy over the other 2 grades of office buildings.

As regards the Grade B office buildings, Electricity Charges (33.10%) was found to have become a larger share of the recommended benchmark monthly management fees, followed by Building Services Charges (13.36%) and Security Charges (12.41%). This clearly reflected that Grade B office premises, without much sophisticated installations within the buildings, still required higher electricity supply to ensure adequate and efficient building services and security measures as their prime priority for better standards of services and facilities than Grade C office premises.

Surprisingly, Electricity Charges (22.43%), Security Charges (23.65%) and Building Services Charges (12.17%) were also on the top three positions of overall MMCs in the Grade C office buildings, which seemed to have similar weights in the ranking priority of Grade B office premises though there had been small variances in the percentage representations. In this regard, it was evidenced that these three MMCs became of an essence to the operating charges for daily management services and facilities in both Grades B/C office buildings.

Table 5.1 Summary of Recommended Monthly Benchmark Management Fees for Management and Maintenance Components (MMCs)

Grade of Building	**Grade A**	**%**	**Grade B**	**%**	**Grade C**	**%**
Recommended Monthly Benchmark Management Fee ($/m^2)	**$55.61**	---	**$46.26**	---	**$24.74**	---
Management and Maintenance Components (MMCs)	**Per Month**	**Benchmark % of Total**	**Per Month**	**Benchmark % of Total**	**Per Month**	**Benchmark % of Total**
1. Electricity Charges	$17.24	30.00%	$15.31	33.10%	$5.55	22.43%
2. Water Charges	$0.35	0.63%	$ 0.33	0.71%	$0.26	1.05%
3. Cleaning and Waste Disposal	$4.31	7.75%	$ 3.65	7.89%	$2.07	8.37%
4. Building Works Charges include:	$2.28	4.10%	$ 5.87	12.69%	$1.08	4.37%
(a) Building Fabrics	($1.23) *	(53.95%)*	($3.78) *	(64.40%)*	($0.73)*	(67.60%)*
(b) Plumbing and Drainage	($0.35) *	(15.35%)*	($2.09) *	(35.60%)*	($0.35)*	(32.40%)*
(c) Others	($0.70) *	(30.70%)*	N/A	N/A	N/A	N/A
5. Building Services Charges include:	$6.79	12.21%	$6.18	13.36%	$3.01	12.17%
(a) HVAC System	($2.32) #	(34.18%)#	($2.33) #	(37.70%)#	($0.61)#	(20.27%)#
(b) Electrical System	($0.61) #	(8.98%)#	($0.79) #	(12.78%)#	($0.55)#	(18.27%)#
(c) Lift and Escalator System	($2.96) #	(43.59%)#	($2.47) #	(39.97%)#	($1.42)#	(47.18%)#
(d) Others	($0.90) #	(13.25%)#	($0.59) #	(9.55%)#	($0.43)#	(14.28%)#
6. Fire Services	$0.22	0.40%	$0.41	0.89%	$0.17	0.69%
7. Security	$2.50	4.50%	$5.74	12.41%	$5.85	23.65%
8. Gardening and Landscaping	$0.35	0.62%	$0.17	0.37%	$0.11	0.44%
9. Insurance	$0.37	0.67%	$0.32	0.69%	$0.28	1.13%
10. Management Office and Administration Expenses	$5.92	9.65%	$2.40	5.19%	$2.15	8.69%
11. Reserve/Annual Sinking Funds	$3.17	5.70%	$1.70	3.67%	$1.43	5.78%
12. Staff Costs	$10.30	18.52%	$3.30	7.13%	$2.12	8.57%
13. Sundries	$1.81	3.25%	$0.88	1.90%	$0.66	2.66%
Total	**$55.61**	**100%**	**$46.26**	**100%**	**$24.74**	**100%**

* The figures in parentheses refer to the amounts and percentages that make up the amount and percentage of Building Works Charges.
\# The figures in parentheses refer to the amounts and percentages that make up the amount and percentage of Building Services Charges.

Fig. 5.1(a) **Distribution of Recommended Benchmark Monthly Values for Individual MMCs Expenditures amongst Grade A/B/C Office Buildings**

