

Report for Questionnaire Survey on Electronic Tendering



Government of Hong Kong
Special Administrative
Region



**Hong Kong
Productivity Council**
香港生產力促進局

Task Force on Electronic Tendering,
Works Bureau

CAD Centre
1/F, HKPC Building,
78 Tat Chee Avenue
Kowloon

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Comments and Enquiries

We welcome any comments and enquiries on this report. Please forward them to:-

Computer Services Unit,
Works Bureau,
Room 1305, Murray Building,
Garden Road,
Hong Kong.
(Fax No. - 2905 1181)
(E-mail – csu@wb.gov.hk)

1. Purpose

- 1.1. This report presents the findings of a questionnaire survey on electronic tendering (e-tendering) undertaken by the Hong Kong Productivity Council (HKPC) on behalf of the Task Force on Electronic Tendering formed under the Contracts Committee of the Construction Advisory Board. The report is intended to provide information to the task force in formulating the strategy for e-tendering for works contracts.

2. Introduction

- 2.1. The purpose of the questionnaire survey is to gather information on:-
- (a) the industry's intention to proceed with e-tendering;
 - (b) the perceived benefits of e-tendering; and
 - (c) the concerns on the initiative.
- 2.2. The targets of the survey include contractors, architectural firms, engineering consulting firms and quantity surveying firms.
- 2.3. This report is organized as follows:-
- (a) Main text
 - (i) Survey process
This section gives a brief description of the process of conducting the survey;
 - (ii) Major findings
This section presents the major findings of the survey;
 - (iii) Conclusion
This section presents the conclusions drawn from the survey results;
 - (b) Annex 1 – Responses to Questions
This annex summarizes the responses to individual questions.

3. Survey Process

- 3.1. The methodology for the survey are set out in Discussion Paper No. 1 approved by the Plenary Meeting of the task force during the session on 3 December 1999. The paper is available on the web site for the task force (URL <http://www.wb.gov.hk/committee/etender/index.htm>).

- 3.2. The survey was conducted in two phases. Phase 1 was conducted in January/February 2000. Phase 2 was conducted in May 2000.
- 3.3. The questionnaires for Phase 1 were distributed on 22 January 2000 to 512 firms on the following lists:-
- (a) Contractors:-
 - (i) list of Approved Public Works Contractors provided by Works Bureau;
 - (ii) list of contractors provided by Housing Department;
 - (b) List of engineering consultants provided by the Engineering and Associated Consultants Selection Board (EACSB);
 - (c) List of architectural firms provided by the Architectural and Associated Consultants Selection Board (AACSB); and
 - (d) List of quantity surveying firms provided by the Hong Kong Institute of Surveyors.
- 3.4. HKPC staff made follow-up calls after the Lunar New Year holidays in early February 2000 and requested the firms to respond. When the return of questionnaires closed on 22 February 2000, there were 271 returns.
- 3.5. The questionnaires for Phase 2 were distributed on 28 March 2000 to 587 firms on Works Bureau's list of Approved Suppliers of Materials and Specialist Contractors for Public Works. When the return of questionnaires closed on 19 April 2000, there were 280 returns.
- 3.6. The two phases of the survey cover 1,099 firms, distributed as follows:-

	Number
Contractors	882
Architectural firms	38
Engineering consulting firms	173
Quantity surveying firms	27
	1,099¹

¹ As some firms have business in more than one sector, the figures for individual sectors does not add up to the total.

4. Major Findings

4.1. Overview

4.1.1. The questionnaire consists of 19 questions divided into two parts:-

(a) Part 1 – Main Questionnaire (Questions 1 to 17)

The part gathers information on:-

- (i) the nature and turnover of the respondent's business;
- (ii) his/her perception on the benefits of and concerns on electronic tendering;
- (iii) his/her preferred features and functions for an electronic tendering systems; and
- (iv) his/her willingness to participate in the initiative;

(b) Part 2 – IT Profile (Questions 18 and 19)

This part gathers information on the respondent's IT facilities.

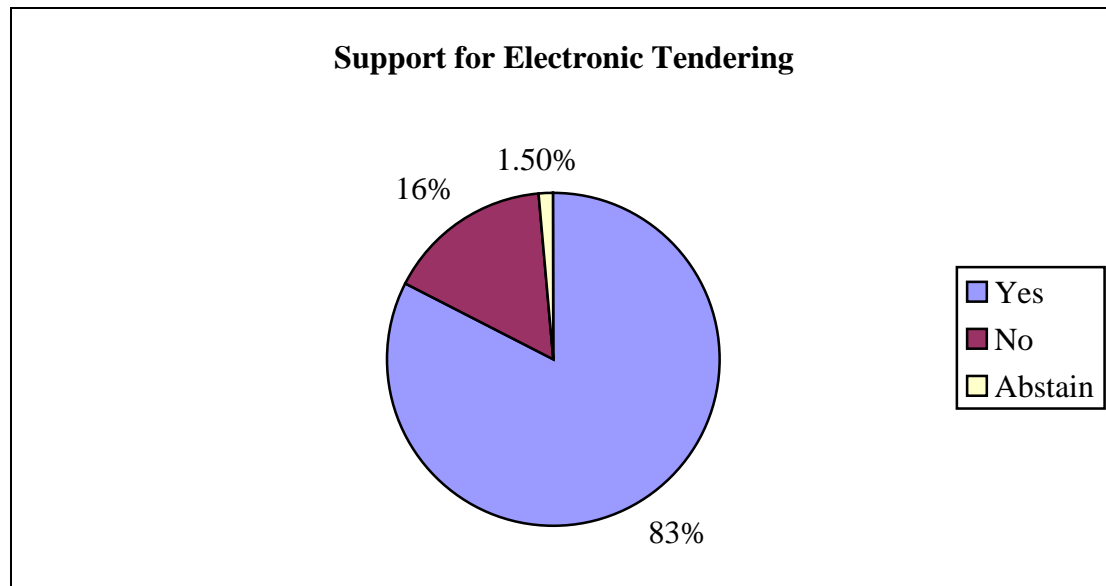
4.1.2. The responses to the questionnaire are included in summary form in Annex 1. The major findings derived from the responses are presented under the following headings:-

- (a) Overall support for e-tendering;
- (b) Support and size of firm;
- (c) Support by sectors and disciplines;
- (d) Concerns on e-tendering;
- (e) Potential savings of e-tendering;
- (f) IT profiles of respondents; and
- (g) Response rate.

4.2. Overall Support for E-tendering (Questions 14, 15 and 16)

4.2.1. The overall support for e-tendering is 83% derived as follows:-

Total number of questionnaires issued	1,099
Total number of returns	551
Total number of valid returns²	545
Number of respondents who intend to participate in e-tendering	<u>451</u>
% of total	<u>83 %</u>



4.2.2. The results show strong industrial support for electronic tendering. The following appears to be the major motivation for participation in the initiative:-

- (a) Time saving in preparing tenders;
- (b) Time saving in checking tenders;
- (c) Cost saving in preparing tenders;
- (d) Cost saving in submitting tender returns; and
- (e) Better productivity.

4.2.3. For those who do not intend to participate, the main concerns are as follows:-

- (a) Security and confidentiality of tender returns;
- (b) Leaking of restricted information; and
- (c) Authenticating tender documents and tender submission.

² We have discarded questionnaires that contain discrepancies making us unable to analyse the returns. For example, some of the firms have filled in both "yes" and "no" for question 14. We had made attempts to contact them to no avail.

