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# COMMERCIAL MANAGEMENT IN PROJECT-BASED ORGANISATIONS

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### Summary

- The term commercial management has been used for some time, similarly the job title commercial manager. However, as of yet, little emphasis has been placed on defining the role of commercial managers or assessing the importance of commercial management as a discipline.
- This paper presents the findings from a two-year research initiative that has compared and contrasted the role of commercial managers from a range of organisations and across industry sectors, as a first step in developing a body of knowledge for commercial management.
- It is argued that there are compelling arguments for considering commercial management, not solely as a task undertaken by commercial managers, but as a discipline in itself: a discipline that, arguably, bridges traditional project management and organisational theories.
- While the study has established differences in approach and application both between and within industry sectors, it has established sufficient similarity and synergy in practice to identify a specific role of commercial management in project-based organisations. These similarities encompass contract management and dispute resolution; the divergences include a greater involvement in financial and value management in construction and in bid management in defence/aerospace.

**Keywords:** Commercial management, commercial manager, management of projects.

### INTRODUCTION

The title 'Commercial Manager' is by no means new; indeed it can be traced back at least to the middle of the twentieth century. The last two decades have, however, seen an increase in the number of individuals assuming this title in organisations. What once used to be a board level activity has become more of a middle-to-senior management role in companies. In the UK construction industry a clear trend can be detected of the role of the traditional contractor's quantity surveyor evolving into that of a commercial manager. Other industries have gone through their own evolution and the trend towards an increasing number of commercial managers (also called contract or commercial contract managers) is equally unmistakable. As a result, commercial managers can today be found across a spectrum of industries, especially those that are predominantly project based.

It would be naïve to state that the specific tasks undertaken by individual commercial managers are identical across industries, or even between divisions of large organisations. However, a growing recognition of commercial management as a discipline and an associated skill set can be detected. Evidence supporting these claims can, for example, be taken from the growth of various professional bodies such as the US-based 'International Association of Contract and Commercial Managers' and the UK-based 'Institute of Commercial Management'.

Frequently, mature professions, to protect their position, seek to define themselves in terms of their core skills/competencies and/or knowledge base [see, for example, RICS (1992) which sought to establish the core skills and knowledge base of the chartered quantity surveyor]. Likewise, project management associations [for example, the International Project Management Association (Caupin et al. 1998), the Project Management Institute (PMI, 2000) and the Association for Project Management (Dixon, 2000)] have defined bodies of knowledge (BOK), in order to establish what a project management practitioner should be knowledgeable in (i.e. a set of professional competences) to underpin professional certification. However, the purpose of BOKs extends beyond providing a basis for establishing competence to practice. According to Morris (2001), they should reflect the purpose and provide a set of topics, relationships, and definitions of a particular domain, reflecting, therefore, a distinct professional discipline.

The aim of the research that underpins this paper was to investigate the role of commercial managers across a variety of industry sectors in order to establish whether or not commercial management could be identified as a distinct discipline. Specific objectives were to:

- Establish the position of commercial managers in their organisation and their involvement with projects
- Identify the functions considered by commercial managers to be important to their day-to-day role and to ascertain their interactions with other actors in the project environment.
- Investigate similarities and differences in these functions between commercial managers from different industry sectors.
- Highlight areas held to be important to the development of commercial management as a discipline.

### **Defining commercial management**

As previously mentioned, the term 'commercial management' has been used for quite some time, not least in construction, cf. Cottrell (1979) who refers to the job title 'commercial manager' in builder's organisations. Yet, research has shown that there is no consensus over what commercial management is or, for that matter, what a commercial manager does (Lowe et al. 1998). In their thorough literature review Lowe et al. failed to unearth any definitive statements of what was meant by commercial management or descriptions of the tasks and skills associated with the role of a commercial manager. This paucity of literature categorised as commercial management was again confirmed by this current study. This is not to say that research has not been conducted in this domain. On the contrary, there is an abundance of literature addressing issues associated with commercial management (e.g. Scott (1974); Gilbreath (1983); and Turner (1995)).

The apparent lack of a common definition is hardly surprising. Commercial management is, in its literal interpretation, ambiguous, while its wide applicability in practice makes it difficult to provide a real boundary for the phenomenon. Two main interpretations tend to stand out in construction-related literature: the first sees commercial management as a subset of project management on individual projects, and a second uses 'quantity surveying' and 'commercial management' interchangeably.

Thomas and Adams (1995) consider the commercial manager to be subsumed within the project team, to be subservient to the project manager but responsible for the planning engineer, contract manager and cost engineer/quantity surveyor. Moreover, the current Association for Project Management BOK, developed by the Centre for Research in the Management of Projects at UMIST (Morris et al. 2000; Morris, 2001) contains a section labelled 'Commercial', thus placing commercial management within the context of project management and at the project level. It is contended that commercial issues may drive the conduct of a project, while the 'Commercial' section, as defined by Morris and the APM team, involves the business case, marketing and sales, financial management, procurement and a legal awareness.