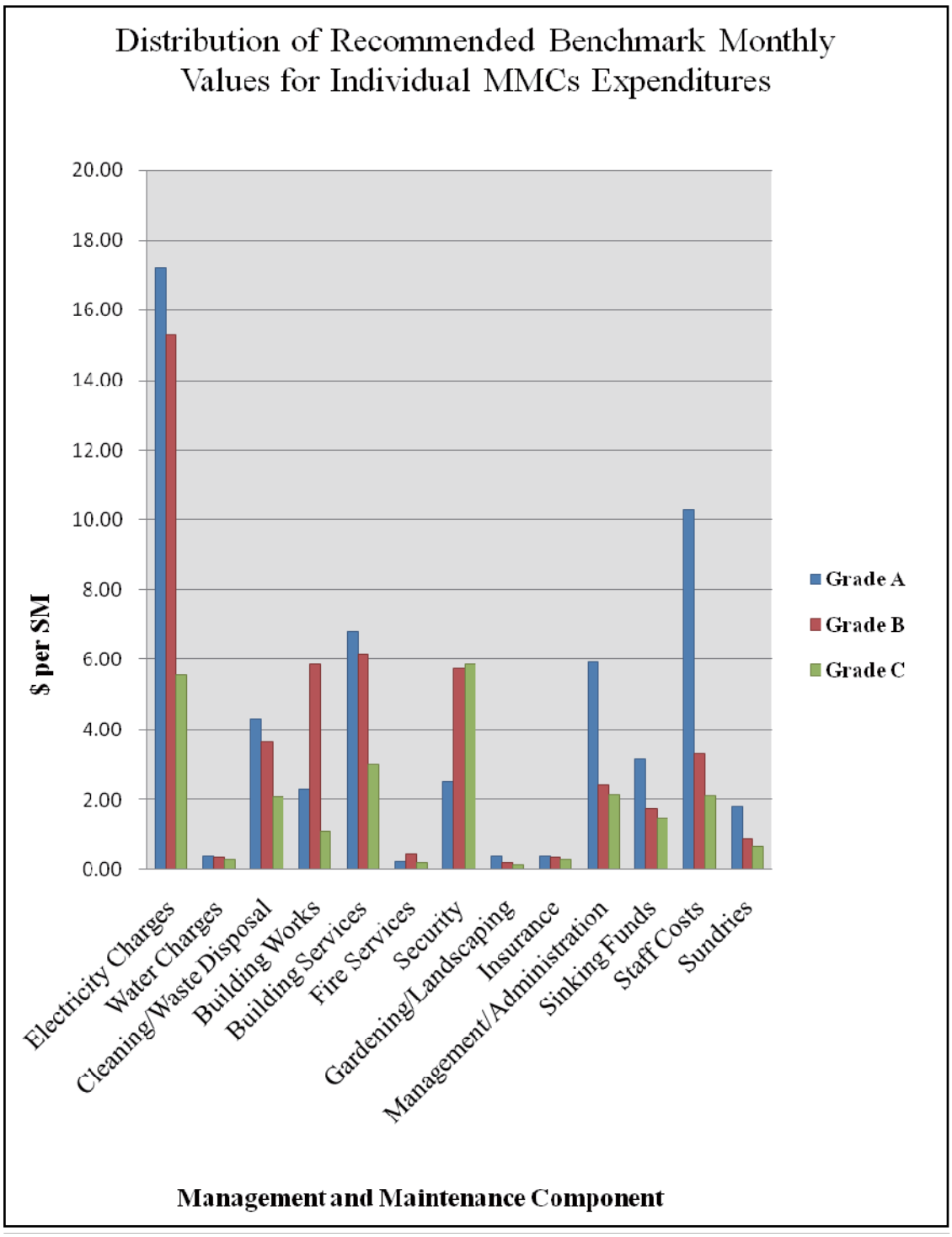


Fig. 5.1(b) **Percentages of Recommended Benchmark Monthly Values for Individual MMCs Expenditures amongst Grade A/B/C Office Buildings**

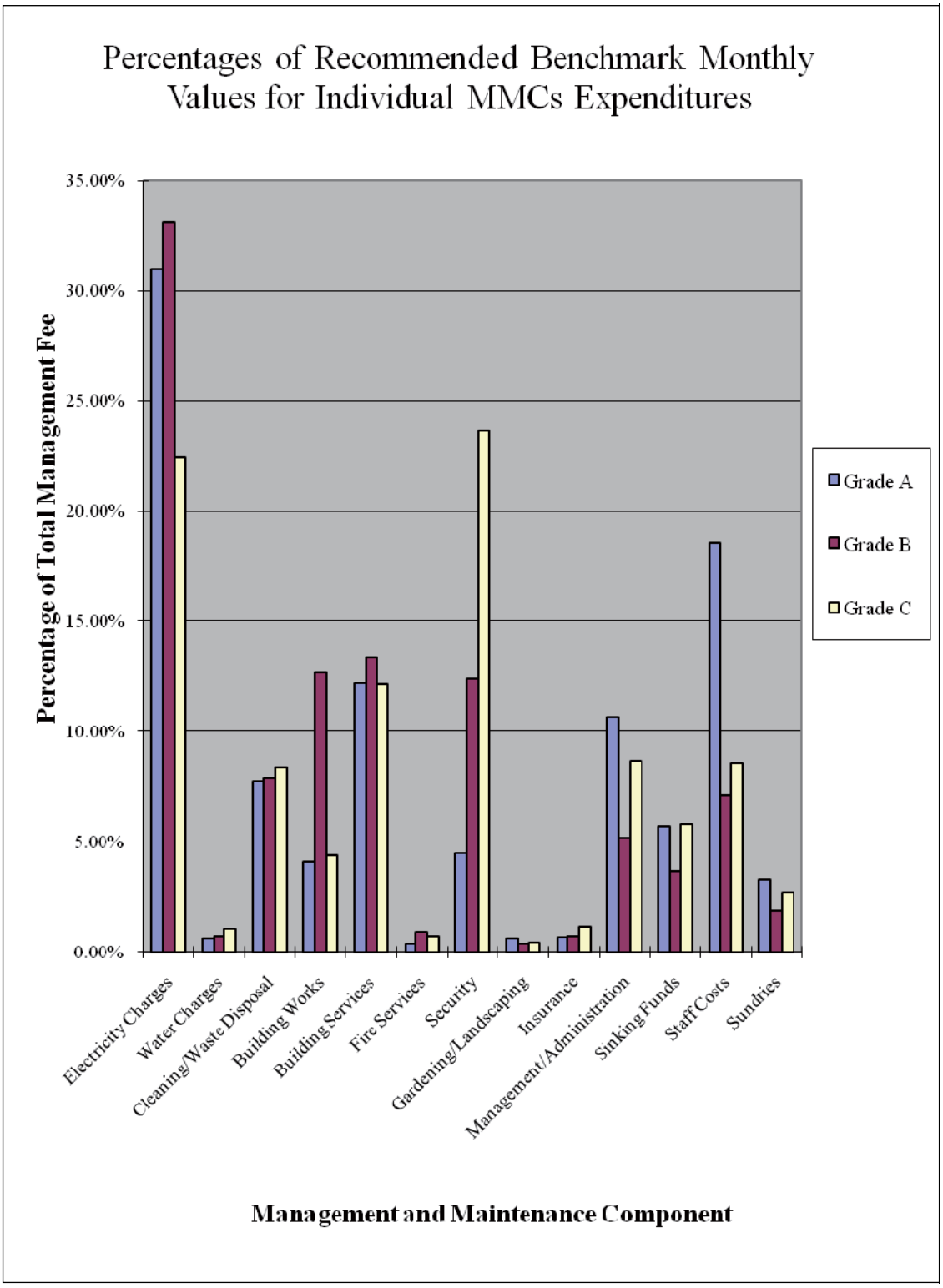


Fig. 5.1(b1) **Pie Chart of Recommended Benchmark Monthly Values of Individual MMCs Expenditures for Grade A Office Buildings**

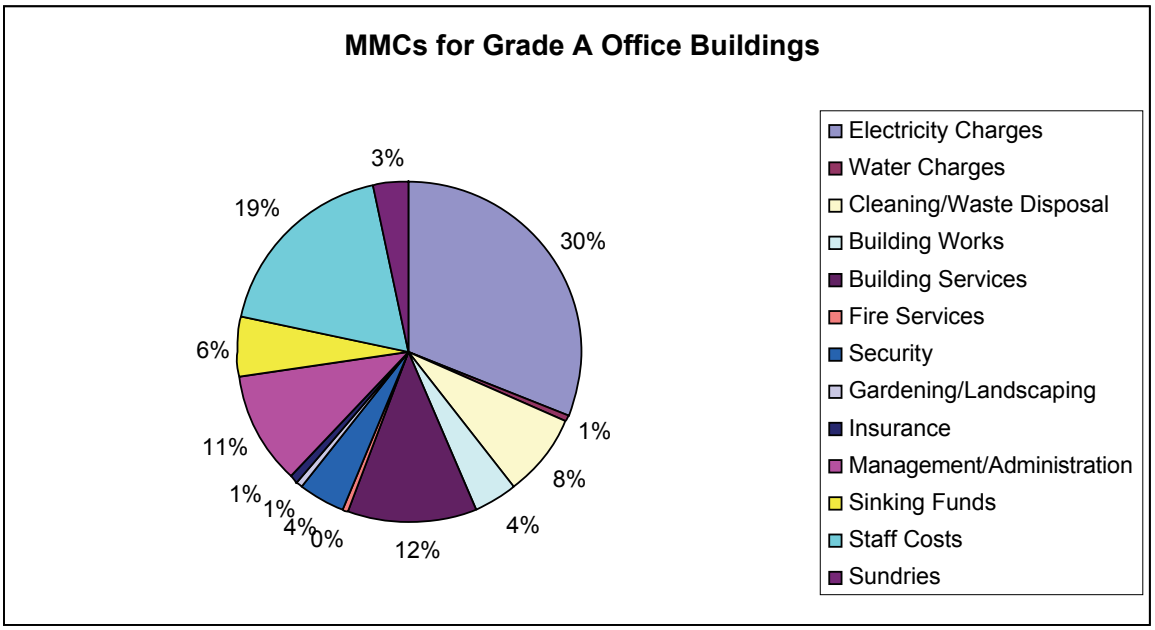


Fig. 5.1(b2) **Pie Chart of Recommended Benchmark Monthly Values of Individual MMCs Expenditures for Grade B Office Buildings**