4.3. Support and Size of Firm (Questions 3 and 14)

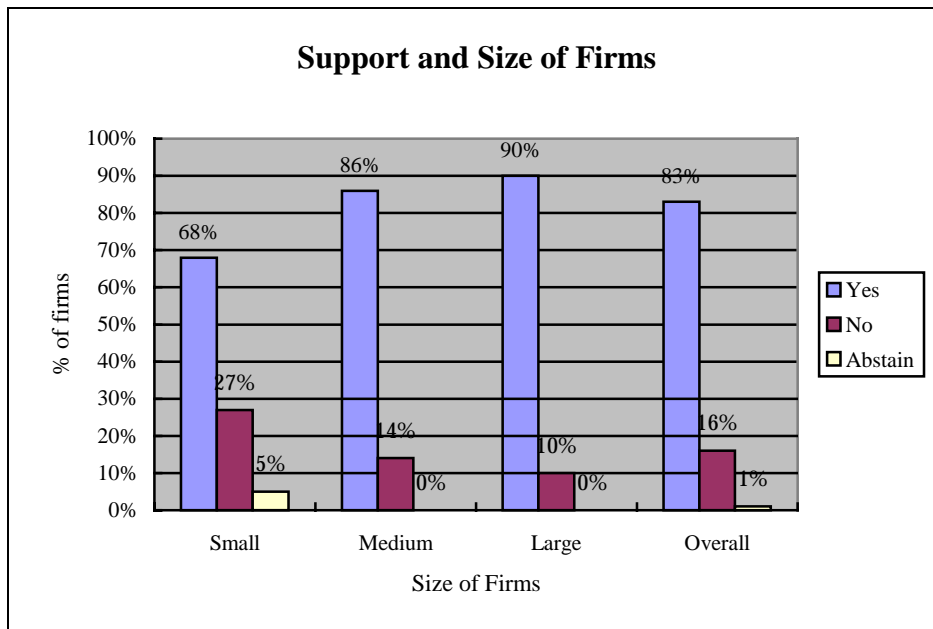
4.3.1. To investigate the relation between the size of firms and intention to participate in e-tendering, we have classified the respondents into three categories:–

	Annual Turnover (HK\$ million)	
		Contracting Firms
Small	< 5	< 10
Medium	between 5 and 1,000	between 10 and 500
Large	> 1,000	> 500
Average turnover	281	478

4.3.2. The turnovers used in the above classification are derived from the following percentiles:–

- (a) Small – firms with turnovers below the 15% percentile of turnovers;
- (b) Medium – firms with turnovers between the 15% and 85% percentiles; and
- (c) Large – firms with turnovers above the 85% percentile.

4.3.3. The results of the analysis are presented in the following figures. It appears that the percentage of small firms that support electronic tendering is significantly lower than the overall average.



4.4. Support by Sectors and Disciplines (Questions 2 and 14)

4.4.1. We have also analyzed the responses to Question 14 by splitting firms into the following sectors:-

- (a) Consulting sector which consists of architectural firms, engineering consultants and quantity surveying firms; and
- (b) Contracting sector which consists of contractors and suppliers.

4.4.2. For each sector we have further split the results into the following disciplines:-

- (a) building;
- (b) civil;
- (c) building services (BS); and
- (d) electrical and mechanical (non-building services) (E&M)

4.4.3. The results of the analysis by sectors and disciplines are presented in the following table:-

			Discipline				Overall for Sector
			Building	Civil	BS	E&M	
Sector	Consulting	N1	76	53	39	35	127
		N2	68	48	36	31	112
		P	89%	91%	92%	89%	88%
	Contracting	N1	161	131	160	113	437
		N2	129	111	134	92	354
		P	80%	85%	84%	81%	81%
Overall for discipline	N1	231	179	188	136	545	
	N2	192	156	160	113	452	
	P	83%	87%	85%	83%	83%	

Note:-

- (a) The following abbreviations are used in the above table:-
 - (i) N1 – Number of firms
 - (ii) N2 – Number of firms that support e-tendering
 - (iii) P - % of firms that support e-tendering ($P = N2/N1$)
- (b) As there are firms that are involved with business in more than one sectors and disciplines, the overall figures are different from the row and column totals.

4.4.4. For the consulting sector, the percentages of support for the various sub-sectors are as follows:-

	% of Support
Architectural firms	86%
Engineering consultants	93%
Quantity surveying firm	100%

4.5. Concerns on E-tendering (Question 8)

4.5.1. In Question 8, we list the potential issues on e-tendering and ask respondents to advise on their degrees of concerns through the following choices:-

- (a) no concern;
- (b) minor concern; and
- (c) major concern

4.5.2. Legal and security issues are considered as major concerns by the majority of respondents. The most critical issues are:-

- (a) Question 8(b) - Security and confidential of tender returns, major concern for 77% of respondents;
- (b) Question 8(d) - Leaking of restricted information, major concern for 69%;
- (c) Question 8(c) - Authenticating tender documents and tender submission, major concern for 60%; and
- (d) Question 8(e) – Virus attack, major concern for 51%;
- (e) Question 8(a) - Legal issues, major concern for 50%.

4.6. Potential Savings of Electronic Tendering

4.6.1. We have attempted to estimate the potential saving for e-tendering using the following methodology:-

- (a) calculate the saving for each respondent by multiplying the figures for Question 5 (average annual expenditure for responding to Government tenders) with the figure for Question 9 (average percentage saving in operational expenditure);
- (b) calculate an average saving [s] for all respondents;
- (c) calculate the total saving for the firms included in the survey by the formula:-

$$S = s \cdot N$$

where N = total number of firms included in the survey.

4.6.2. The calculations are presented in the spreadsheet below:-

Total saving for all respondents	\$ 16,400,000	[A]
Total no. of respondents	545	[B]
Average saving for each firm	\$ 30,092	[C]=[A]/[B]
No. of firms included in the survey	1099	[D]
Total saving for firms included in the survey	\$ 33,070,826	

4.6.3. The saving estimated in paragraph 4.6.2 above should be interpreted in light of the following observations:-

- (a) The estimate is intended to provide a very rough indication of the potential saving in operational expense that would have been realized through electronic tendering;
- (b) The answers for Questions 5 and 9 are based on the perception of respondents only. They may not necessarily reflect the actual situation; and
- (c) We have assumed that the percentage saving for responding to Government tenders is the same as the percentage saving in operating costs.

4.6.4. In view of the reasons stated above, the figure in paragraph 4.6.2 should only be used with great care.

4.7. IT Profile (Questions 18 and 19)

4.7.1. In Questions 18 and 19, we asked the respondents to provide information on their IT infrastructures. On the basis of the information, we have derived IT Profiles for small, medium and large firms. IT Profile is an indicator adopted

in HKPC's audit practice to measure a firm's IT strength. IT Profile is a combined assessment of the following aspects:-

- (a) Infrastructure - whether a firm is equipped with IT infrastructures including WAN, LAN, Internet and IT security policy;
- (b) General system – whether a firm is equipped with OA applications, e-mail or groupware systems and document management systems;
- (c) Technical system - whether a firm is equipped with CAD systems, project management systems and cost estimating systems;
- (d) Staff/PC ratio – the ratio between number of technical staff and number of PC's allocated to these staff; and
- (e) IT support - measure of the IT support resources.