Following the second line of interpretation of commercial management, Cottrell (1979) and more recently Walker and Wilkie (2002) hold the title 'commercial manager' to be synonymous with that of the builder's/contractor's quantity surveyor: a role that is integrated into the management of a project and to involve valuation of work, change management, financial accounting and sub-contractor administration. This line of reasoning is further supported by the fact that it is not uncommon for contemporary private quantity surveying practices to advertise their services as commercial management. Furthermore, other commentators have noted that the contractor's quantity surveyor is now cast in the role of a financial manager, providing financial control of projects; see for example Pearson (1996). Research has been conducted in the construction sector into the role of the quantity surveyor both in consultancy and construction companies; see for example Cottrell (1979), Bennett (1989), Male (1990), RICS (1984, 1991 & 1992), Cornick and Osbon (1994), and Fortune and Skitmore (1994), against which this current investigation into the role of commercial managers can be compared.

Looking more closely at the two ambiguous terms that make up commercial management a literal definition can be derived from the following definitions found in *The Oxford Modern English Dictionary*:

*Commercial*: "... of, engaged in, or concerned with commerce; having profit as a primary aim rather than artistic, etc."

*Commerce*: "financial transactions"

*Manage*: "organize; regulate; be in charge of (a business, etc.)"

*Management*: "... the process or an instance of managing or being managed."

*Manager*: "a person controlling or administering a business or part of a business."

Adapting these definitions commercial management can be defined as follows:

*'The process of controlling or administering the financial transactions of an organisation with the primary aim of making a profit'.*

Unfortunately, this definition, in its simplicity, leaves much for interpretation. Yet, it reflects the findings from a prior investigation into commercial management in construction. In their study Lowe et al. (1998) and Lowe and Fenn (1997) concluded that the most common description of commercial management in the construction industry was '*looking after the profits of the company... by keeping costs to a minimum and maximising income*'.

### **Limitation of scope**

It is acknowledged that commercial managers could be found in a diversity of industries. The research initiative reported in this paper is limited in scope to investigating commercial management practice in project-based industries. Thus, it deals with firms whose work consists of undertaking certain activities on projects or, if the organisations are mainly operationally oriented, undertaking projects as an important part of their overall activity. Construction, Telecommunications/ICT and Defence/Aerospace were chosen as suitable for the investigation.

## **EMPIRICAL STUDY**

### **Research method**

The empirical research has been conducted in four separate stages. The first stage consisted of a literature review and analysis of over 100 job advertisements for commercial managers. Stage two comprised a pilot questionnaire sent to commercial managers in a large telecommunications company. This organisation was selected because it had a long established and defined commercial management function. The questionnaire targeted their roles in the various divisions of the organisation. The findings were compiled and further corroborated through in-depth interviews with two senior commercial managers in the company. As the findings were biased towards the telecommunication industry, further interviews were subsequently conducted with commercial managers from construction companies. These actions enabled the research team to create a generic questionnaire that could be fielded to commercial managers in most sectors. The third stage involved a large-scale questionnaire survey of commercial managers in the Construction, Telecoms/ICT and Defence/Aerospace industries. All the commercial managers surveyed were employed by corporate organisations within a business-to business context. Within the context of construction, for example, the organisations could be classified as main contractors. The questionnaire was divided into three parts. Part A comprised an experience profile, which provided information concerning the position of the subject in their organisation. Part B concerned the respondent's involvement with projects, the identification of functions considered to be important to their day-to-day role as a commercial manager and their interaction with other actors in the project environment. Part C provided an opportunity for respondents to record their own personal experiences and to highlight areas held to be important to the development of commercial management as a discipline. The fourth and final stage involved the presentation and validation of the questionnaire results by means of a focus group comprising 8 representative senior commercial managers and three academics.

## **Analysis**

Data analyses were undertaken using the Statistical Package for the Social Sciences (SPSS for Windows, release 11.0.0). Descriptive statistics were calculated for each variable. The variables were then analysed for differences between subgroups based on the industry sector of the respondents (Construction, Defence/Aerospace and Telecoms/ICT) by means of the Kruskal-Wallis one-way analysis of variance H test. Where significant differences were indicated by this test the Mann-Whitney U test was used to investigate differences between the groups pair-wise. This analysis was exploratory in nature and is, therefore, interpreted by reference to significance levels (two-tailed). Finally, hierarchical cluster analysis was used to cluster the functions of a commercial manager into homogeneous groups.

## **FINDINGS**

The findings presented in this paper are based on 106 responses distributed between Construction (42), Telecoms/ICT (33) and Defence/Aerospace (31).

### **The respondents**

Predominantly the respondents hold the title/position of commercial manager, some commercial contracts manager, others commercial head/divisional/regional manager, while six were commercial directors. In construction the title quantity surveyor was equally as common as that of the commercial manager. The respondents were primarily from very large commercial organisations; 94.3% of them work for organisations with more than 1000 employees.