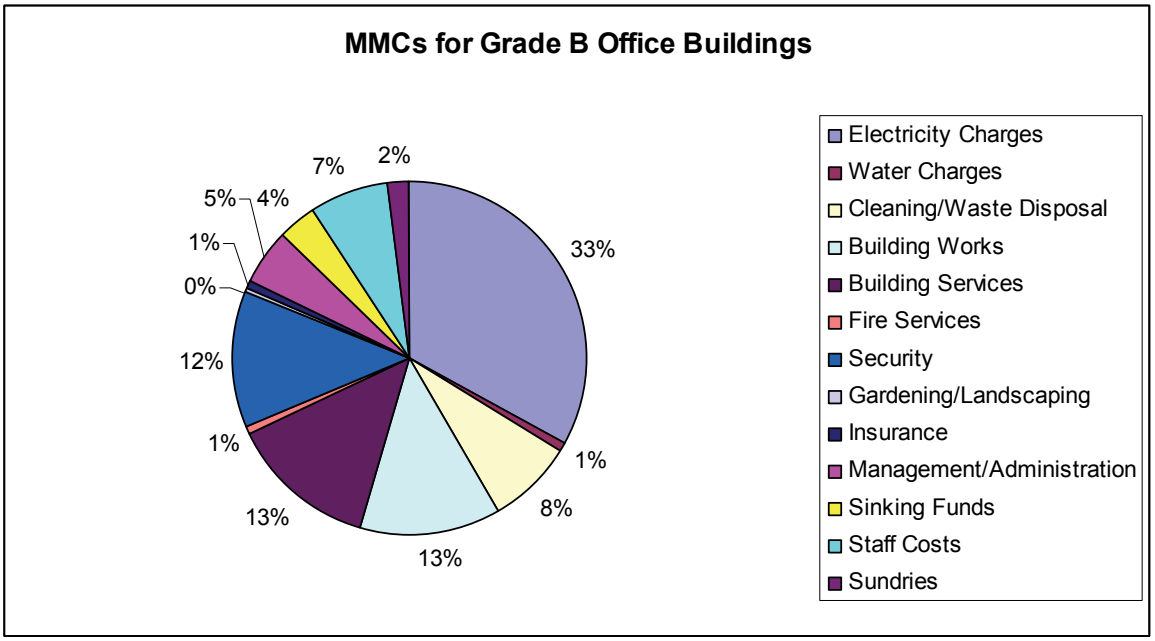
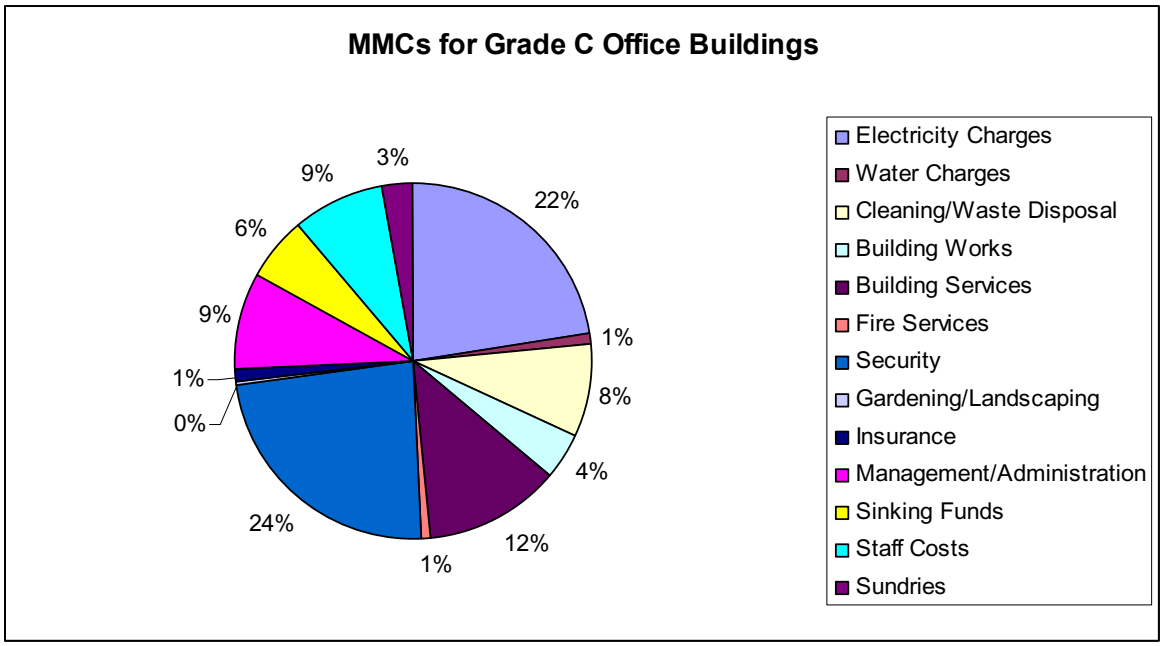


Fig. 5.1(b3) Pie Chart of Recommended Benchmark Monthly Values of Individual MMCs Expenditures for Grade C Office Buildings



5.2 Recommended Benchmark Values for Monthly Management Fees

5.2.1 Grade A Office Buildings

An overall monthly mean value of management fee at \$55.61/m^2 was achieved for Grade A office premises ranging from \$40.06/m^2 to \$80.86/m^2 from 20 sampled office buildings over the years of 2005 to 2008. The resulting figure was found in line with the current market level in the industry. Amongst things being equal, the recommended benchmark monthly management fee for Grade A office buildings was considered be at \$55.61/m^2.

The correlation analysis revealed that there was a moderate negative association between the unit rate of monthly management fee and building size (r=-0.5318 at p=0.05). This indicated that the increase in building size was not necessarily in raising the unit rate of monthly management fee, probably due to the economy of scale. However, there was little significant association between the unit rate of monthly management fee and building age (r=-0.2508 at p=0.05).