4.7.2. Using the overall average of the industry as a benchmark (100%), the IT Profiles for the for firms with various sizes are as follows:-

					IT Support
Small	55%	81%	59%	91%	73%
Medium	104%	103%	104%	102%	109%
Large	139%	113%	135%	112%	98%
Overall	100%	100%	100%	100%	100%

4.7.3. From the table, it appears that,

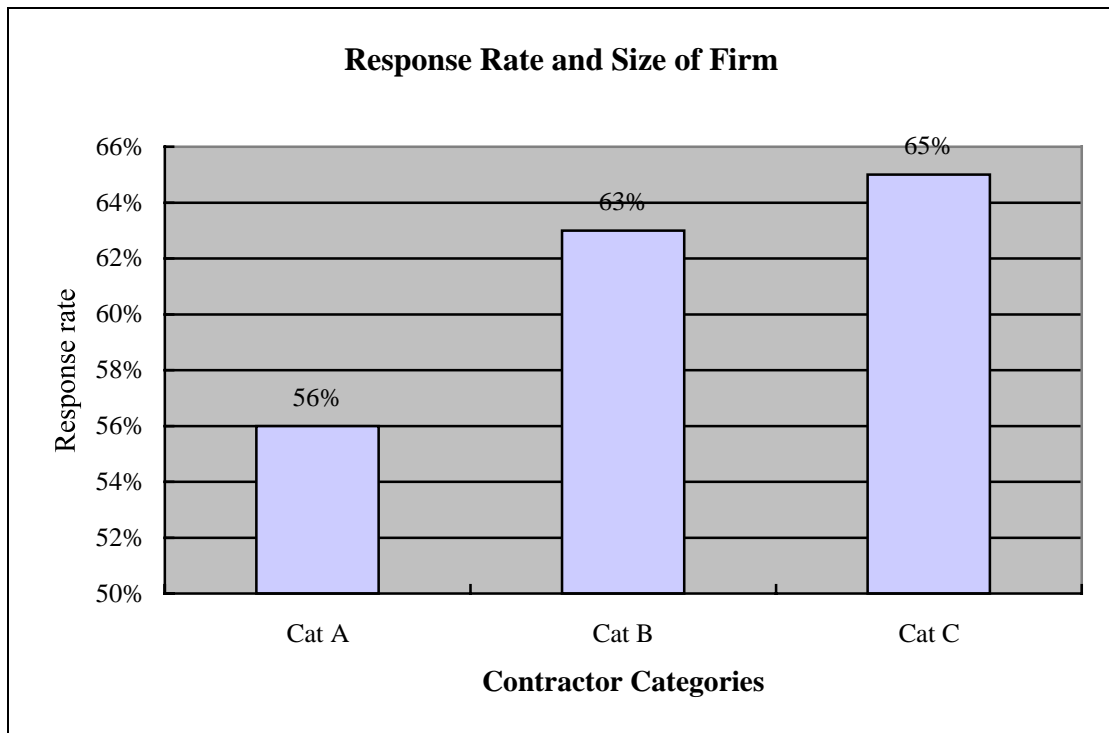
- (a) Larger firms have an IT profile that is above the overall average for the industry;
- (b) Medium firms have an IT Profile similar to that of the overall average; and
- (c) Small firms are less computerized in comparison to the overall average. The greatest gaps are in IT infrastructures and technical systems.

4.8. Response Rate

4.8.1. The overall response rate is 50%, which is considered to be satisfactory. The response rates for the various types of firms are tabulated below:-

			% of return
Contractors	883	451	51%
Architectural firms	38	22	58%
Engineering consultants	173	71	41%
Quantity surveying firms	27	15	56%
			50 %

4.8.2. To verify whether the response rate for small firms is lower, we have compared the rates for contractors in Categories A, B and C of Works Bureau's list of Approved Public Works Contractors. The results of comparison are shown in the following chart.



5. Conclusions and Recommendations

- 5.1. The results of the survey show strong industrial support for electronic tendering. 83% of the firms that responded to the survey indicate that they support electronic tendering and intend to participate in the initiative. The main motivation behind the support appears to be productivity enhancement and cost saving. In responding to Question 9, 56% of the firms perceive that e-tendering will save operational expenditure. In responding to Question 13, 76% of the firms indicate that e-tendering will enhance their productivity.
- 5.2. Despite the strong overall support, the analysis in paragraph 4.3 shows that the support for small firms is only 68%, which is 15% below the overall average. The difference may result from lower degree of computerization and the concerns on the technical, administrative and legal issues. To enable the benefits of e-tendering to percolate to the whole of the construction industry, the e-tendering strategy to be delivered by the task force should include measures for assisting small firms to get through the technical, administrative and legal hurdles.
- 5.3. The e-tendering strategy should also address the concerns enumerated in Question 8. In particular, we suggest two measures for addressing legal and security issues that are perceived as major concerns by the majority of the respondents. Firstly, the e-tendering strategy should make the full use of legal and framework promulgated in the Electronic Transactions Ordinance (ETO) to assure the confidential, integrity, authenticity and non-reputability of electronic records exchanged in the tendering process. Furthermore, the strategy should include additional measures to complement the ETO. One of the possible measures is the use of electronic courier service to provide independent records of the contents of electronic communication and the timings of dispatching and receiving these contents.
- 5.4. Secondly, as the ETO has been enacted only in early 2000, most players in the construction industry are not aware of its provisions. The e-tendering strategy should therefore include a comprehensive publicity campaign to advise the industry of the measures for tackling legal and security issues and to convince the industry of their effectiveness. Awareness will help allay legal and security concerns. The Government should therefore organize more seminars and conferences to help the construction industry understand more about the implementation of electronic tendering.
- 5.5. As more than 65% of the respondents indicated that more than half of their business would be coming from private sectors, it is necessary that the e-tendering should be readily adopted or interfaced with the systems used by the projects raised in the private sectors.
- 5.6. Finally, the responses to Question 12 indicate a strong preference for industrial standard data formats. The preference is in line with the main objective of electronic tendering, which is to improve the collaboration

between project participants through exchange project information electronically.

- 5.7. In view of the clear preference of the industry, the task force should give serious consideration to adopting industrial standard data formats for dissemination of tender documents and submission of tender returns. This arrangement will not necessarily require the industry to write off its existing systems that cannot support industrial standards natively. A better solution would be to develop interfaces between the existing systems and the data formats adopted in the e-tendering strategy. The reward for investment in these interfaces will come in the form of better collaboration between project participants and hence enhanced productivity and quality in project delivery.

Annex 1 – Summary of Responses to Questions

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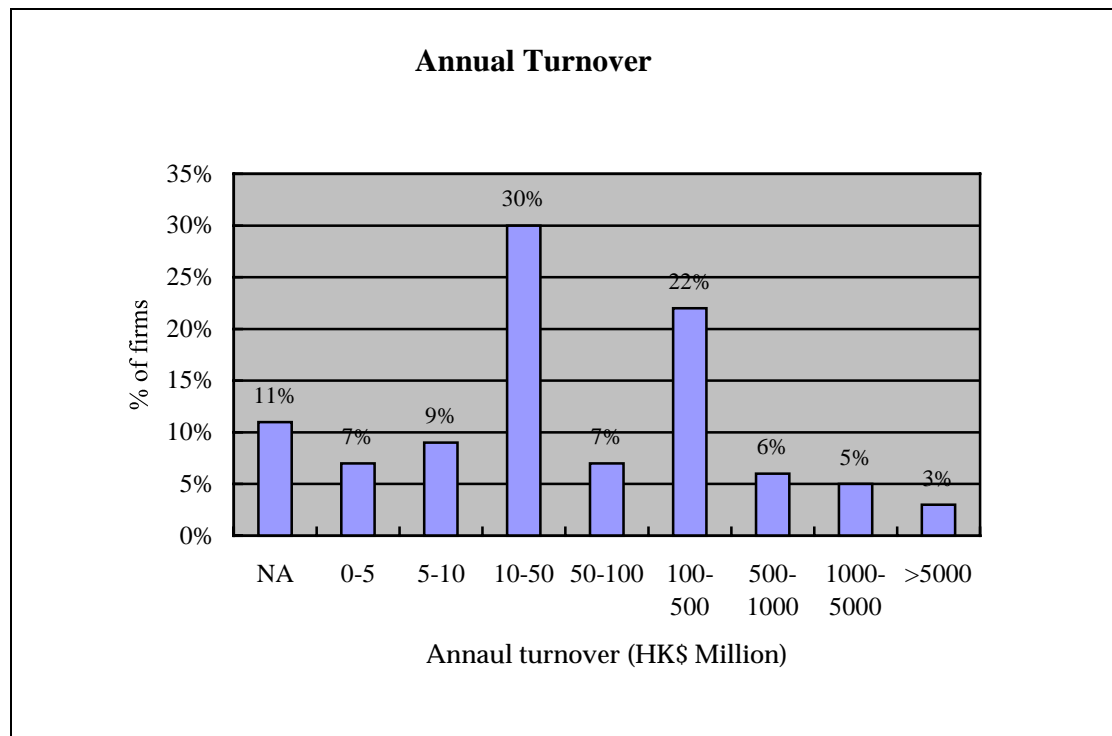
Question 2 – Sector and discipline