In terms of academic qualifications, 61% held a first degree, with a further 17% having a higher degree. Tests for differences between the three industry sectors revealed no significant differences in the level of academic qualifications. However, with regard to professional affiliation, only 33% of the respondents held corporate membership of a professional institution of which 71% were from a construction background, 27% in Telecoms/ICT and only 1 respondent in the Defence/Aerospace sector held professional membership.

61% of the respondents worked on multiple projects, while 25% didn't work on specific projects and 14% were allocated to one project at a time (See table 1). Of this latter group, 80% (12) were in the construction industry. 71% considered their role to be integrated into the project team (See table 2). Statistically there were no significant differences in the responses of the 3 subgroups to these 2 questions.

**<<< Insert Tables 1 & 2 about here >>>**

Several questions sought to investigate the involvement of commercial managers with projects. Tables 3 and 4 show that commercial managers in the Telecoms/ICT and Defence/Aerospace sectors were predominantly involved in pre-contract activities and that project development<sup>1</sup> dominated their time. Respondents from the construction sector were mainly involved in contract administration activities with project execution dominating their time. Tests for differences between the three industry sectors revealed the following divergence:

- **Primary project involvement:** significant difference ( $p \leq 0.001$ ) between the responses of the Construction and both the Telecoms/ICT and Defence/Aerospace respondents. Further, when the construction quantity surveyors were excluded from the calculations there were still significant differences ( $p \leq 0.01$ ) between the responses of these subsets. (As the titles commercial manager and quantity surveyor are at times used interchangeably, it is of interest to exclude those that had roles similar to the historic quantity surveying function.)
- **Dominant project stage:** significant difference ( $p \leq 0.01$ ) between the responses of the Construction and Telecoms/ICT respondents. However, when the quantity surveyors were excluded from the calculations there were no significant differences between these subsets.

<<< **Insert Tables 3 & 4 about here** >>>

Tables 5 and 6 show that commercial managers in the Telecoms/ICT and Defence/Aerospace sectors generally became involved with projects at either the pre-request for information (RFP) or at the proposal development stages, whereas in the construction sector several respondents became involved at the contract award stage (many of these held the title quantity surveyor). The respondents terminated their involvement most commonly at either project closure or contract completion, but there were a few respondents in the Telecoms/ICT and Defence/Aerospace sectors whose involvement ended upon the award of the contract or when the contract was signed. Tests for differences between the three industry sectors revealed the following significant differences:

- **Start of project involvement:** significant difference ( $p \leq 0.001$ ) between the responses of the Construction and Defence/Aerospace respondents, and significant difference ( $p \leq 0.05$ ) between the responses of the Construction and Telecoms/ICT respondents. However, when the quantity surveyors were excluded from the calculations the only significant difference was between the Construction and Defence/Aerospace respondents ( $p \leq 0.05$ ).
- **End of project involvement:** significant difference ( $p \leq 0.01$ ) between the responses of the Construction and the Telecoms/ICT respondents. Further, when the quantity surveyors were excluded from the calculations there was still a significant difference ( $p \leq 0.01$ ) between the responses of these two subsets.

<<< **Insert Tables 5 & 6 about here** >>>

Table 7 shows a tendency for commercial managers to be based at regional offices of their organisation, with a tendency for quantity surveyors in the construction sector to be based on site. Tests for differences revealed significant difference ( $p \leq 0.001$ ) between the responses of the Telecoms/ICT and both the Construction and Defence/Aerospace respondents. Further, when the quantity surveyors were excluded from the calculations there was still a significant difference ( $p \leq 0.01$ ) between the responses of the Telecoms/ICT and Construction subsets.

<<< **Insert Tables 7 about here** >>>

### **Functions of the commercial manager**

The initial literature review, the analysis of job advertisements, the subsequently pilot questionnaire, and interviews revealed 28 functions that were deemed to be significant to the

role of the commercial manager. The respondents were asked to indicate whether these functions form part of their job, they provide support to the function, they provide a counterbalance to the function, or have little or no contact with this function. The frequencies of the responses are shown in table 8, where the functions are ranked in order of the mode/median response.

<<< **Insert Table 8 about here** >>>

### *Job*

The results indicate that overall the functions: contract formulation, contract negotiation, risk management, dispute resolution, and bidding were generally seen as part of the job of a commercial manager (The mode and median response = job). Further tests for differences between the three subsets both including and excluding the quantity surveyors revealed no significant differences for the functions: contract negotiation, risk management, and bidding. Significant differences were revealed in the responses to the following functions:

- **Dispute resolution** forms significantly less of the role of a commercial manager in the Telecoms/ICT sector when compared with both the Construction ( $p \leq 0.001$ ) and Defence/Aerospace sectors ( $p \leq 0.01$ ). Further, this also holds true when the quantity surveyors were excluded from the calculations.
- **Contract formulation** forms significantly less of the role of a commercial manager in the construction sector when compared with the Defence/Aerospace sector ( $p \leq 0.01$ ). Further, this also holds true when the quantity surveyors were excluded from the calculations. Having said this, both the mode and median response from the construction sector indicated that this function forms part of the job of a commercial manager in the construction industry.