5.2.2 Grade B Office Buildings

From a total of 16 sample Grade B office buildings spanning from the lowest monthly mean value of \$34.59/m^2 to the highest one of \$64.64/m^2, it had arrived at an overall monthly mean value of \$46.26/m^2, which appeared to have been within the pace of current market trend.

Therefore, it is recommended to take the benchmark monthly management fee to be at the amount of $\$46.26/m^2$.

In terms of association between the monthly management fee per m^2 with building size and building age, the former did not indicate significant association between them as reflected by the weak correlation coefficient (r=0.0167 at p=0.05), whilst the latter revealed to have a mild positive association between them. This showed that the unit rate of monthly management fee was likely to rise up mildly corresponding to the increasing building age (r=0.1241 at p=0.05), rather than building size.

5.2.3 Grade C Office Buildings

As a result of analysing the monthly mean values of total management fees for Grade C office premises from 16 sample buildings within the lowest range of $\$11.96/m^2$ to the highest one of $\$46.47/m^2$, an overall monthly mean value of $\$24.74/m^2$ was obtained, which was observed to be in close proximity to the prevailing market range. As such, it would be reckoned as the recommended benchmark value of monthly management fee.

For this grade of office premises, the findings showed a relatively moderate negative association between the unit rate of monthly management fee with building size (r=-0.3619 at p=0.05). An increase in the building size was not necessarily to rise up the unit rate of monthly management fee, probably due to a rather lower standard of facilities and level of management services provided to these premises.

Furthermore, there was also a moderate negative association between unit rate of monthly management fee and building age (r=-0.4252 at p=0.05), reflecting that the upward building ages would result in reduction in the unit rate, this might probably be caused by the decreasing expectation in the quality of facilities and services standards provided within the premises upon ongoing building ages.

5.3 Recommended Benchmark Values for 5 Selected Individual Management and Maintenance Components (MMCs) Expenditures

It had been realised that management fees mainly composed of a total of 13 different Management and Maintenance Components (MMCs), in which their levying levels would vary with respect to the influence of different MMCs depending much upon the impacts of building size, age and opening hour across the three grades of office premises.

Having regard to the 5 selected salient MMCs as per the preceding Section 4.2, their differentiations in the recommended levels of benchmark values amidst Grade A, B and C office premises were further discussed as follows:-

5.3.1 Electricity Charges

Having mentioned in the preceding Section 4, the overall monthly mean values of Electricity Charges for Grade A/B/C office premises had been sought from a series of data analysis. In view of the findings which came within the current market trends, it was not unreasonable to consider the recommended benchmark monthly values of Electricity Charges for Grade A, B and C office buildings to be set at $\$17.24/m^2$, $\$15.82/m^2$ and $\$5.55/m^2$ respectively.

Relatively speaking, a slight difference was found between Grade A ($\$17.24/m^2$, or 30.00% of the total expenditures) and Grade B ($\$15.82/m^2$ or 33.10% of the total expenditures). They were nearly two-third more than Grade C office buildings ($\$5.55/m^2$, or 22.43% of the total expenditures) as illustrated in Table 5.1 and Figures 5.1(a), 5.1(b), 5.3.1(a), and 5.3.1(b).

Fig. 5.3.1(a) Benchmark Values of Monthly Electricity Charges for Grade A/B/C Office Buildings

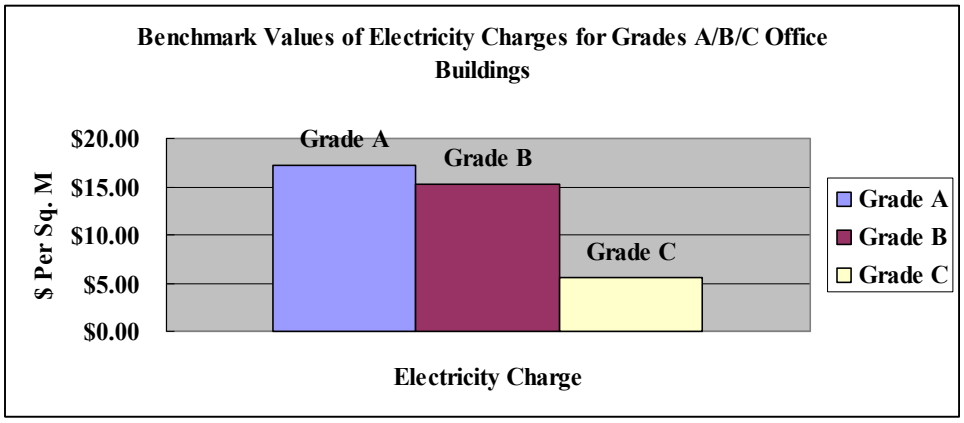
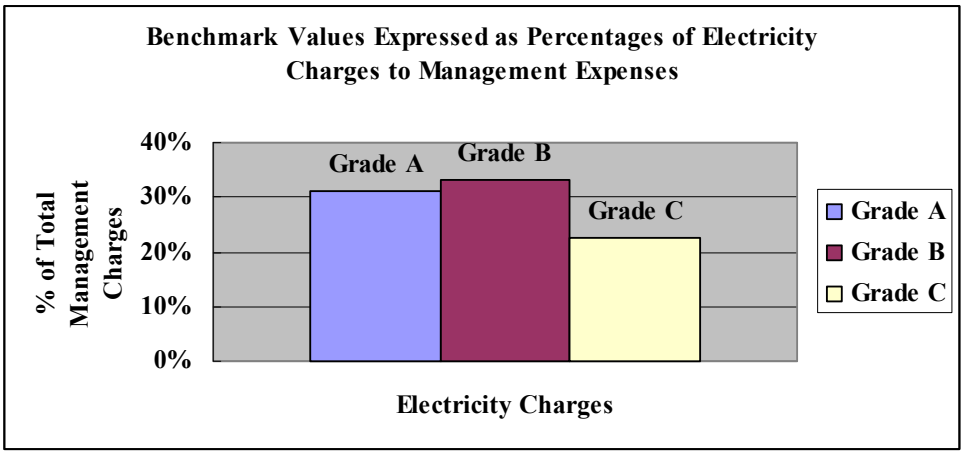


Fig. 5.3.1(b) Benchmark Values Expressed as Percentages of Monthly Electricity Charges for Grade A/B/C Office Buildings



5.3.2 Cleaning and Waste Disposal Charges

Daily cleaning and waste disposals are the essential services provided to the premises. These expenditure items have considerable impacts on the total management expenses to maintain basic standard of hygienic conditions within the communal areas of the premises. However, their charging levels depend very much upon building size and the expected hygienic requirements amongst different grades of office premises.