	Number of returns					
	Discipline					
						Sub-Total
Architects	33	5	4	2	6	41
Engineering Consultants	38	40	27	26	40	83
Quantity Surveyors	15	12	13	9	6	21
Contractor	161	131	160	113	79	437
Sub-total	231	179	188	136	116	545

As there are firms with business in more than one sectors or disciplines, the overall figures are different from the row and column totals. There are 214 multi-disciplinary or multi-sector firms.

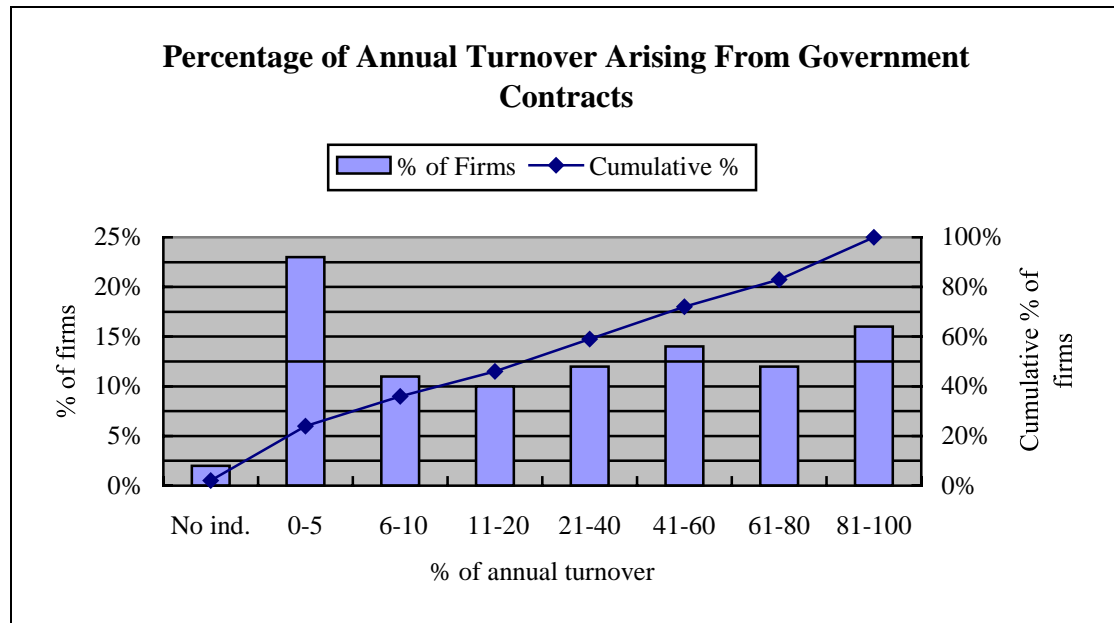
Question 3 – Annual Turnover

	Percentage
No Indication	11%
0-5	7%
5-10	9%
10-50	30%
50-100	7%
100-500	22%
500-1000	6%
1000-5000	5%
> 5000	3%
	100%



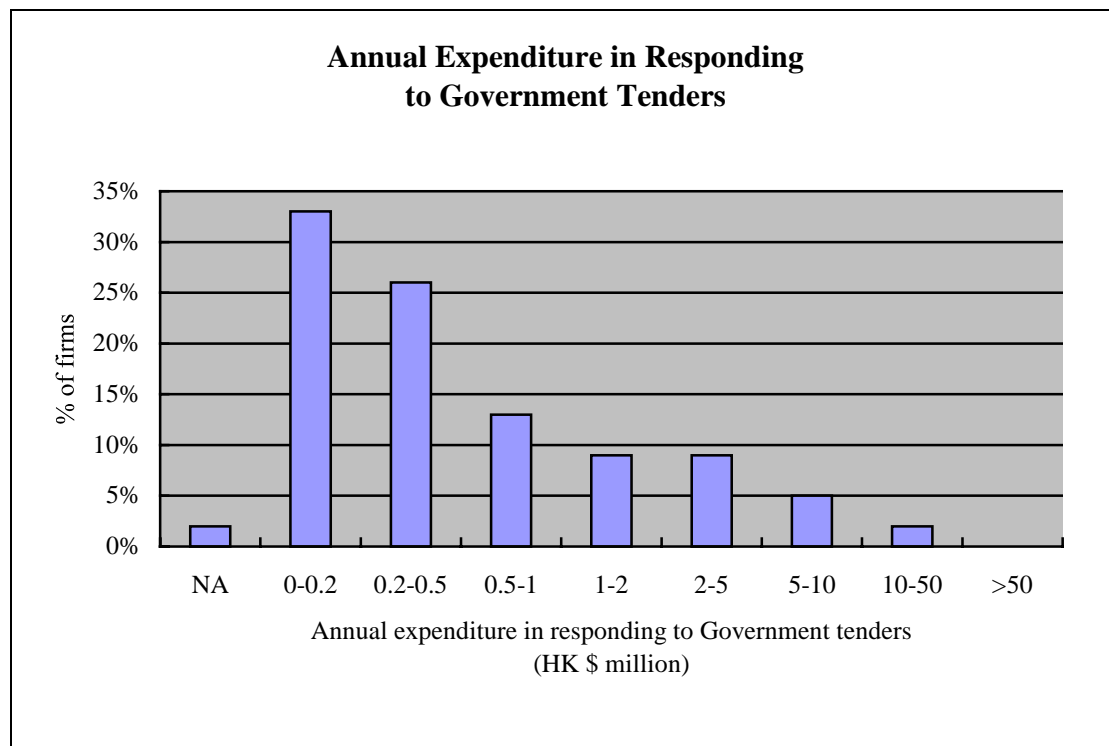
Question 4 –Percentage of Annual Turnover Arising from Government Contracts

	Percentage
No Indication	2%
0-5	23%
6-10	11%
11-20	10%
21-40	12%
41-60	14%
61-80	12%
81-100	16%
	100%



