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Public and Private Sector Views of Electronic Government Tendering in light of the Glover report in Northern Ireland

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Abstract: Despite many initiatives e-procurement uptake in the UK within construction has not been as fast as expected. Glover (2008) identified e-procurement as a catalyst to successfully accelerating the Small and Medium Enterprises (SME) economic engine. Glover's (2008) recommendations are based on making procurement more transparent, simpler, more strategic and fully electronic by the end of 2010. This research investigates Government progress in meeting the recommendations and deadlines in the report. The findings are based on responses from 101 private sector organisations identified as seeking government projects through registration with "Constructionline". Findings indicate that many aspects of the Glover Report(2008) have not been fully implemented. However, when comparing the results with a previous study Eadie et al (2011) it indicates that e-procurement use has accelerated in response to the report. The paper also investigates issues related to time to complete tenders, size and contract aggregation. The prequalification process is identified as a barrier for SMEs in regard to showcasing their unique attributes and increased workload through lack of standardisation. The paper showed little difference in responses regarding the amount of time needed to produce an accurate tender for government organisations for tenders above and below the EU financial thresholds. The UK Government needs to identify improvements in the prequalification process and this paper suggests that the adoption of the standard BSI/PAS91(2010) prequalification questionnaire may assist in addressing some of these problems.

Keywords:- Government Procurement, e-procurement, Prequalification, Glover Report

Biographical notes:

Robert Eadie is the Course Director for MEng/BEng Hons Civil Engineering at the University of Ulster. He holds a PhD in Art Design and the Built Environment with the topic being e-procurement in construction. His research focuses on procurement and pedagogy. He spent 20 years in industry prior to moving into research implementing e-procurement within a government department and sitting on the Northern Ireland Civil Service e-procurement strategy working group.

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Gary McMorran has worked in the Construction Industry for many years. In addition to his undergraduate degree he holds a MSc in Construction and Project Management.

1. INTRODUCTION

OGC (2005) describes electronic procurement (e-procurement) as “...*the use of electronic tools and systems to increase efficiency and reduce costs during each stage of the purchasing process.*” Both public and private sectors in various business categories agree that efficiencies can be made through the use of e-procurement whilst maintaining quality, and producing greater value-for-money (Eadie et al, 2010). However, uptake of e-procurement has been slower than expected.

Glover (2008) identified e-procurement as a catalyst to successfully accelerating the Small and Medium Sized Enterprise (SME) economic engine. Glover’s (2008) recommendations are based on making procurement more transparent, simpler and more strategic. Transparency was to be achieved through electronic advertising. Recommendations relating to simplicity were to be achieved through standardisation of non-contract specific information at prequalification stage, allowing submission of all previous relevant experience (by providing private sector in addition to public sector examples) and being flexible with third party accreditation when using pre-qualification criteria. Strategic enhancements suggested included using outcome-based specifications, increasing potential for innovation and by encouraging and providing the opportunity for SMEs to become prime contractors. A number of issues were raised as obstacles in achieving these objectives such as contract size, contract aggregation and current prequalification procedures. Target dates were set for the recommendations to be in place within the industry. However, little by way of research has been carried out in this area to identify whether the targets or recommendations have the support of the private sector or have indeed been met. This paper seeks to fill that knowledge gap.

2. RESEARCH METHODOLOGY.

Private and public sector organisations were investigated using two on-line surveys (Limesurvey™). Results stored in the Limesurvey™ database were imported into Statistica™ for analysis. In Northern Ireland public sector procurement is carried out by centres of procurement expertise (COPE). Each of these was contacted. The ‘Constructionline’ database was utilised to identify companies seeking to acquire public sector contracts. As they had to electronic self-register for ‘Constructionline’ it eliminates those solely intent on working for private sector clients. The following categories were chosen from the Constructionline database: Contractors, Quantity Surveyors, Architects, Civil & structural Engineers (Constructionline, 2010). The database produced a total population of six hundred (600) organisations. A survey sample of one hundred and eighty seven (187) was required for data collection (Bartlett et al, 2001) giving a margin of error of 0.05%. One hundred and one (101) responded providing a 54% response rate which is deemed “good” by Rubin, and Babbie (2004) and is just below the 60% limit suggested by Bartlett et al (2001).

The responses by organisation type are provided in Table 1.