Having referred to Section 4.2, the overall monthly mean value of Cleaning and Waste Disposal charges for Grade A office premises was at $\$4.31/m^2$ or 7.75% of the total charges, which was about 25% in excess of that of Grade B at $\$3.65/m^2$ or 7.89% of the total charges, and nearly double than that of Grade C at $\$2.07/m^2$ or 8.37% of the total charges, as illustrated in Table 5.1 and Figures 5.1(a), 5.1(b), 5.3.2(a) and 5.3.2(b). The values appeared to be in parity with the current market level, hence, the benchmark values of Cleaning and Waste Disposal Charges pertaining to monthly management fees for Grade A, B and C office premises are recommended to be set at $\$4.31/m^2$, $\$3.65/m^2$ and $\$2.07/m^2$ respectively.

Fig. 5.3.2(a) Benchmark Values of Monthly Cleaning and Waste Disposal Charges for Grade A/B/C Office Buildings

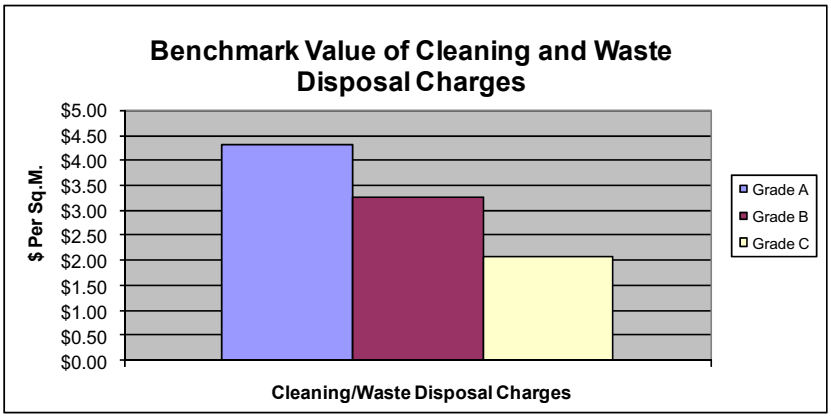
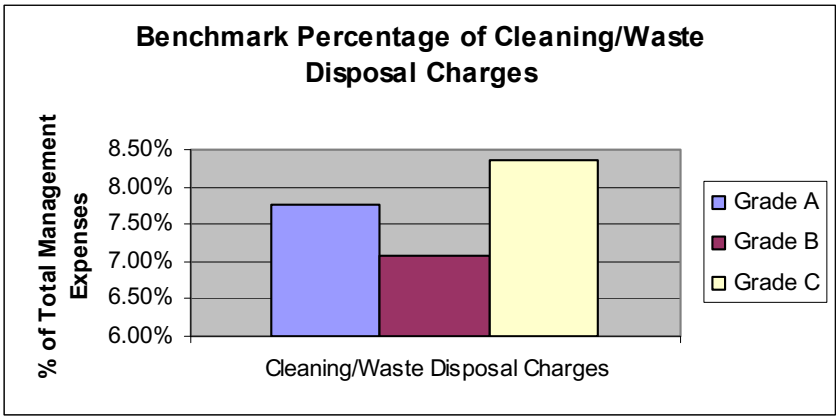


Fig. 5.3.2(b) Benchmark Values Expressed as Percentages of Monthly Cleaning and Waste Disposal Charges for Grade A/B/C Office Buildings



5.3.3 Building Works Charges

Premises are in need of upkeeping their building fabrics which included facades; structural repair and maintenance; replacement of fresh and flushing water supply as well as drainage systems, and other associated works to keep the buildings in proper conditions.

It happened that Grade A office premises had superior quality of building design and construction materials which required less recurrent repairs and maintenance than Grade B office buildings, so it fetched an overall monthly mean value of $\$2.28/m^2$ which was lower than that of Grade B at $\$5.87/m^2$. On the other hand, low graded office premises were in simple design with relative smaller floor size, then Grade C office premises was at a lower level of $\$1.08/m^2$ for lesser works and small scales. In consideration of these values as compared with the prevailing price movement trends in the market, it would be conclusive to set the recommended benchmark monthly values of $\$2.28/m^2$ for Grade A office premises $\$5.87/m^2$ for Grade B and $\$1.08/m^2$ for Grade C office buildings. Figures 5.3.3(a) and 5.3.3(b) refer.

By way of expressing as a percentage of the total management and maintenance costs, Building Works Charges in Grade B office premises (12.69%) took a substantial share of the total expenses than those of Grades A (4.1%) and C office premises (4.37%), whilst there was a similar proportion of shares for both Grades A and C as shown in Fig. 5.3.3(b).

Fig. 5.3.3(a) Benchmark Values of Monthly Building Works Charges for Grade A/B/C Office Buildings

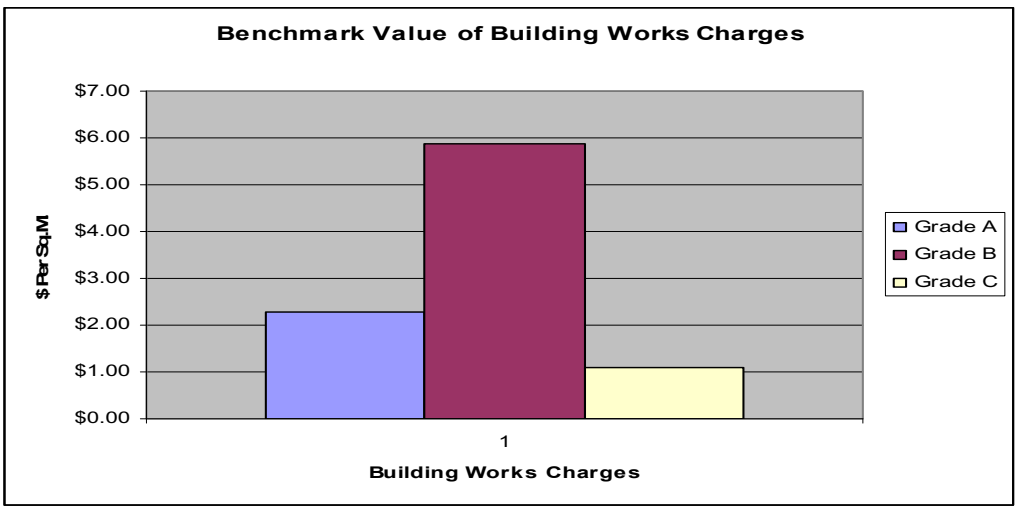
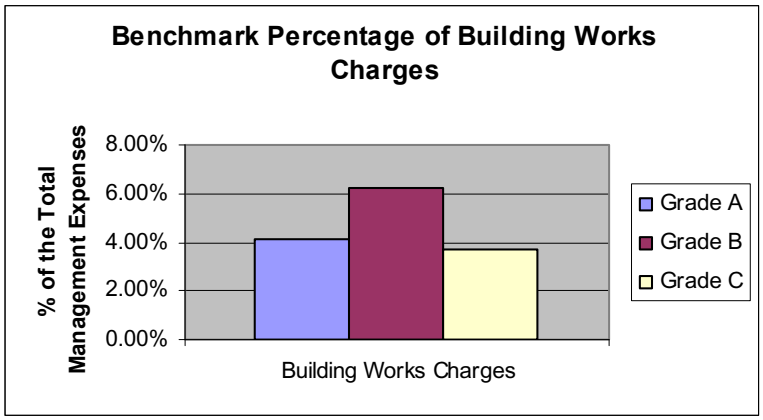


Fig. 5.3.3(b) Benchmark Values Expressed as Percentages of Monthly Building Works Charges for Grade A/B/C Office Buildings



5.3.4 Building Services Charges

Building Services form an essential provision in effective running of the building facilities within premises. Through comparison, Grades A and B office premises might have to spend larger sums for providing higher standards of efficient and convenient facilities and services for the well-beings of occupants and visitors than Grade C office premises.