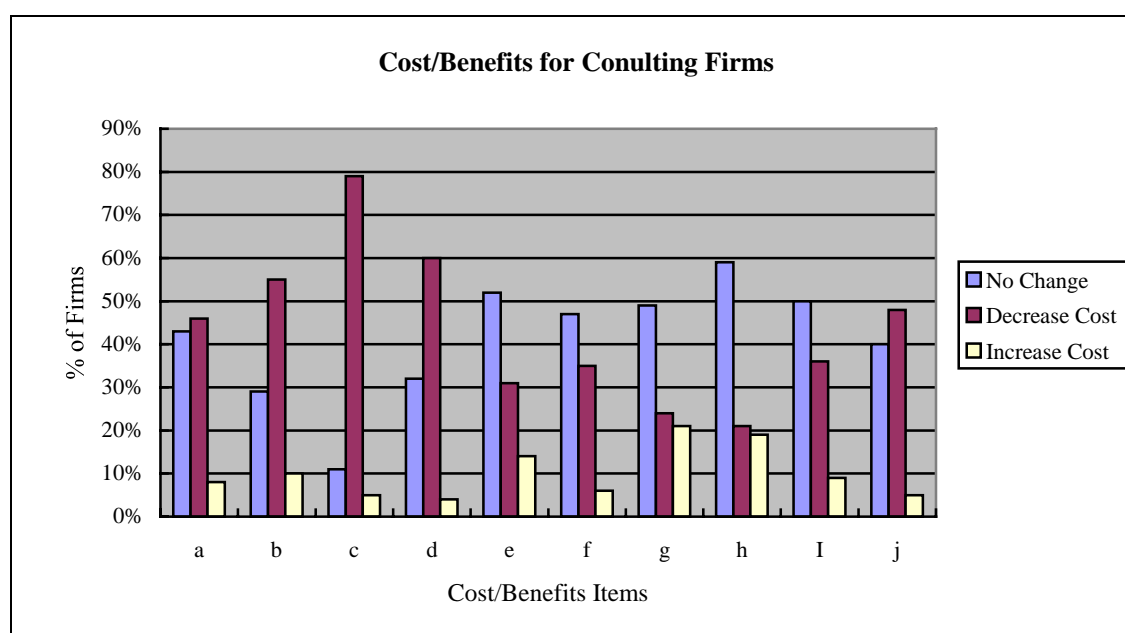
Question 5 – Average Annual Expenditure for Preparing and Responding to Government Tenders

	Percentage
No Indication	2%
0-0.2	33%
0.2-0.5	26%
0.5-1	13%
1-2	9%
2-5	9%
5-10	5%
10-50	2%
>50	0%
	100%



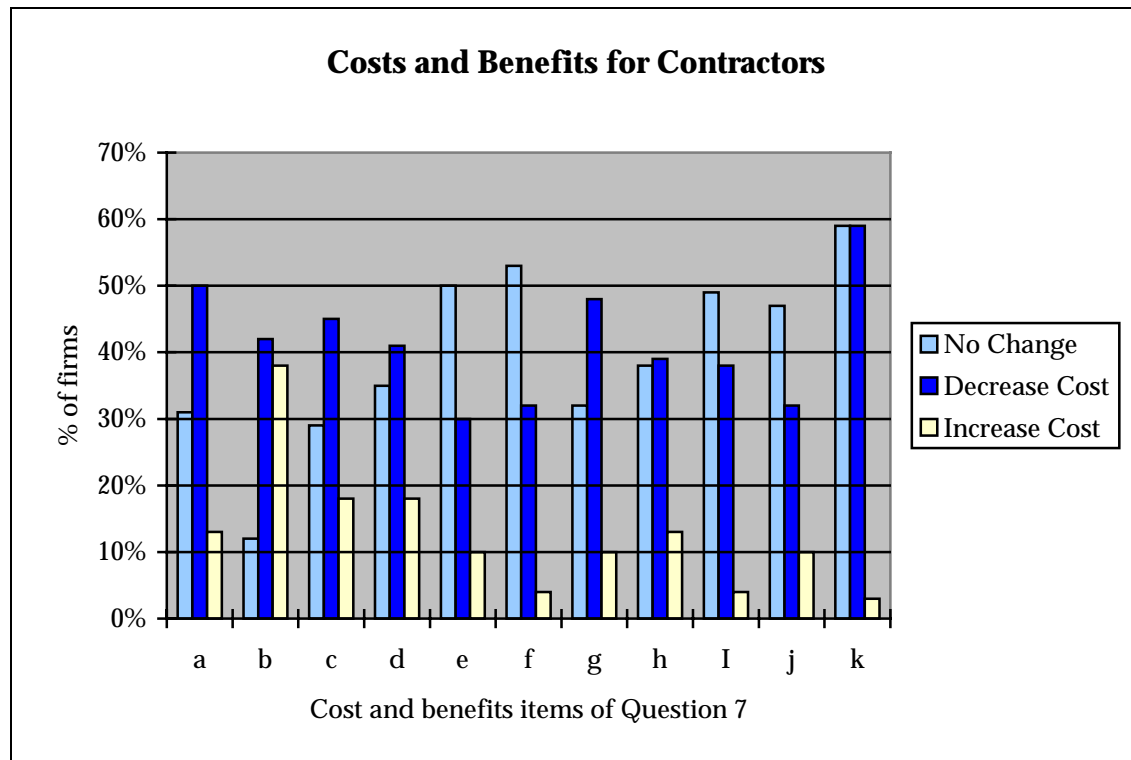
Question 6 – Cost and Benefit of E-Tendering for Consulting Firms

			Increase cost
Tender documentation by clients			
(a) Consolidating input from business partners into the tender documents	45%	47%	7%
(b) Production of tender documents	28%	55%	10%
(c) Printing and distribution of tender documentation	11%	79%	6%
(d) Preparation of tender addendum	33%	59%	5%
Assessment of tenders (post tendering)			
(e) Receipt and opening of tender	51%	31%	14%
(f) Assessment of tender prices	46%	35%	6%
(g) Assessment of design submissions	49%	24%	22%
(h) Assessment of other parts of tender submission	58%	21%	18%
(i) Tender clarification	50%	36%	8%
(j) Preparation of tender reports	40%	46%	6%



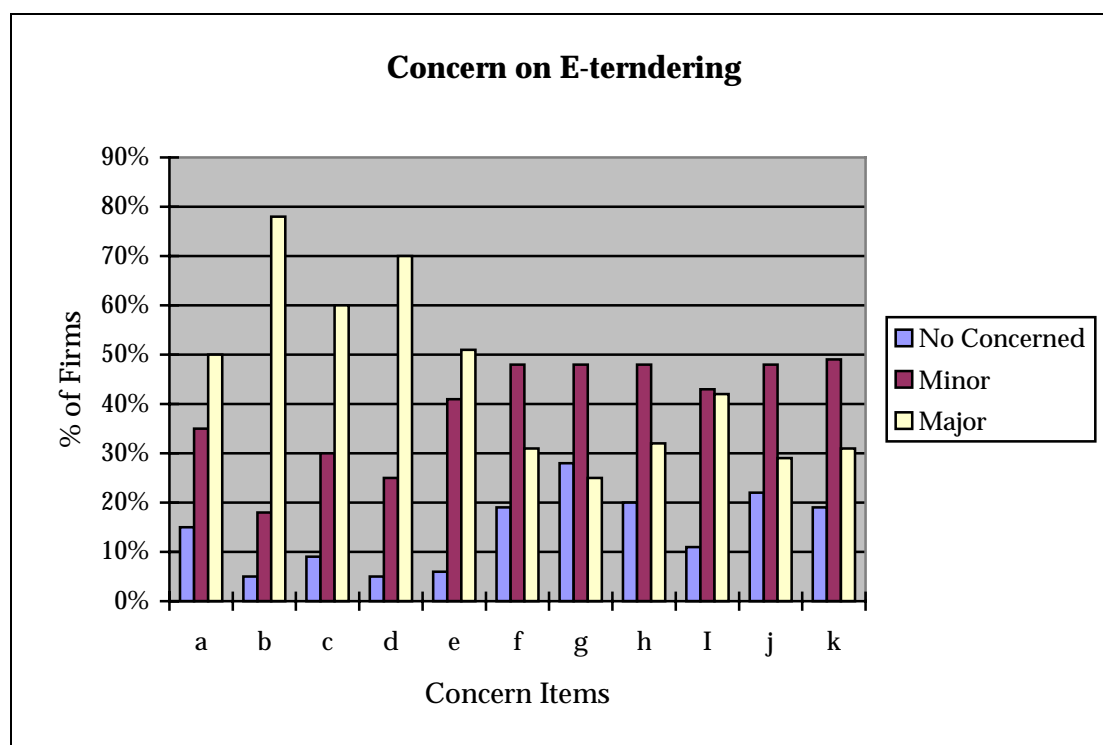
Question 7 – Cost and Benefit of E-Tendering for Contracting Firms