Table 1 Sample and validity by Organisation type

Organisation	Survey Sent (No.)	Response (No.)	Vaild % Response
Quantity Surveyors	28	13	46
Civil & Structural Engineers	25	12	48
Architects	38	22	58
Contractors	96	53	54
Private Sector	187	101	54

3. FINDINGS

3.1 Findings on amount of Electronic Contracts

Eadie et al (2011) indicates that two years ago 47% of responses received less than 10% of pricing documentation in electronic format. While they measured the electronic document use this study measures paper use. The Glover Report stipulated that documentation should be available electronically by the end of 2010. Figure 1 indicates that this target has not been met with 65% of organisations still receiving tenders in paper only format within the last 12 months.

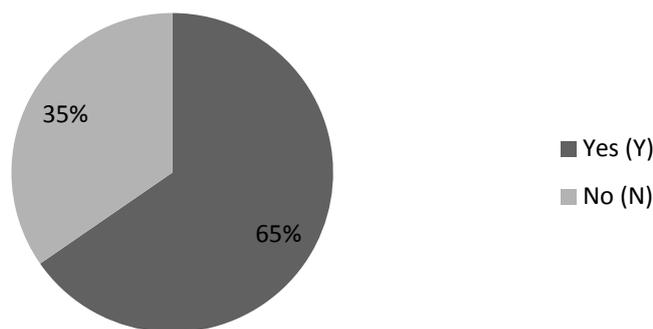


Figure 1 Paper only tenders in the last 12 months

Eadie et al (2010) ranks 'resistance to change' as the 3rd most important barrier to the implementation of e-procurement, however, change can only come about if the opportunity is presented and there are drivers to promote change, such as lower costs. Proper training and infrastructure is required along with a cultural change (Batenburg, 2007). However, large strides have been made within the last 12 months as Figure 2 indicates. Whilst the graph is transposed it can be seen that while Eadie et al (2011) had a value of 47% of that sample with 0-10% of documentation electronic thus 90-100% paper this has dropped to 21% in the current study indicating a sizeable shift towards electronic documentation.

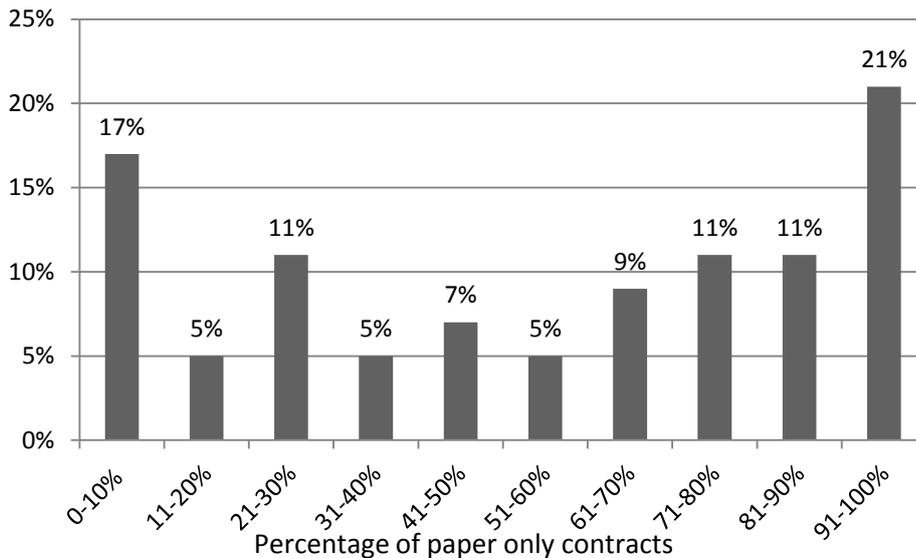


Figure 2 Percentage of Paper Only Contracts

Whilst the figures are encouraging Glover (2008) recommended that no paper only tenders were to be received by the end of 2010. Therefore the percentage of paper only contracts needs to be severely reduced to work towards compliance of Glover's recommendations and to create the momentum for a cultural change.

Public sector responses confirm the private sector findings with two of the largest, in construction terms, Health Estates and Education Estates indicating that more than 80% of their tenders are requested on paper only format. All other respondents, however, indicated that they have not asked for any paper only tenders during this time – an encouraging sign to counteract any idea of a cultural resistance to change suggested as a barrier by Eadie et al (2010).