It was observed in Table 5.1, Figures 5.3.4(a) and 5.3.4(b), the overall monthly mean value of Building Services Charges amongst three grades of office premises were \$6.79/m^2 for Grade A, \$6.18/m^2 for Grade B, and \$3.01/m^2 for Grade C with their respective apportionments of 12.21%, 13.36% and 12.00% of the total expenses pertaining to the monthly management fees, which were considered in pace with the current market practices. In this regard, they would be adopted as the recommended benchmark monthly values in the study

Fig. 5.3.4(a) Benchmark Values of Monthly Building Services Charges for Grade A/B/C Office Buildings

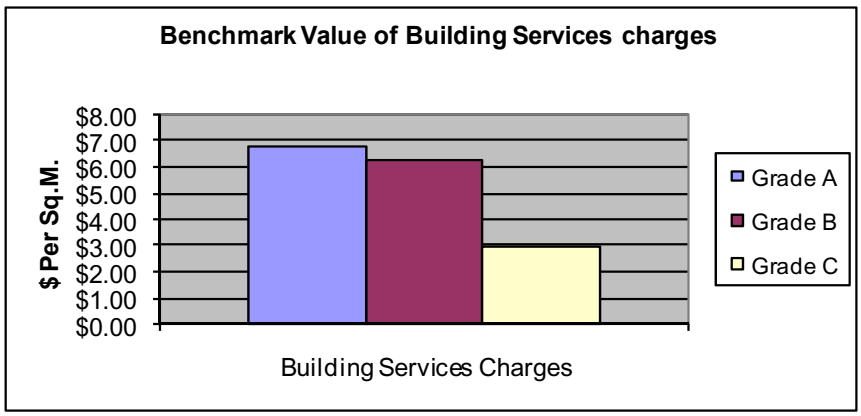
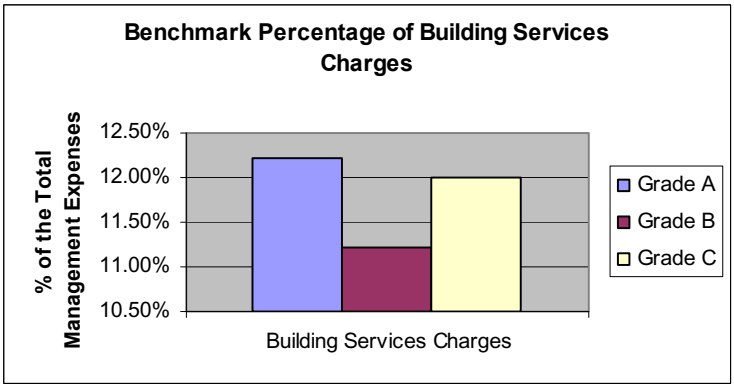


Fig. 5.3.4(b) Benchmark Values Expressed as Percentages of Monthly Building Services Charges for Grade A/B/C Office Buildings



5.3.5 Security Services Charges

The Grade A office premises were normally installed with high-technology security systems to replace human process as much as practicable, which may lead to reduce considerable expenses in the staff deployments for patrolling duty that has to be performed in both Grades B and C office premises. Hence, variation of expenses might be determined by the availability of technology and deployment of security staff within the premises to a certain extent.

An overall monthly mean value of \$5.85/m^2 or 23.65% of the total expenditures for Grade C office premises was obtained slightly more than that of Grade B at \$5.74/m^2 or 12.41% of the total expenditures but dramatically more than Grade A at \$2.50 m^2 or 4.50% of the total expenditures as indicated in Figures 5.1(a), 5.1(b), 5.3.5(a) and 5.3.5(b). On the basis of these pricing levels which were widely adopted in the current market, they would be best treated as the recommended benchmark monthly values of Security Services Charges at \$2.50/ m^2 for Grade A office premises, \$5.74/m^2 for Grade B and \$5.85/m^2 for Grade C respectively.

Fig. 5.3.5(a) Benchmark Values of Monthly Security Services Charges for Grade A/B/C Office Buildings

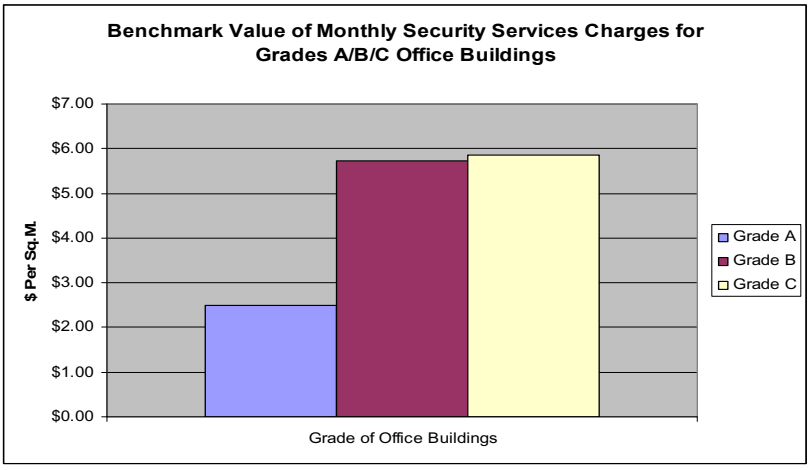
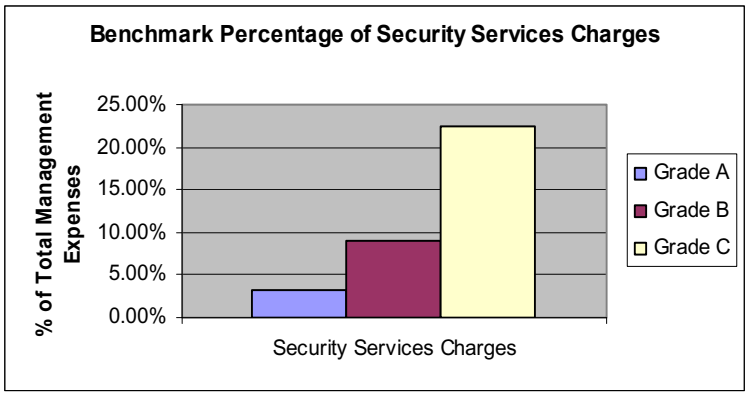


Fig. 5.3.5(b) Benchmark Values Expressed as Percentages of Monthly Security Services Charges for Grade A/B/C Office Buildings



5.4 Management Fee Levels for Office and Residential Premises

Different grades of office premises in Hong Kong charged management fees at different levels in accordance with their respective quality of management services and facilities provided. In this study, the recommended benchmark monthly management fees for Grade A, B and C office premises had been set at \$55.61/m^2, \$46.25/m^2 and \$24.74/m^2 respectively.