			Increase cost
Preparation of tender submissions			
(a) Receipt of tender document	31%	50%	13%
(b) Conversion of hard copy tender documents into electronic format	12%	42%	37%
(c) Preparation and production of tender documents for sub-contractors and suppliers	29%	45%	17%
(d) Printing and distribution of tender documents to sub-contractors and suppliers	34%	41%	17%
(e) Consolidation of returns from sub-contractors and suppliers	50%	30%	10%
(f) Tender query	53%	32%	4%
(g) Processing tender addendum	33%	46%	10%
(h) Preparing design submissions	37%	38%	13%
(i) Tender pricing	49%	36%	4%
(j) Preparing other parts of tender submission	46%	32%	10%
(k) Submitting tender	25%	58%	3%



Question 8 – Concerns on E-Tendering

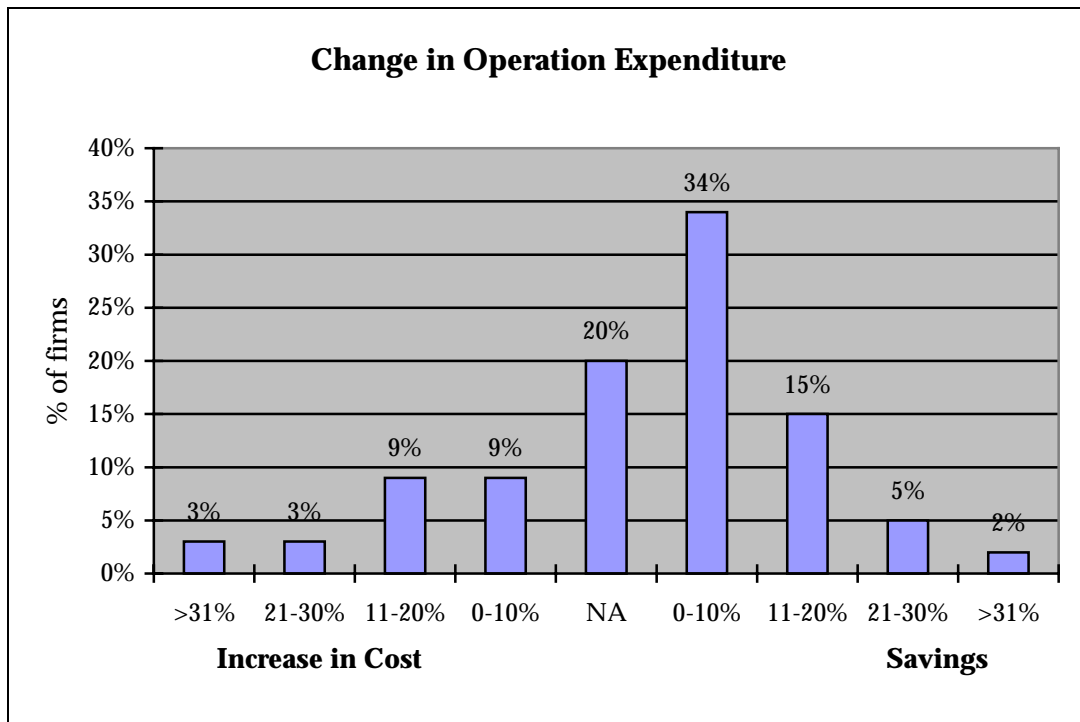
	Degree of Concern		
			Major
(a) Legal issues	14%	35%	50%
(b) Security and confidentiality of tender returns	5%	17%	77%
(c) Authenticating tender documents and tender submission	9%	31%	60%
(d) Leaking of restricted information	6%	25%	69%
(e) Virus Attack	7%	42%	51%
(f) High initial outlay on electronic tendering systems	18%	47%	32%
(g) High operating cost	28%	47%	25%
(h) Investment in keeping pace with the changing technology	20%	47%	32%
(i) Software and system compatibility	12%	44%	43%
(j) Lack of local professionals (who have both industry knowledge and IT)	23%	47%	29%
(k) Lack of experience in electronic tendering	19%	47%	32%



Question 9 – E-tendering and Savings in Operational Expenditure

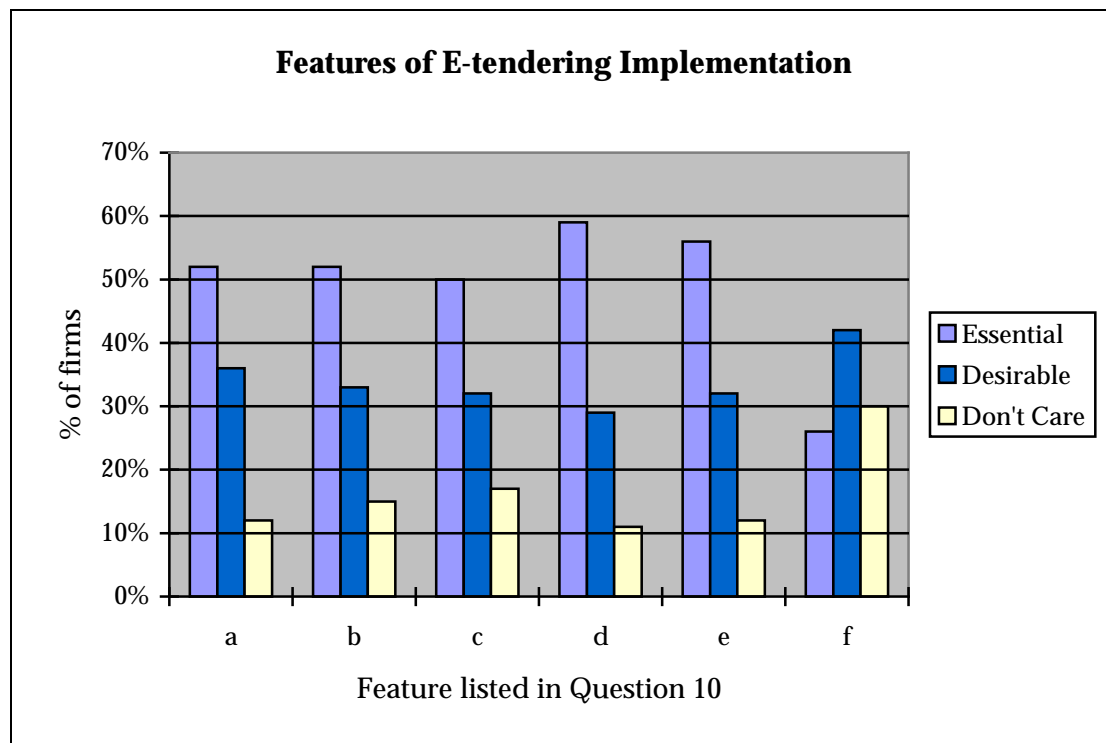
The summary is shown in the following table,

			Subtotal
		3%	24%
		3%	
		9%	
	0-10 %	9%	56%
	No indication/No change	20%	
		34%	
		15%	
		5%	2%
	> 31 %	2%	
	Total	100%	100%



Question 10 – Features of E-tendering System

	Preference		
			Don't care
(a) Distribution of the tender documents in electronic format	52%	36%	12%
(b) Use of common industrial standard data format for tender documents	52%	33%	15%
(c) Use of common industrial standard data format for tender returns	50%	32%	17%
(d) Bill of quantities/schedule of rates submission	59%	29%	11%
(e) Automatic computational facilities for bill of quantities/schedule of rates	56%	32%	12%
(f) Design submission (including designs required under the terms of the tender and alternative designs) in electronic format	26%	42%	30%