### *Job/Support*

While forming part of the job for many commercial managers, the functions: price formulation, claim formulation, payments, cash flow management, creation of outline proposals, cost management, cost value reconciliation, value management, sub-contracting administration, procurement strategy, and acquiring approvals and permits were also considered by some to be functions to which they provide support. (The mode response = job, while the median response = support). Test for differences revealed significant differences in the responses of the three subsets to all these functions. Significant differences were revealed in the responses to the following functions:

- **Cost management, cost value reconciliation, value management, and sub-contracting administration** form significantly more of the role of a commercial manager in the construction sector when compared with both the Telecoms/ICT and Defence/Aerospace sectors (all  $p \leq 0.001$ ). Further, this also holds true (except for estimating) when the quantity surveyors were excluded from the calculations.
- **Claims formation, payments, cash flow management, and estimating** forms significantly less of the role of a commercial manager in the Telecoms/ICT sector when compared with both the Construction ( $p \leq 0.001/p \leq 0.05$ ) and Defence/Aerospace ( $p \leq 0.001/p \leq 0.01/p \leq 0.05$ ) sectors. Further, this also holds true (except for estimating) when the quantity surveyors were excluded from the calculations.



- **Creation of outline proposals, and acquiring approvals and permits** forms significantly less of the role of a commercial manager in the construction sector when compared with both the Telecoms/ICT (both  $p \leq 0.05$ ) and Defence/Aerospace (both  $p \leq 0.001$ ) sectors. Further, this also holds true (except for creation of outline proposals) when the quantity surveyors were excluded from the calculations.
- **Price formulation** forms significantly more of the role of a commercial manager in the Defence/Aerospace sector when compared with both the Construction ( $p \leq 0.01$ ) and Telecoms/ICT ( $p \leq 0.001$ ) sectors. Further, this also holds true when the quantity surveyors were excluded from the calculations.
- **Procurement strategy** forms significantly more of the role of a commercial manager in the Defence/Aerospace sector when compared with the Telecoms/ICT sector ( $p \leq 0.05$ ).
- **Cash flow management** forms significantly more of the role of a commercial manager in the construction sector when compared with the Defence/Aerospace sector ( $p \leq 0.01$ ). However, this does not hold true when the quantity surveyors were excluded from the calculations.

### *Support*

Overall, the respondents considered that they provided support to the functions: marketing, supply chain management, business plan development, sales, estimating, quality assessment, development appraisal, supplier evaluation, image/reputation management, performance measurement, and innovation management (The mode and median response = support). Further tests for differences between the three subsets both including and excluding the quantity surveyors revealed no significant differences for the functions: marketing, quality assessment, development appraisal, image/reputation management, and innovation management. Significant differences were revealed in the responses to the following functions:

- **Supply chain management** forms significantly less of the role of a commercial manager in the Telecoms/ICT sector when compared with both the Construction ( $p \leq 0.001$ ) and Defence/Aerospace ( $p \leq 0.05$ ) sectors. Further, this also holds true when the quantity surveyors were excluded from the calculations.
- **Supplier evaluation and performance measurement** form significantly less of the role of a commercial manager in the Telecoms/ICT sector when compared with the construction sector ( $p \leq 0.001/p \leq 0.01$ ). Further, this also holds true when the quantity surveyors were excluded from the calculations.
- **Business plan development and sales** form significantly less of the role of a commercial manager in the construction sector when compared with both the Telecoms/ICT ( $p \leq 0.05/0.001$ ) and Defence/Aerospace ( $p \leq 0.01/0.001$ ) sectors. Further, this also holds true (except for business plan development) when the quantity surveyors were excluded from the calculations.

### *No contact*

The results indicate that overall the function: research and development was generally seen as not being part of the job of a commercial manager (The mode and median response = no contact). However, tests for differences revealed a significant difference in the responses of the Construction and Defence/Aerospace subsets to this function, but when the quantity surveyors were excluded no significant difference occurred.

## **The most important or main tasks of commercial managers**

The respondents were then asked to identify the five functions which they had identified as part of their job which they considered to be of most importance for their day-to-day work. The responses are shown in table 9 with the numbers indicating the number of respondents rating the function as being important in their day-to-day work.

**<<< Insert Table 9 about here >>>**

The results confirm the importance to the generic role of commercial management of the following functions: contract negotiation, risk management, contract formulation, bidding and dispute resolution, which received the most mentions as being part of the job for the individual commercial manager.

In order to appreciate the importance given to the various functions and to make comparisons between industry sectors, the frequency of importance and the number of respondents indicating that a function was part of their job were cross tabulated for the generic industry sectors. The top ten functions were then ranked based upon on the interaction between the two measures (See table 10).

**<<< Insert Table 10 about here >>>**

This comparison confirms the general importance of contract negotiation, risk management and dispute resolution. It also further illustrates the differences between Construction and the other two sectors investigated. For example, it shows the greater importance of the functions cost management, cost value reconciliation, sub-contracting administration and payments in the construction sector. Likewise, despite being considered to be a part of the job of a commercial manager in the construction sector it reveals the relative lack of importance of both bidding and contract formulation when compared with Telecoms/ICT and Defence/Aerospace sectors.