Further analysis of the private sector data (Figure 2) indicates that more than one third of firms have not been asked to submit any paper only tenders and 56% (32% of 65% = 21% + 35% = 56%) of respondents are submitting 70% or more of tenders using electronic means. It would be logical to assume that a sizeable portion of the paper only tenders are a direct result of the Health and Education Estates asking for paper based tenders. From these findings it can be argued that e-tendering is well established, confirming conclusions made by Batenburg (2007) that the UK is not a country resistant to change, but that some COPEs are lagging behind for other reasons.

3.2 Findings on time allowed to respond to Electronic Contracts

The Public Contracts Regulations (HMSO, 2006) and the amendment in 2009 set timescales for European Procurement. However, for each of the four specified routes the timescales must be reasonable, taking into account all the circumstances and complexity of the scheme: Open Procedure – Clause 15(4), Restricted Procedure – Clause 16(4), Negotiated Procedure – Clause 17(6) and the Competitive Dialogue Procedure – Clause 18(8). However, contracts under the threshold have not been provided with guideline timelines and this paper investigated whether those tendering for both types of contract were being provided with enough time to accurately respond to these types of competitions.

Table 2 Time provided to respond to a tender document

To provide an accurate tender document did you consider the time for responding to tenders to be?				
Answer	Count Above EU Threshold	Percentage Above EU Threshold	Count Below EU Threshold	Percentage Below EU Threshold
Much too short	6	6%	8	8%
Slightly too short	32	32%	30	30%
Adequate	60	59%	60	59%
Slightly too long	1	1%	1	1%
Much too long	2	2%	2	2%

In Table 2 the figures for above and below the EU threshold are very similar. In both cases the statistics for Adequate time to respond (59%), Slightly too long (1%) and Much too long (2%) remained consistent. Thirty-eight per cent (38%) of organisations considered that the time was too short with this becoming more acute for schemes under the EU threshold: the Much too short figure rising from 6% to 8%.

3.3 Findings on innovation and skills in response to Electronic Contracts

The Federation of Small Businesses (FSB, 2008) indicates that the uniqueness of SMEs is what makes them attractive to the public sector. They can produce individually tailored solutions to construction problems. It is, however, essential to recognise their special attributes during the procurement process, both in pre-qualification and within the selection criteria. It is often alleged that SMEs are excluded during the pre-qualification because of what they do not have or cannot offer and are not afforded the opportunity to present their main attributes during the selection phase. However, prior to this study little research had been carried out to prove whether this was in fact the case. Glover (2008) recognised the unique position of SMEs and suggested the use of “*Innovation Procurement Plans to give advanced notice of long-term procurement plans and how procurement aligns with the overall commercial strategy and encourages innovation*”.

Table 3 Extent of expression of benefits/skills and innovation allowed by Electronic procurement systems

To what extent do you think your firm is allowed to express its full range of benefits/skills/innovative solutions through the government’s e-tendering processes?		
Answer	Count	Percentage
Totally	4	4%
Frequently	16	16%
Sometimes	40	40%
Infrequently	33	32%
Never	8	8%

Analysis of Table 3 indicates that only 4% think their future ability and skills are being fully recognised. Two out of five SMEs consider it happens Infrequently or Never, proving the hypothesis that the unique attributes of many SMEs are not being utilised. This suggests that the recommendations of Glover (2008) which were meant to address this issue are not being fully implemented. Further analysis indicated that there was no substantial difference in either size or type of firms affected.

In contrast, the COPEs indicated that 33% are totally compliant in assessing all the benefits/skills / innovative solutions that are presented, 50% comply frequently, 17% sometimes and 0% applying the recommendation infrequently or never. This indicates a level of disconnect between the two sides. However, the difference in the two perceptions could indicate the pre-qualification questionnaire is not as flexible as the public sector think or the private sector does not understand what is expected, or being asked of them. Either way there is a breakdown in communication which although not exclusive to e-procurement, its effects could be resolved through adaptation of the electronic questionnaire. It is something that adoption of the new BSI/PAS91 prequalification questionnaire should address. Eadie et al (2007, 2010) ranked improved communications as an important driver for the implementation of e-procurement showing the importance both the public and private sectors should place on this aspect.

3.4 Findings on the costs of Electronic Contracts

Another highly ranked driver (Eadie et al, 2007, 2010), is the reduction in costs associated with the use of e-procurement. Analysis of Table 4 confirms that e-procurement is judged to be cheaper than paper only contracts by 58% of respondents with only with only 7% indicating that they considered it would be more expensive.