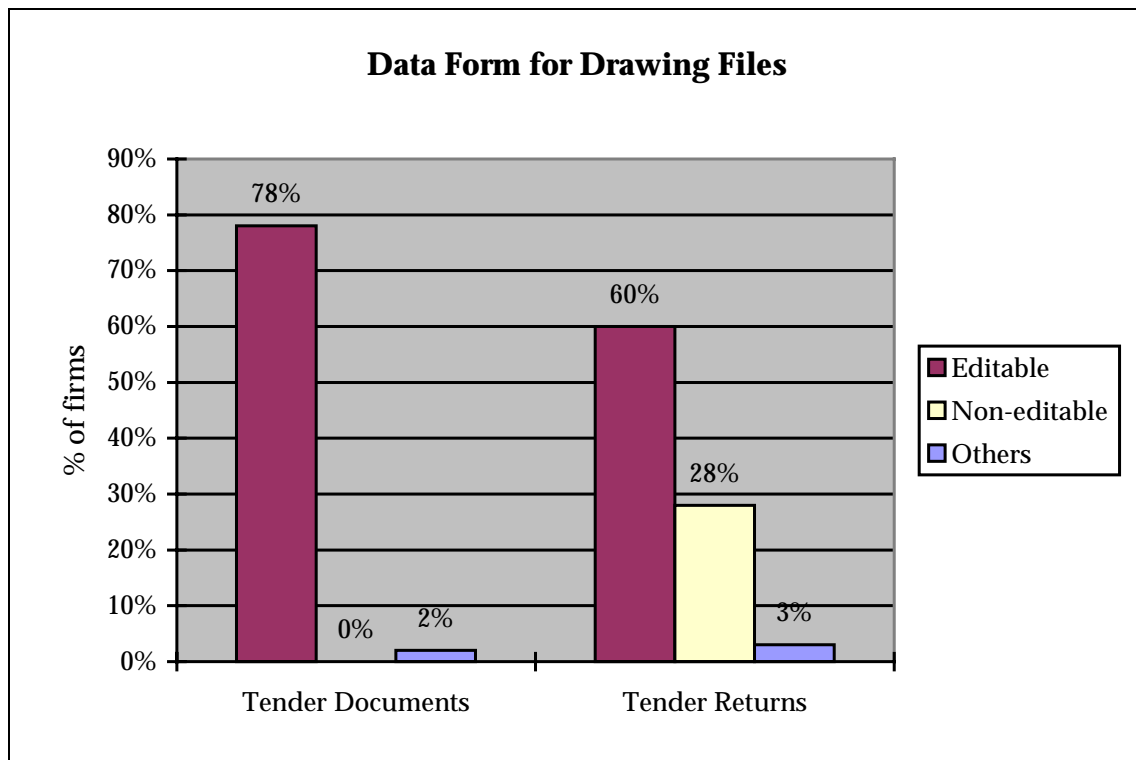


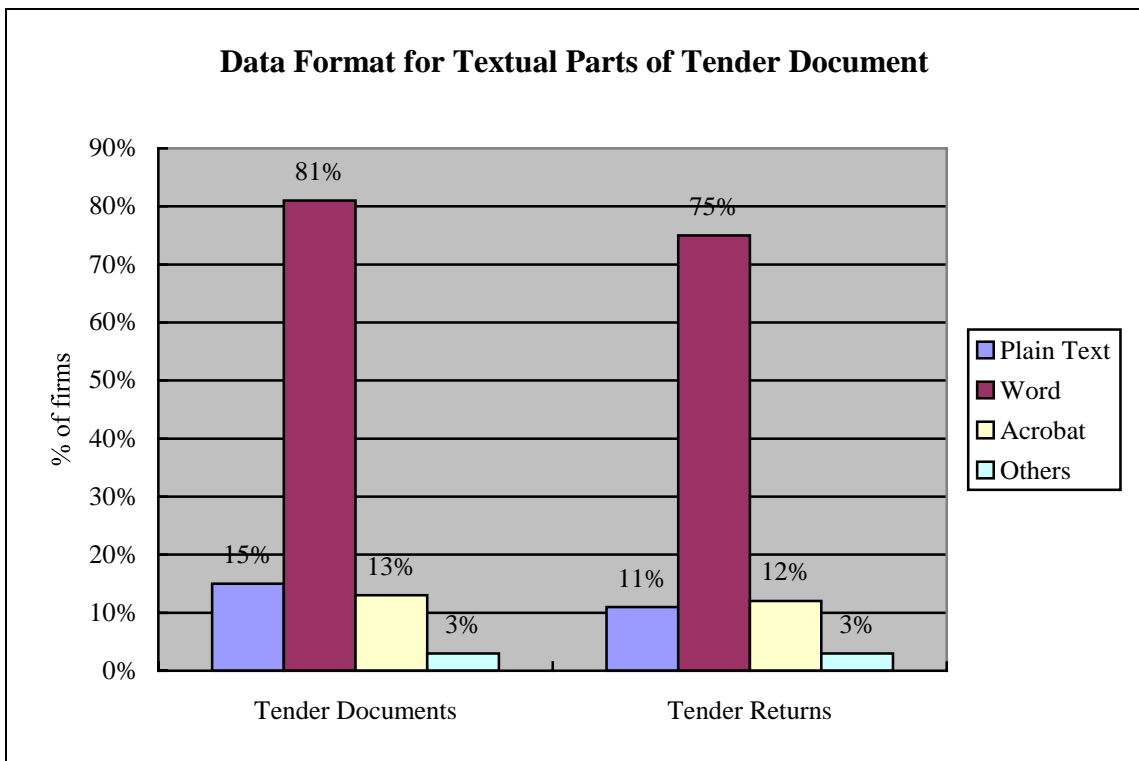
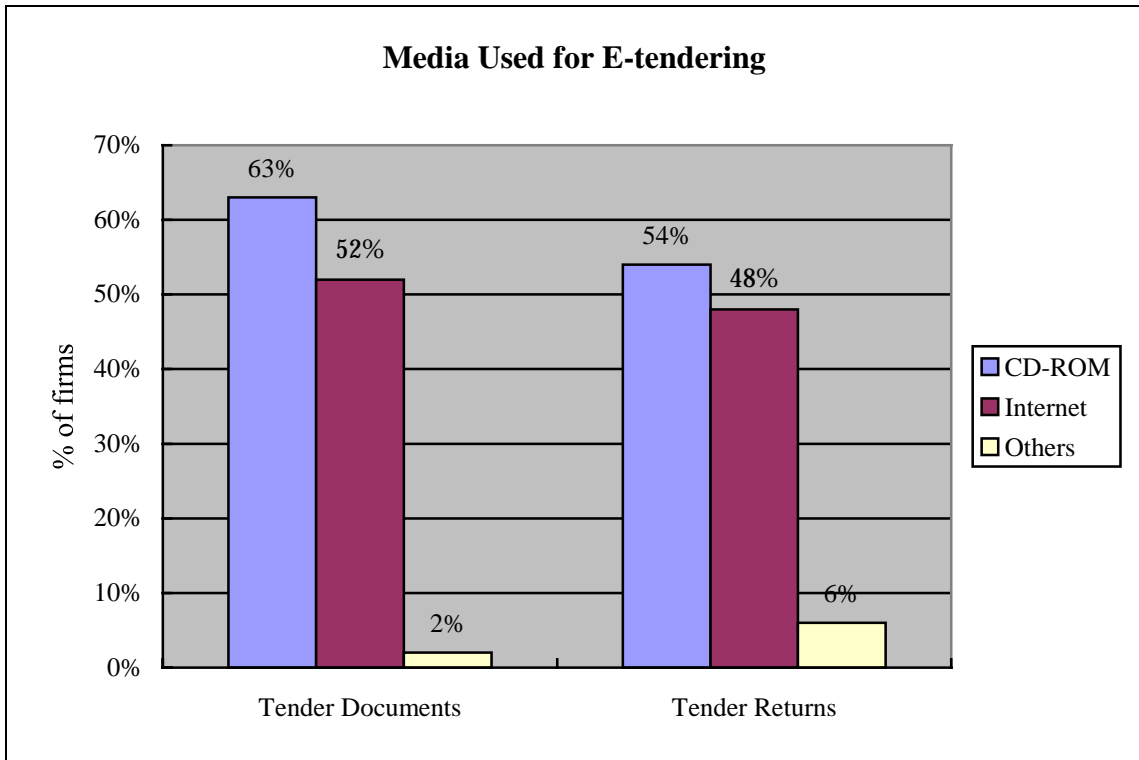
Question 11 – Government Assistance in Migrating to Electronic Tendering