## **Cluster Analysis**

Cluster analysis seeks to identify relatively homogeneous groups of variables (or cases) based on specific characteristics. Commencing with each variable (or case) in a separate cluster, the procedure utilises an algorithm that coalesces clusters until only one is left. A major issue concerning the validity of cluster analysis relates to whether or not the clusters 'identified' by the method represent real groups or are simply 'produced' as a result of the clustering rules (Hagan and Fellows, 2003). Hierarchical cluster analysis was applied to the 28 functions initially held to contribute to the role of the commercial manager, using the squared Euclidean distances as the criteria for grouping. The resulting dendrogram, generated using average linkage between groups, is presented in figure 1. To facilitate understanding of the dendrogram, the clusters were then interpreted and labelled (see figure 2); the subsequent graphical representation was held to represent genuine clusters.

**<<< Insert Figures 1 & 2 about here >>>**

At the highest level the functions are split into two groups, which we have labelled Business Delivery and Business Development.

Business Delivery comprises three sub-groups labelled:

- Commercial Solutions:
  - Risk/Price Interaction: was further sub-divided into:
    - Contract Management, which includes the functions contract formulation, contract negotiation and risk management.
    - Dispute Resolution
    - Bid management, which includes the functions bidding, procurement strategy, price formulation, business plan development, and creation of outline proposals.
- Acquiring Approvals and Permits
- Technical Solutions: further sub-divided into:
  - Production/Supply Interaction: comprising:
    - Supplier management, which includes sub-contractor administration, supply chain management, and supplier evaluation.
    - Performance Measurement
    - Innovation Management
    - Quality Assessment
  - Cost/Value Interaction: comprising:
    - Financial Management, which includes cost management, cost value reconciliation, cash flow management, payments, and claims formulation.
    - Value Management
  - Estimating

Business Development comprises two sub-groups labelled:

- Opportunity Development: further subdivided into:
  - Capture management, which includes marketing and sales
  - Image/reputation management
  - Development Appraisal
- Research and development

### **Interaction with others**

As commercial management is about managing interfaces, it is also of interest to get an appreciation of how and with whom commercial managers typically interact. The respondents were therefore asked how often/seldom they would be in contact with various other actors that could be found on projects. The results are shown in table 11 ranked in order of the mode/median response.

**<<< Insert Table 11 about here >>>**

The results indicate that the most frequent interactions (on a daily/weekly basis) are within the company. This was particularly true for the Telecoms/ICT sector; tests for differences revealed that interaction between commercial managers in this sector and specialist divisions in their company was significantly more frequent than those in both the Construction and Defence/Aerospace sectors ( $p \leq 0.001$ ). Likewise, contact with the client and their representatives, taken overall, are on a weekly basis. However, test for differences revealed

that for commercial managers in the Telecoms/ICT sector interaction was significantly less frequent with the client's representative compared with the construction sector ( $p \leq 0.001$ ); with the client compared with the Defence/Aerospace sector ( $p \leq 0.05$ ); and with end users compared with both the Construction and Defence/Aerospace sectors ( $p \leq 0.001$ ). Further, in the construction sector, interaction was significantly more frequent with subcontractors compared with both the Telecoms/ICT and Defence/Aerospace sectors ( $p \leq 0.001$ ), and suppliers again compared with both the Telecoms/ICT and Defence/Aerospace sectors ( $p \leq 0.01$ ). Although, for the latter (contact with suppliers) when the quantity surveyors were excluded no significant difference occurred. These results are hardly surprising considering the on-site based nature of construction.

### **Developing the practice of commercial management**

Finally, the respondents were asked to identify specific areas in their current practice with the most potential for improvement, practices from other industry sectors that should be adopted in their sector and practice that would potentially benefiting from targeted research. Taken collectively, commercial management, risk management, contracts and contract management, value management, bidding, procurement – particularly partnering arrangements, cost management and dispute resolution are of greatest concern to commercial managers, although dispute resolution appears to be of special importance to the construction sector. Again, these results add weight to the foregoing investigation into the functions that comprise the role of the commercial manager.

## **DISCUSSION**

Predominantly, their responses showed that commercial managers across all three sectors held at least a first degree with a proportion holding higher degrees; but that outside the construction industry there is a lack of professional representation and certification of competence to practice. While there are a number of aspiring institutions and associations active in this and in related disciplines, these apparently have not appealed to practising commercial managers in the targeted organisations in Telecoms/ICT and Defence/Aerospace. Indeed, the issue of a lack of professional standing was raised during the interviews. This lack of status for commercial management led a blue-chip telecommunications organisation to approach UMIST in 2000 to develop an MSc programme in Commercial Management and more recently to establish an MBA for Commercial Executives. Both these programmes were the first of their kind.