Table 4 Costs of e-procurement

Is the use of e-tendering _____ (fill in the blank) paper only tendering?		
Answer	Count	Percentage
Much cheaper than	19	19%
Slightly cheaper than	39	39%
About the same cost as	36	35%
Slightly dearer than	4	4%
Much dearer than	3	3%

Most public sector organisations still ask for electronic and paper documents for legal reasons. Qualitative feedback indicates that once this requirement is removed it is expected that firms will realise more of the cost benefits of e-tendering.

3.5 Findings on Pre-qualification

One of the aims of the Glover Report (2008) was to make pre-qualification criteria standardised in such a way as to allow innovation through using different techniques, materials or processes to be proposed. Glover (2008) attempted to achieve this by taking into account all relevant experience as pre-qualification criteria and the increased use of outcome based specifications as a strategy to increase innovation.

The use of pre-qualification questionnaires is ubiquitous, with public sector respondents unanimously confirming they are used above and below the EU thresholds. There appears to be ambiguity over the standardisation of pre-qualification questionnaires, with 50% saying they were standardised below the EU threshold. Qualitative feedback indicates that moves to improve the standardisation of pre-qualification questionnaires are underway with the introduction of an electronic pre-qualification questionnaire template on e-Sourcing NI.

Glover (2008) further suggested a relaxation of the rules on 3rd Party Accreditation. The purpose of 3rd Party Accreditation is to prove to potential clients that there is a recognised methodology to achieving quality within the allocated time and within budget. The process and the systems

used to manage the contract are robust and repeatable to obtain the project's success. When considering 3rd Party Accreditation some prequalification questionnaires allowed a client to specify what a firm must have, for example, ISO 9001 or ISO 14001, or that a firm must be trained by the CITB. In a similar way to outcome based specifications, it should be the result which matters and not how it is achieved. Using alternative management tools or training techniques should not exclude organisations from winning a contract so long as it can be proven that the alternatives are of a similar standard.

Table 5 Extent of 3rd Party exclusion

To what extent does third party accreditation (eg. ISO 9001, ISO 14001 or equivalent) preclude you from tendering?		
Answer	Count	Percentage
Totally	16	16%
Frequently	17	17%
Sometimes	27	27%
Infrequently	5	5%
Never	36	35%

An analysis of Table 5 shows 60% have been excluded because of 3rd Party Accreditation 'sometimes' or more, with 33% 'frequently' and 'totally'. However 36% have 'never' been excluded on the basis of 3rd Party Accreditation. When the data was further analysed with regards to company type no substantial differences were detected. An analysis of firm size, however, suggested that the smaller the firm the more likely they were to suffer exclusion, Figure 3. A single category (100-249) had 43% being 'totally' or 'frequently' excluded. This figure was greater than the previous two categories. All of the above were contractors and the percentage rose to 57% when the 'sometimes' figures were included.

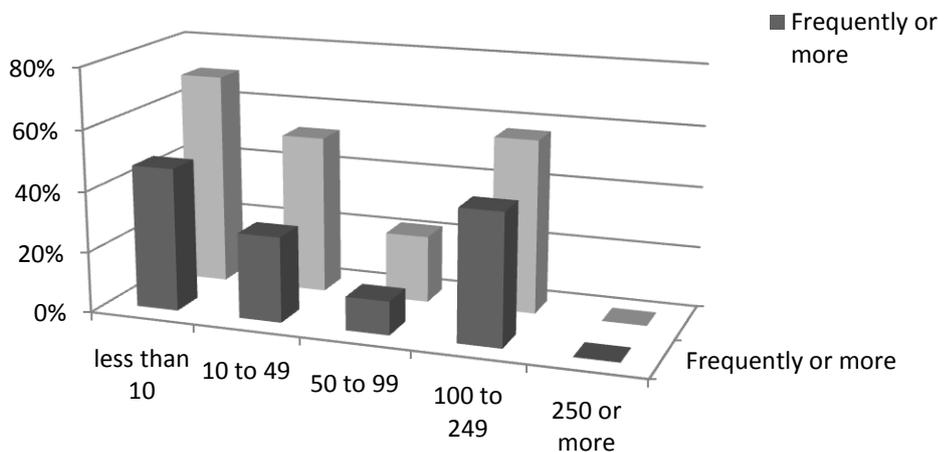


Figure 3 Relationship between firm size and exclusion

Another issue relating to prequalification questionnaires raised by Glover (2008) was the reworking of information. She cites the following comment from a SME regarding the prequalification process "Nightmarish. Each and every tender asks just about the same questions

in a slightly different order but with just enough difference to ensure that you have to start all over again.” However, little by way of academic research has been carried out in this field.