	Preference		
			Don't care
(a) Promoting awareness of electronic tendering through introductory seminars on legal, administrative and technical aspects	59%	33%	8%
(b) Providing guidance on legal, administrative and technical aspects of electronic tendering	73%	23%	4%

Question 12 –Data Formats and Distribution Media

		Tender returns
(a) Media for tender documents and tender submissions		
CD-ROM	64%	54%
Internet	52%	45%
Others (Pls. specify _____)	3%	6%
a) <u>Preferably in Hard Copy format</u>		
b) <u>Magnetic Storage Media</u>		
c) <u>Floppy Disks</u>		
(b) Data format for drawings files		
Editable CAD files (such as dwg or dgn)	78%	59%
Non-editable format (such as cgm)	0%	27%
Others (Pls. specify _____)	2%	2%
a) <u>portable format like dxf</u>		
(c) Data format for textural parts of tender documents		
Plain text	15%	11%
Word format	81%	75%
Adobe Acrobat format	14%	12%
Others (Pls. specify _____)	2%	3%
a) <u>paper based format</u>		
b) <u>HTML</u>		
c) <u>Excel, QSM</u>		
d) <u>Database and Work Sheet</u>		





Question 13 –Productivity and E-tendering

The response is

YES , e-tendering will increase productivity :	76 %
NO , e-tendering will not increase productivity :	21 %
ABSTAIN	3 %

The following are the reasons given for positive answer:-

- Cost saving and time saving
- Higher accuracy
- Possibility for last minute adjustment
- Keeping pace with the fast IT development
- Speeding up transmission of documentation between our Hong Kong and overseas offices
- Standardization will facilitate data transfer

The following are the reasons given for negative answers:-

- lack of expertise
- substantial investment
- not yet computerized

Question 14 –Support and Participation in E-tendering

The response is

YES , We wish to participate in electronic tendering	83 %
NO , We do not wish to participate in electronic tendering	16 %
ABSTAIN	1 %

Question 15 – Reasons for Participating

	(Please tick if the reason is material to your decision.)
(a) Cost saving in preparing tenders	64%
(b) Cost saving in preparing tender returns	64%
(c) Cost saving in checking tenders	46%
(d) Time saving in preparing tenders	68%
(e) Time saving in preparing tender returns	74%
(f) Time saving in checking tenders	55%
(g) Improved collaboration with business partners	46%
(h) Improved productivity	64%
(i) Improved competitiveness	37%
(j) Improve business opportunity	43%
Others (Please specify)	
<ul style="list-style-type: none"> • We have no choice if the client decides to use this. • To save paper • Improve IT facilities of office • Reduction in wastage and storage space • Electronic drawings will save drafting efforts, in particular for design and build tenders. • E-tendering is inevitable. • Better staff Performance and saving in Staff Training. 	

Question 16 – Reasons for not Participating

	(Please tick if the reason is material to your decision.)
(a) Initial capital outlay	56%
(b) Recurrent cost for operating and upgrading system	57%
(c) Lack of experience in implementing and operating electronic tendering system	68%
(d) The existing hard copy based system is adequate for the firm's business requirements	67%
(e) Business partners not ready for electronic tendering	62%
Others (Please specify)	
<ul style="list-style-type: none"> • Security and reliability • Parallel run of existing hard copy system is desired because of security concerns. • We are small firm and major business is renovations. We do not have the plan to computerize. 	

Question 17 – Other Comments

There is no reply for this question.

Question 18 - IT Facilities of the Industry

	Please tick if yes.
(a) WAN (Wide Area Network)	12%
(b) LAN (Local Area Network)	54%
(c) Intranet	30%
Internet access	94%
(d) Via modems	72%
(e) Via leased lines	29%
(f) Own a domain	25%
(g) Internal Email & GroupWare	52%
(h) Internet security systems (like firewall, proxy servers, token cards)	27%
(i) IT security policy	26%
(j) Office document management system	40%
(k) OA applications (like MS Office or Lotus SmartSuite)	81%

Question 19 - Technical System of the Industry

(a) QS packages			
Altes QS ICEPAC QS BillSoft QS RIPAC QS	QSM QS NISA MULTI EST	Laureat IT Pre-Construct customized EXCEL	CCS Candy CBTS - Self developed software Candy Systems
(b) CADD packages			
(1) AutoCAD (96%)			
r.9	3%	r.10	1%
r.11	2%	r.12	18%
r.13	21%	r.14	60%
2000	25%		
(2) Microstation (28%)			
v.5	5%	95	14%
SE	5%	v. J	10%
(c) Structural analysis packages (Please specify _____)			
<u>Superstress</u> <u>Space Gass</u> <u>Lusas</u> <u>STAAD-III</u> <u>OASYS</u> <u>SLOP/W4.22</u> <u>Prodas,</u> <u>ADBEAM</u>	<u>ADSEC.</u> <u>Microfeap</u> <u>MESA</u> <u>LOSAS</u> <u>FCAC</u> <u>LEAP5, in-house</u> <u>programs</u> <u>FREW V.8.8</u>	<u>GASS</u> <u>3DIPEXE</u> <u>CAIPEXE</u> <u>SOIPEXE</u> <u>SADS</u> <u>SAP</u> <u>SASE</u>	<u>FREW V8.8</u> <u>Slope/W v4.01</u> <u>SEEP/W v4.20</u> <u>SAFE v. 5.42</u> <u>Piglet v. 1997</u> <u>Flac v.3.3</u> <u>ETABS</u>

(d) Project management packages (Please specify _____)			
<u>Timeline</u>	<u>Primavera</u>	<u>Pathfinder</u>	<u>MS-Project</u>
<u>SureTrack</u>	<u>Powerprocess, etc.</u>	<u>P3</u>	<u>in-house</u>
<u>PS/Suretrack</u>	<u>Power Project</u>	<u>Open Plan</u>	<u>CCMS - Self-developed</u>
<u>Project Manager</u> <u>(Chinese and English</u> <u>Versions)</u>	<u>Power Point</u>		<u>project management</u> <u>software.</u>
(e) Cost estimating packages (Please specify _____)			
<u>Turfo Accounting</u> <u>System</u>	<u>Proprietary custom</u> <u>made system</u>	<u>Internal tailor made</u>	<u>CCS/QSM</u>
<u>SOE Below</u>	<u>Power Project P3</u>	<u>ICEPAC</u>	<u>CBTS</u>
<u>QSU</u>	<u>Manifest</u>	<u>Excel</u>	<u>CBTS</u>
<u>QSM</u>	<u>IT Pre-Construct</u>	<u>Concep/Westpro</u>	<u>Candy</u>

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