When compared with the benchmark monthly management fees for residential buildings at \$14.40/m^2 as released by Leung *et al.* (2009), the office buildings, assuming the same discount rate applied to both types of properties, were levied much higher than those of residential premises in Hong Kong, e.g., Grade A office premises charged more than 3.8 times of those residential premises. This is consistent to the estimate that was produced by the Hong Kong Institute of Facility Management in 2004 in its Facility Management Market Audit 2003 (\$59.10/m^2 per month and \$16.5/m^2 per month for office and residential premises respectively). Whereas, the recommended monthly benchmark monthly management fees for Grade B and C office premises would be more than 3.2 times and 1.7 times than those of residential premises. Perhaps, this may be due to higher demand on income producing properties from the uses of facilities and services within the office premises than residential buildings.

5.5 Limitations of Study

In actual fact, the resulting recommended benchmark monthly management fees had not revealed any possible hidden elements, which were not disclosed or cannot be identified in the surveys and questionnaires, most probably because of trade confidentiality or undisclosed corporate policies within the industry.

It was felt that the recommended benchmark monthly management fees were discovered within the reasonable range of current market level in the industry. In the study, they,

generally expressed in a single unit, were commonly composed of both air-conditioning and general management charges simultaneously, but in some practices, they are charged separately for pricing purposes.

However, the recommended benchmark monthly management fees were not supposed to be conclusive; they should not have any binding effect, rather than for indication purposes which form a yardstick purely for reference and guidance. Every attempt of fixing the management fees is advised to take into account of the suggested benchmark results together with other practical considerations, such as market elements, company policies, managers' remuneration margins and related factors in order to finalise the most justifiable level of management fees. To follow the frameworks of this study, a comprehensive benchmarking system of management fees for office premises was able to be feasible not without the data support from a much larger-scale survey.

5.6 Further Study

In this study, correlation analyses between the charges for daily management and building services and factors such as building size, building age and opening hour were appropriate to establishing the degree of significant associations amongst them. However, these factors were not able to reflect the level or the standard of maintenance to building fabrics, facilities and services provision across different grades of office premises. Even within the same grade of office buildings, the levels or standards would have deviations to some extent. Because of resulting in the variable levels or standards of maintenance which included but not limited to, for instance, electricity charges, there would undoubtedly affect the efficient performance of services and facilities that would have led to vary the level of monthly management fees. As such, it is advisable to include the same standards of maintenance as a factor of study for further larger-scale study too.

The study involved mainly the collection of data through questionnaire surveys to different management agents. There were a total of 52 sets of valid sample data received within which 20, 16 and 16 sets were from Grade A, B and C office premises respectively. From the statistical point of view, the larger is the sample size, the more feasible is the generalization of the study that could possible attain. Accordingly, despite the result of this study which had been able to produce information for the benchmarking of management fees, it is strongly recommended to conduct a much larger-scale survey based on the existing frameworks of this study to obtain more comprehensive and conclusive outcomes.

Last but not least, due to limited sample size, the study was not adequately able to differentiate different modes of property and facility management systems, such as landlord's direct management, management agent, owner's corporation and so on, which might have various impacts on the benchmarking of monthly management fees. Hence, it is suggested to have the mode of management systems to be incorporated in any future larger-scale survey as to identify or reflect, if any, possible effects to the charges of monthly management fees in any circumstances.

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APPENDIX A: SAMPLE OF QUESTIONNAIRE

QUESTIONNAIRES FOR THE RESEARCH PROJECT

"BENCHMARKING OF MANAGEMENT FEES FOR OFFICE BUILDINGS"

This is a questionnaire survey for a joint research project between the Property and Facility Management Division of the Hong Kong Institute of Surveyors, and the PolyU Technology & Consultancy Company Limited on the benchmarking of management fees for Hong Kong office buildings. The prime concern of this survey is to collect annual management expenditures of various management services components which make up the total management expenditures of each grade of office buildings, e.g., Grade A, B or C as defined by Rating & Valuation Department of the HKSAR Government (see Note 1). The amount of management fee is established on the basis of the total management expenditures. We are confident that the information collected by this survey will contribute to the improvement of property management services for office buildings.

The results of this survey are **SOLELY** used for research study, you are assured of their confidentiality whatsoever and all data will definitely be destroyed immediately after the study.

The questionnaire is divided into 3 parts. Part 1 is the general information of the office building, Part 2 refers to the management expenditures of individual components of the office building and Part 3 is the optional contact details of respondents. **Please reproduce additional questionnaires if there are more than three buildings.**

Part 1 - General Information of Office Building

Items	Descriptions	Building No. 1	Building No. 2	Building No. 3
1.1	Grade	A/ B/ C*	A/ B/ C*	A/ B/ C*
1.2	Building Name/ Address/ District (Optional)			
1.3	Management Model	Landlord's subsidiary/ Management agent/ Owners' Incorporation*	Landlord's subsidiary/ Management agent/ Owners' Incorporation*	Landlord's subsidiary/ Management agent/ Owners' Incorporation*
1.4	Nature of Building	Office/Office + other commercial uses*	Office/Office + other commercial uses*	Office/Office + other commercial uses*
1.5	Building Age (Years)			
1.6	Total Office's GFA ('000 m^2)			
1.7	Opening Hours (Hours)			
1.8	Major Renovation in last 5 years (if yes - in which aspects: Building Works/ Building Services / Fire Services*)			

*** Circle as appropriate**

Part 2 - Annual Management Expenditures of Office Building

For the Year: 2005

Items	**Components (For Offices Only)**	**Annual Expenditures (HK$ '000)**		
	Number of Building	**Building No. 1**	**Building No. 2**	**Building No. 3**
2.1	Electricity Charges (Note 2)			
2.2	Water Charges (Note 3)			
2.3	Cleaning/Waste Disposal (Note 4)			
2.4	Maintenance/Repairs & Replacements:	-----	-----	-----
	2.4.1 Building Works (Note 5)	-----	-----	-----
	(i) Building Fabrics			
	(ii) Plumbing and Drainage			
	(iii) Others (please specify)			
	(iv) **Total**			
	2.4.2 Building Services Works (Note 6)	-----	-----	-----
	(i) HVAC System			
	(ii) Electrical System			
	(iii) Lift and Escalator Systems			
	(iv) Others (please specify)			
	(v) **Total**			
	2.4.3 Fire Services Works (Note 7)			
2.5	Security (guards/patrol/surveillance Systems)			
2.6	Landscaping/Gardening, if any			
2.7	Insurance			
2.8	Management Office/ Administration Expenses (Note 8)			
2.9	Reserve/Annual Sinking Funds			
2.10	Staff Costs, e.g., Customer Services Ambassadors, Estate Officers and etc.			
2.11	Others (please specify)			
2.12	**Grand Total**			