Table 6 Reworking of information in standard prequalification questionnaires

To what extent are pre-qualification criteria standardised on one format to prevent reworking of information before submission?		
Answer	Count	Percentage
Totally	6	6%
Frequently	30	30%
Sometimes	40	39%
Infrequently	23	23%
Never	2	2%

It can be seen from Table 6 that the private sector confirmed the public sector view with only 36% indicating that pre-qualification criteria are standardised ‘frequently’ or ‘totally’. Glover (2008) stated that standardisation is for generic information only and the remaining project specific information should be proportionate to the project.

Another key recommendation of the Glover report (2008) was that “*Procurers should give businesses the opportunity to provide details of all previous relevant experience when bidding for contracts, not just public sector experience. This should be taken into account when selecting successful tenderers*”. This study investigated current practice in this regard. From a public sector viewpoint five out of the six public sector procurement bodies who responded to the question indicated that ‘frequently’ or ‘totally’ they would consider non-public sector work experience. BSO answered ‘sometimes’ and suggested that this was when construction procurement was being carried out.

Table 7 Extent of experience considered

To what extent is all your firm’s experience, not just the public sector works, taken into consideration for pre-qualification?		
Answer	Count	Percentage
Totally	9	9%
Frequently	23	23%
Sometimes	37	36%
Infrequently	23	23%
Never	9	9%

Table 7 provides the private sector viewpoint indicating 32% consider their non-public sector work experience is taken into account ‘totally’ or ‘frequently’, with 36% indicating ‘sometimes’ and 32% indicating ‘infrequently’ or ‘never’. When this is correlated against company size, the smaller organisations in the ‘50-99’ category are affected considerably more than those in the ‘100-249’ category and it had no effect on companies with ‘250+’ employees.

3.6 Findings on Contract Aggregation

The size of contracts and aggregation of public sector work was examined. The private sector was asked if they thought contracts were too small, with 72% indicating they were not. However they also indicated that contracts were not too big (66%). When asked to put a figure on the minimum and maximum contract value the median values of £25,000 and £5,000,000 respectively were obtained. The lower value is consistent with the £20,000 threshold

recommended by Glover (2008) and is midway between that and the £30,000 threshold imposed by the Department of Health indicating that they accord with private sector opinion. The upper value is roughly in line with the EU threshold indicating the domestic nature of the construction industry in Northern Ireland, consistent with an industry dominated by SMEs. The figure was inflated by a small quantity of extremely high values which is evident from the average value of approximately £9.2M.

Contract Aggregation is a divisive topic. In Scotland problems have arisen because of local authorities aggregating contracts to create geographical difficulties for SMEs, while in Northern Ireland Framework Agreements have been set aside because of procedural deficiencies identified by those not selected. The exclusion of those firms would have been detrimental to their development and long-term survival and could have led to a reduction in long term advantages of competition achieved through a short-term gain, identified by the Office of Fair Trading (econ, 2004).

Table 8 Extent of exclusion due to aggregation

To what extent do you think your firm is excluded from tendering because of Contract Aggregation (the practice of bundling a number of small contracts into one large one)?		
Answer	Count	Percentage
Never	12	12%
Very seldom	15	15%
Occasionally	38	37%
Frequently	31	31%
Always	5	5%

The figures in Table 8 were reanalysed in two groups. Group 1 contained companies being affected on a regular basis (Occasionally, Frequently and Always) and Group 2 contained only those companies who indicated it Always or Frequently affected their business. The results are shown in Figure 4.