While in some construction organisations the title 'commercial manager' was found to be reserved for individuals who were involved at a high level in their organisation, in others it was used interchangeably with that of the contractor's quantity surveyor. This was indicated by the general high level of consistency in the responses from the construction sector when the quantity surveying respondents were both included and excluded from tests for differences.

Contrary to the view that commercial management is a function of project management on specific projects, the findings indicate that commercial management goes beyond projects. The majority of the respondents worked on multiple projects or were not allocated to specific projects, of those allocated to only one project the majority were from the construction sector.

The involvement of commercial managers in projects varied between the industries. A tendency was revealed for individuals in the Telecoms/ICT and Defence/Aerospace sectors to be appointed earlier in the project life cycle than those in the construction sector. This was evident from the fact that commercial managers in the construction sector were mainly involved in contract administration activities with project execution dominating their time, whilst commercial managers in the other sectors were predominantly involved in pre-contract activities with project development dominating their time. This difference between the sectors is perhaps a result of the traditional division of the commercial function in the construction industry, the estimating department being responsible for pre-contract activities but the quantity surveying section taking responsibility for contract administration activities (Brown, 1997).

As for what the commercial manager actually does once involved in the projects, the three industries show both similarity and divergence. Contract management, comprising: contract negotiation, contract formulation, and risk management; and the functions dispute resolution and bidding were generally consistently seen as forming part of the role of the commercial manager, although bidding and contract formulation were not seen as being quite so important in the construction sector. The latter could be explained in part by the greater tendency to use standardised contracts in construction compared to the other two sectors and that pre-contract activity is largely confined to business development, board and estimation departments in construction.

Another area that showed convergence between the three industries was research and development, which was stated by virtually all to be outside the remit of commercial management. Indeed, the similar areas of opportunity development (in particular marketing, image/reputation management and development appraisal) and innovation management were consistently viewed as support functions. Thus, whilst all these are important for the survival of commercial firms in competitive markets and, therefore, justifiably could be claimed to be an integral part of commercial management; they are not primarily dealt with by commercial managers.

Areas of particular interest in which the three industries differ include bid management and financial management (see Figure 2). Bid management was seen as a part of the role of a commercial manager in the Defence/Aerospace sector, whereas there was a tendency in Construction and Telecoms/ICT to view bid management more as a support function. Financial management (comprising functions such as cost management and cost value reconciliation), value management and supplier management (particularly sub-contracting administration) were seen to be integral parts of the role of the commercial manager in the construction sector, while in Telecoms/ICT and Defence/Aerospace involvement in these areas was generally in a support capacity. Again, this could be explained by peculiarities in the industry sectors and by the fact that respondents may have found it difficult to accurately distinguish between performing a task as an integral part of their job and providing support to the function.

Finally, there was a general lack of agreement between the sectors on the role commercial managers take concerning the tasks of estimating and acquiring approvals and permits.

Overall, the most frequent interactions were between the commercial manager and specialist divisions within their organisation, the client's representative and the client. Although differences in interaction did occur in industry sectors, for example, in the Telecoms/ICT

sector interaction was significantly more frequent between commercial managers and specialist divisions in their organisation but less frequent with the client's representative, end users and the client. Further, in the construction sector, interaction was significantly more frequent with subcontractors compared with both the Telecoms/ICT and Defence/Aerospace sectors. These findings are perhaps to be expected in view of the site-based nature of construction.

Keeping in mind that the above discussion deals exclusively with projects and the project-based organisation a modified definition of commercial management can be deduced:

*“The management of contractual and commercial issues relating to projects, from project inception to completion.”*

This entails specific activities and functions as well as whole processes in individual firms in addition to the project organisations that they might be part of and an acceptance of the centrality of risk management to commercial management.

## **CONCLUSIONS**

This research has compared and contrasted the role of commercial managers from a range of organisations and across industry sectors. While the study has established differences in approach and application both between and within industry sectors, it has established sufficient similarity and synergy in practice to identify a specific role of commercial management in project-based organisations. These areas of similarity encompass contract management and dispute resolution; whereas the areas of divergence include a greater involvement in financial and value management in construction and bid management in defence/aerospace.

In the construction sector, there is a tendency for commercial managers to be corporate members of the RICS and/or the Chartered Institute of Building. Outside construction, however, there is a distinct lack of professional representation and recognition. While the more obvious development would entail the creation of a generic institute or association to represent commercial managers, disseminate good practice and certify competency to practice, perhaps these formal structures represent 19<sup>th</sup> century ideals more than current aspirations. Possibly a more progressive response would be to utilise the Internet to establish loosely based ‘communities of practice’ (Lave and Wenger, 1991) as a vehicle to disseminate good practice and cutting edge research pertinent to commercial managers. In terms of developing a research agenda to further underpin the development of commercial management as a distinct discipline, there is a need to co-ordinate the disparate strands of research currently being undertaken. Only then would it be possible to evaluate whether or not there is any benefit to be gained from developing a body of knowledge for commercial management. Initially, this could be facilitated through the establishment of a research network for commercial management.