Additional information for detailed illustrations, if any:

For the Year: 2006

Items	Components (For Offices Only)	Annual Expenditures (HK$ '000)		
	Number of Building	**Building No. 1**	**Building No. 2**	**Building No. 3**
2.1	Electricity Charges (Note 2)			
2.2	Water Charges (Note 3)			
2.3	Cleaning/Waste Disposal (Note 4)			
2.4	Maintenance/Repairs & Replacements:	-----	-----	-----
	2.4.1 Building Works (Note 5)	-----	-----	-----
	(i) Building Fabrics			
	(ii) Plumbing and Drainage			
	(iii) Others (please specify)			
	(iv) **Total**			
	2.4.2 Building Services Works (Note 6)	-----	-----	-----
	(i) HVAC System			
	(ii) Electrical System			
	(iii) Lift and Escalator Systems			
	(iv) Others (please specify)			
	(v) **Total**			
	2.4.3 Fire Services Works (Note 7)			
2.5	Security (guards/patrol/surveillance Systems)			
2.6	Landscaping/Gardening, if any			
2.7	Insurance			
2.8	Management Office/ Administration Expenses (Note 8)			
2.9	Reserve/Annual Sinking Funds			
2.10	Staff Costs, e.g., Customer Services Ambassadors, Estate Officers and etc.			
2.11	Others (please specify)			
2.12	**Grand Total**			

Additional information for detailed illustrations, if any:

For the Year: 2007

Items	Components (For Offices Only)	Annual Expenditures (HK$ '000)		
	Number of Building	**Building No. 1**	**Building No. 2**	**Building No. 3**
2.1	Electricity Charges (Note 2)			
2.2	Water Charges (Note 3)			
2.3	Cleaning/Waste Disposal (Note 4)			
2.4	Maintenance/Repairs & Replacements:	-----	-----	-----
	2.4.1 Building Works (Note 5)	-----	-----	-----
	(i) Building Fabrics			
	(ii) Plumbing and Drainage			
	(iii) Others (please specify)			
	(iv) **Total**			
	2.4.2 Building Services Works (Note 6)	-----	-----	-----
	(i) HVAC System			
	(ii) Electrical System			
	(iii) Lift and Escalator Systems			
	(iv) Others (please specify)			
	(v) **Total**			
	2.4.3 Fire Services Works (Note 7)			
2.5	Security (guards/patrol/surveillance Systems)			
2.6	Landscaping/Gardening, if any			
2.7	Insurance			
2.8	Management Office/ Administration Expenses (Note 8)			
2.9	Reserve/Annual Sinking Funds			
2.10	Staff Costs, e.g., Customer Services Ambassadors, Estate Officers and etc.			
2.11	Others (please specify)			
2.12	**Grand Total**			

Additional information for detailed illustrations, if any:

For the Year: 2008

Items	Components (For Offices Only)	Annual Expenditures (HK$ '000)		
	Number of Building	**Building No. 1**	**Building No. 2**	**Building No. 3**
2.1	Electricity Charges (Note 2)			
2.2	Water Charges (Note 3)			
2.3	Cleaning/Waste Disposal (Note 4)			
2.4	Maintenance/Repairs & Replacements:	-----	-----	-----
	2.4.1 Building Works (Note 5)	-----	-----	-----
	(i) Building Fabrics			
	(ii) Plumbing and Drainage			
	(iii) Others (please specify)			
	(iv) **Total**			
	2.4.2 Building Services Works (Note 6)	-----	-----	-----
	(i) HVAC System			
	(ii) Electrical System			
	(iii) Lift and Escalator Systems			
	(iv) Others (please specify)			
	(v) **Total**			
	2.4.3 Fire Services Works (Note 7)			
2.5	Security (guards/patrol/surveillance Systems)			
2.6	Landscaping/Gardening, if any			
2.7	Insurance			
2.8	Management Office/ Administration Expenses (Note 8)			
2.9	Reserve/Annual Sinking Funds			
2.10	Staff Costs, e.g., Customer Services Ambassadors, Estate Officers and etc.			
2.11	Others (please specify)			
2.12	**Grand Total**			

Additional information for detailed illustrations, if any:

Explanatory Notes:

1. The grading of office buildings is defined by the Rating and Valuation Department and its criteria are extracted from its Technical Notes for reference.

   Grade A - modern with high quality finishes; flexible layout; large floor plates; spacious, well decorated lobbies and circulation areas; effective central air-conditioning; good lift services zoned for passengers and goods deliveries; professional management; parking facilities normally available.

   Grade B - ordinary design with good quality finishes; flexible layout; average-sized floor plates; adequate lobbies; central or free-standing air-conditioning; adequate lift services, good management; parking facilities not essential.

   Grade C - plain with basic finishes; less flexible layout; small floor plates; basic lobbies; generally without central air-conditioning; barely adequate or inadequate lift services; minimal to average management; no parking facilities.

2. Electricity charges apply to all common areas including electrical systems, i.e., lifts, air-conditionings, escalators, alarm systems, and etc.

3. Water charges include plumbing, pantries, communal toilets, watering systems to landscapes and garden, if any.

4. Cleanings contain floorings, exterior windows, plants on roof, and façade walls.

5. Building Works refer to general repairs to building fabrics including any structural components, such as walls, floors, ceilings and windows and plumbing and drainage.

6. Building Services include lifts, escalators, any power generated plants machines, lightings, air-conditioning systems, ventilation systems, and any electricity power supply.

7. Fire Services refer to auto-sprinkler systems, alarm system, fire hoses, extinguishers, smoke detectors, and other devices for fire protection prevention and fighting purposes.

8. Management Office/Administration Expenses include Manager's Remuneration, professional consultants' fees of accountants with auditor reports and legal costs; including notional rents charged for the accommodation used by the Management Office.

Part 3 - <u>Optional</u> contact details

3.1 Name _____ 3.2 Company _____

3.3 Contact Telephone No. _____ 3.4 e-mail _____

For enquiries, please call up Mr. William K. H. Wong, Research Manager, on 6608 4073 or Dr. K.K. Lo, Director of Research Project, on 2766 5878, PolyU Technology & Consultancy Company Limited, QR603, The Hong Kong Polytechnic University, Hunghom, Kowloon.