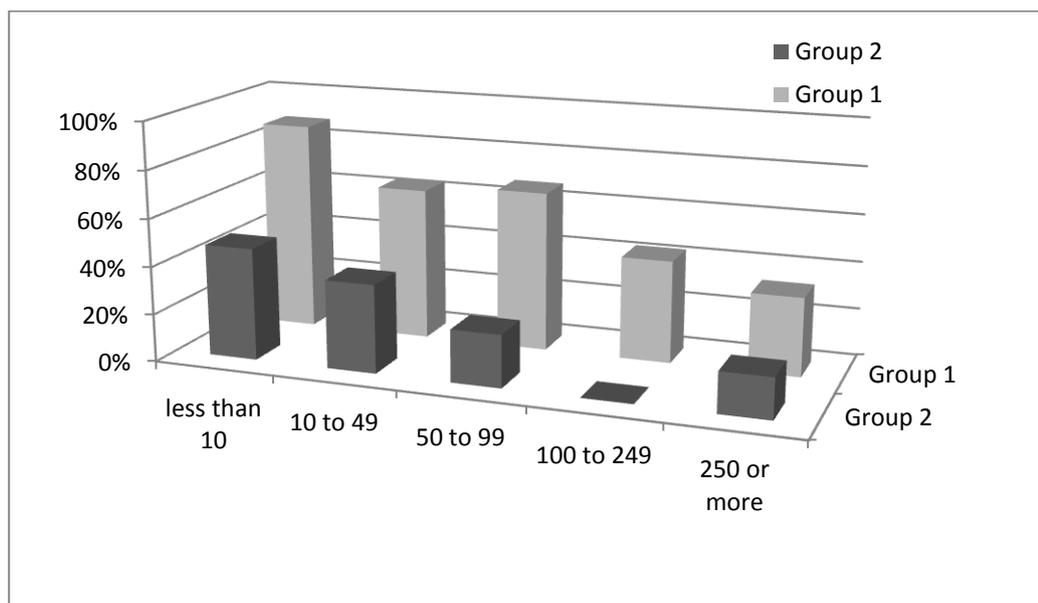


Figure 4 Company Size against disadvantage due to aggregation

Figure 4 indicates that contract aggregation has a detrimental affect with the smallest firms being affected substantial more than smaller organisations. When the firm type was analysed Architects and Quantity Surveyors were most affected, due to their relatively large percentage of companies with less than 10 employees.

Much has been written of the advantages of Contract Aggregation including econ (2004), OGC (2004) and most local authorities throughout Scotland have witnessed the efficiencies it can bring to public sector bodies (Holmes et al, 2009). Holmes et al (2009), however, have also realised some of the pitfalls, in particular the onerous paperwork.

All public sector bodies indicated it contract aggregation created efficiencies through scale. However, only 36% of private sector respondents agreed, with 64% saying that aggregation caused bureaucracy and was inefficient (Table 9).

Table 9 Description of Contract Aggregation

Do you think that Contract Aggregation is?		
Answer	Count	Percentage
Bureaucratic and financially inefficient	65	64%
Creates efficiency through scale	36	36%

The findings were not unexpected and do not mean that government bodies are not implementing Glover’s recommendations or that they are not promoting SMEs within public sector procurement. It does mean, however, that smaller firms will have to look for work in more traditional ways such as sub-contracting to larger firms.

4. CONCLUSIONS

The Glover Report (2008) stipulated that all contract documentation should be fully electronic by the end of 2010. This paper shows that that deadline was not met. However, it does indicate that as a result of its publication, government organisations have moved towards this goal through comparison with other literature. Eadie et al (2011) had a value of 47% of that sample with 0-10% of documentation electronic thus 90-100% paper this has dropped to 21% in the current study indicating a sizeable shift towards electronic documentation. This demonstrates the value of policy documentation and deadlines, as the benefits of e-procurement suggested by Eadie et al (2010) can therefore be accrued.

The paper showed little difference in responses regarding the amount of time needed to produce an accurate tender for government organisations for tenders above and below the EU financial thresholds. It did show a slight shift from 6% (for tenders above the Threshold) to 8% (for tenders below the Threshold) for those considering the timeline much too short. It indicates that the guidelines on time to respond provided in the Public Contracts Regulations 2006 (HMSO, 2006) may also be being used in the majority of cases below the EU threshold and this appears to be reasonable.

There appears to be a disconnect between SMEs and Government departments on the issue of specialisms and innovation. Forty per cent of SMEs appear to consider the Prequalification procedure a barrier to allowing them to showcase their unique attributes. On the Government side 83% consider that they allow SMEs to identify innovative work practices frequently or every time. The study also identified a lack of standardisation of prequalification questionnaires with only 36% suggesting that prequalification questionnaires would be standardised frequently

or totally. Further research needs to be carried out into why this may be the case and whether adoption of the standard BSI/PAS91(2010) prequalification questionnaire will assist in this regard, since the research identified that prequalification questionnaires are used above and below the European threshold.