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Table 1: Number of projects involved with: Generic industrial sector comparison

		Is your work primarily on:				Total
		1 project at a time	2 or 3 projects at a time	4 or more projects at a time	I don't work on specific projects	
<b>Generic Industrial sector</b>	Telecommunications	0	5	<b>21</b>	6	32
	Construction (Building & Civils)	12 (5)	8 (2)	9 (6)	<b>13</b> (13)	42 (26)
	Defence/Aerospace	3	5	<b>15</b>	7	30
	<i>Total</i>	15	18	45	26	104

NB: **Bold** = mode; ( ) = Excluding quantity surveyors

Table 2: Role integrated within the project team: Generic industrial sector comparison

		Is your role integrated into the project team		Total
		No	Yes	
<b>Generic Industrial sector</b>	Telecommunications	9	23	32
	Construction (Building & Civils)	11 (11)	30 (15)	41 (26)
	Defence/Aerospace	10	21	31
	<b>Total</b>	30	74	104

NB: **Bold** = mode; ( ) = Excluding quantity surveyors

Table 3: Which project stage dominates your time: Generic industrial sector comparison

		Which project stage dominates your time:			Total
		Project development	Project execution	Project resolution	
<b>Generic Industrial Sector</b>	Telecommunications	<b>18</b>	11	2	31
	Construction (Building & Civils)	11 (9)	<b>25</b> (14)	6 (3)	42 (26)
	Defence/Aerospace	<b>13</b>	8	4	25
	<i>Total</i>	42	44	12	98

NB: **Bold** = mode; ( ) = Excluding quantity surveyors

Table 4: Primary project involvement: Generic industrial sector comparison

		Is your involvement in projects primarily:		Total
		Pre-contract	Post contract	
<b>Generic Industrial sector</b>	Telecommunications	<b>24</b>	7	31
	Construction (Building & Civils)	14 (10)	<b>27</b> (15)	41 (25)
	Defence/Aerospace	<b>22</b>	6	28
	<i>Total</i>	60	40	100

NB: **Bold** = mode; ( ) = Excluding quantity surveyors

Table 5: Start of project involvement: Generic industrial sector comparison

		Start of project involvement					Total
		Pre-RFP	Proposal Development	Contract Negotiation	Contract Award	Varies	
<b>Generic Industrial sector</b>	Telecommunications	<b>12</b>	<b>12</b>	5	1	0	30
	Construction (Building & Civils)	11 (8)	<b>16</b> ( <b>12</b> )	2 (2)	13 (5)	1	43 (27)
	Defence/Aerospace	<b>17</b>	11	0		1	29
	<b>Total</b>	40	39	7	14	2	102

NB: **Bold** = mode; ( ) = Excluding quantity surveyors

Table 6: End of project involvement: Generic industrial sector comparison

		End of project involvement						Total	
		Contract Award	Contract Signature	Planning & start up)	Project closure	Contract Completion	On going	Varies	
<b>Generic Industrial sector</b>	Telecommunications	3	6	1	7	10	3	0	30
	Construction (Building & Civils)	0 (0)	0 (0)	1 (1)	7 (4)	34 (21)	0 (0)	1 (1)	43 (27)
	Defence/Aerospace	5	2	0	4	16	1	1	29
	<i>Total</i>	8	8	2	18	60	4	2	102

NB: **Bold** = mode; ( ) = Excluding quantity surveyors

Table 7: Physical location: Generic industrial sector comparison

		Where are you physically located:					Total
		Production site	Head office	Regional office	No fixed office	At home	
<b>Generic Industrial sector</b>	Telecommunications	2	2	<b>16</b>	2	10	32
	Construction (Building & Civils)	11 (3)	5 (4)	<b>21</b> ( <b>17</b> )	3 (0)	2 (2)	42 (26)
	Defence/Aerospace	<b>12</b>	3	<b>12</b>	4	0	31
	<i>Total</i>	25	10	49	9	12	105