The Glover report (2008) identified flexibility in third party accreditation as a way of improving SME uptake of government contracts. This study identified that in the main the smaller the organisation the more chance of exclusion through not having third party accreditation. However, organisations with 100 to 249 employees appear to be one of the hardest hit categories.

The size of government contracts and the issue of Contract Aggregation were also investigated. This showed that the majority of organisations considered £25,000 as the smallest viable government contract and among SMEs £5,000,000 as the largest. In a similar way to third party accreditation the smaller the organisation the greater the barrier caused by Contract Aggregation. While Government Organisations fully support the practice those who have to tender for contracts which have been aggregated are not supportive with 64% suggesting this method caused bureaucracy and was inefficient. Thirty-six per cent of organisations also suggested that they are excluded as a result of the practice. This shows that smaller organisations tendering for Government work still have to work as sub-contractors for tendering purposes which is a similar situation to that prior to the publication of Glover (2008) . Further research will have to be carried out into how the recommendations of the Glover report (2008) can be put into place.

5. REFERENCES

- Bartlett, J., Kotrlik, J., and Higgins, C., 2001. *Organisational Research: Determining Appropriate Sample Size in Survey Research* in *Information Technology, Learning, and Performance Journal*, Vol.19, No.1.
- Batenburg, R., 2007. *E-procurement Adoption by European Firms: A Quantitative Analysis*. In *Journal of Purchasing and Supply Management*. Vol. 13, Issue 3, May 2007, Pps 182-192.
- BSI/PAS 91, 2010. *Construction related procurement – Prequalification questionnaire*. (Available on-line at: <http://www.bis.gov.uk/assets/biscore/business-sectors/docs/b/bis-specification-pas91-construction-procurement.pdf> [Accessed August 2011]).
- Constructionline, 2010. *Supplier Zone*. (Available on-line at: <http://www.constructionline.co.uk/static/suppliers/> [Accessed September 2010]).
- Eadie, R., Perera, S., and Heaney, G. 2011. *Analysis of the Use of e-procurement in the Public and Private Sectors of the UK Construction Industry*, *Journal of Information Technology in Construction (ITcon)*, Vol.16, pg. 669 – 686. (Available on-line at: <http://www.itcon.org/2011/39>)
- Eadie, R., Perera, S., and Heaney, G., 2010. *A Cross Discipline Comparison of Rankings for E-procurement Drivers and Barriers within UK Construction Organisations*, *Journal of Information Technology in Construction (ITcon)*. Vol 15 Pp. 217 - 233. (Available online at: <http://www.itcon.org/2010/17>)
- Eadie, R., Perera, S., Heaney, G., Carlisle, J. (2007) *Drivers and Barriers to Public Sector e-procurement within Northern Ireland's Construction Industry*, *Journal of Information Technology in Construction (ITcon)*., Vol. 12, Pp. 103-120, (Available on-line at: <http://www.itcon.org/2007/6>)
- Econ, 2004. *Assessing the impact of public sector procurement on competition*, Office of Fair Trading. (Available on-line at:

http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft742a.pdf [Accessed August 2011]).

FSB, 2008, *FSB NI Submission Committee for Finance and Personnel's Inquiry into Public Procurement Policy and Practice in Northern Ireland*, (Available on-line at <http://www.fsb.org.uk/policy/rpu/ni/images/fsb%20ni%20procurement%20submissionfeb09.doc> [Accessed August 2011]).

Glover, A., 2008. *Accelerating the SME economic engine: through transparent, simple and strategic procurement*, London:Office of Public Sector Information.

HMSO, 2006. *The Public Contract Regulations 2006*. London:The Stationary Office Limited.

Holmes, J., Holmes, A., Sear, L., Regan, A., Smith, C., and Butler, B., 2009. *Opportunities and Barriers to Consortia Bidding for Public Sector Contracts, The Scottish Government*, Wood Holmes Group. (Available on-line at

<http://www.scotland.gov.uk/Publications/2009/11/16150241/0> [Accessed August 2011]).

Rubin, A., and Babbie, E., 2004. *Research Methods of Social Work*, Thomson Wadsworth, UK,