NB: **Bold** = mode; ( ) = Excluding quantity surveyors

Table 8: Functions of a Commercial Manager

	<b>Job</b>	<b>Support</b>	<b>Counterbalance</b>	<b>No contact</b>	<b>Median</b>	<b>Z</b>
Contract formulation	<b>77</b>	15	5	7	Job	7.126*
Contract negotiation	<b>73</b>	19	4	8	Job	0.113
Risk management	<b>64</b>	31	3	8	Job	3.567
Dispute resolution	<b>61</b>	26	3	16	Job	13.697***
Bidding	<b>52</b>	37	6	8	Job	0.072
Price formulation	<b>52</b>	43	3	8	Support	17.493***
Claim formulation	<b>50</b>	27	5	19	Support	31.952***
Payments	<b>50</b>	30	4	20	Support	24.719***
Cash flow management	<b>49</b>	38	3	15	Support	33.488***
Creation of outline proposals	<b>45</b>	39	7	14	Support	18.424***
Cost management	<b>45</b>	39	5	15	Support	29.765***
Cost value reconciliation	<b>44</b>	38	5	16	Support	39.886***
Value management	<b>43</b>	36	5	21	Support	17.662***
Sub-contracting administration	<b>43</b>	33	6	24	Support	24.097***
Procurement strategy	<b>41</b>	27	10	8	Support	6.169*
Acquiring approvals and permits	<b>40</b>	33	6	26	Support	12.022**
Marketing	10	<b>49</b>	11	36	Support	0.364
Supply chain management	22	<b>47</b>	13	23	Support	17.389***
Business plan development	33	<b>46</b>	6	20	Support	9.096*
Sales	18	<b>46</b>	13	27	Support	15.835***
Estimating	20	<b>44</b>	12	18	Support	6.166*
Quality assessment	13	<b>43</b>	12	38	Support	0.156
Development appraisal	23	<b>41</b>	11	29	Support	0.303
Supplier evaluation	17	<b>41</b>	13	34	Support	14.384***
Image/reputation management	27	<b>40</b>	5	30	Support	0.432
Performance measurement	31	<b>37</b>	9	29	Support	6.972*
Innovation management	23	<b>34</b>	15	33	Support	0.135
R&D	2	27	9	<b>64</b>	No contact	7.096*

NB: **Bold** = Mode

Job = This function forms part of my job; Support = I provide support to the function; Counterbalance = I provide a counterbalance to this function; No contact = I have little or no contact with this function  
 \*\*\* =  $p \leq 0.001$  \*\* =  $p \leq 0.01$  \* =  $p \leq 0.05$  'z' = Mann-Whitney U – Wilcoxon Rank Sum W Test – between Construction, Telecoms/ICT and Defence/Aerospace industry sectors

**Table 9: Functions which are most important for your day-to-day work**

	<b>Frequency</b>	<b>Rank</b>
Contract negotiation	52	1
Risk management	45	2
Contract formulation	39	3
Bidding	28	4
Dispute resolution	27	5
Cost management	27	5
Price formulation	22	7
Cost value reconciliation	21	8
Payments	19	9
Sub-contracting administration	19	9
Cash flow management	18	11
Business plan development	16	12
Acquiring approvals & permits	14	13
Value management	14	13
Creation of outline proposals	13	15
Procurement strategy	12	16
Performance measurement	8	17
Innovation management	7	18
Sales	7	18
Estimating	6	20
Image/reputation management	6	20
Supply chain management	5	22
Claim formulation	4	23
Supplier evaluation	4	23
Development appraisal	3	25
Quality assessment	3	25
Marketing	2	27
Compliance management	1	28
Contract management	1	28
Contract Sign Off	1	28
<b>Total</b>	<b>444</b>	

Table 10: Functions of a Commercial Manager – Importance/Part of Job: Generic industrial sector comparison

		Generic Industrial Sector			Total	I x J
n		Telecomms/ ICT	Construction (Building & Civils)	Defence/ Aerospace		
		33	42	31	106	
Contract negotiation	Important	18	17	17	52	3796
	Part of Job	24	25	24	73	
Contract formulation	Important	16	5	18	39	3003
	Part of Job	23	26	28	77	
Risk management	Important	22	18	5	45	2890
	Part of Job	23	27	14	64	
Dispute resolution	Important	5	11	11	27	1647
	Part of Job	10	30	21	61	
Bidding	Important	11	3	14	28	1456
	Part of Job	13	18	21	52	
Cost management	Important	1	23	3	27	1215
	Part of Job	7	33	5	45	
Price formulation	Important	4	3	15	22	1144
	Part of Job	7	20	25	52	
Payments	Important	1	13	5	19	950
	Part of Job	4	31	15	50	
Cost value reconciliation	Important	2	18	1	21	924
	Part of Job	3	35	6	44	
Sub-contracting administration	Important	3	16	0	19	817
	Part of Job	5	30	8	43	

**NB: I x J** = Number considering function to be important x number considering function to be part of job

Table 11: Interactions which are most common in day-to-day work

	<b>Daily</b>	<b>Weekly</b>	<b>Monthly</b>	<b>Seldom</b>	<b>Never</b>	<i>Median</i>	<i>Z</i>
Specialist divisions within your company	<b>35</b>	27	23	16	2	Weekly	25.446***
The client's representative	22	<b>38</b>	18	17	7	Weekly	14.718***
The client	24	<b>35</b>	22	19	4	Weekly	7.728*
Sub-contractors	21	14	21	<b>38</b>	9	Monthly	31.836***
Suppliers	4	22	24	<b>43</b>	10	Seldom	12.265**
Potential clients	11	14	24	<b>44</b>	11	Seldom	3.577
End users	6	16	26	<b>44</b>	10	Seldom	18.523***
Competitors	0	2	19	<b>57</b>	25	Seldom	4.065

NB: **Bold** = Mode

\*\*\* =  $p \leq 0.001$  \*\* =  $p \leq 0.01$  \* =  $p \leq 0.05$  'z' = Mann-Whitney U – Wilcoxon Rank Sum W Test

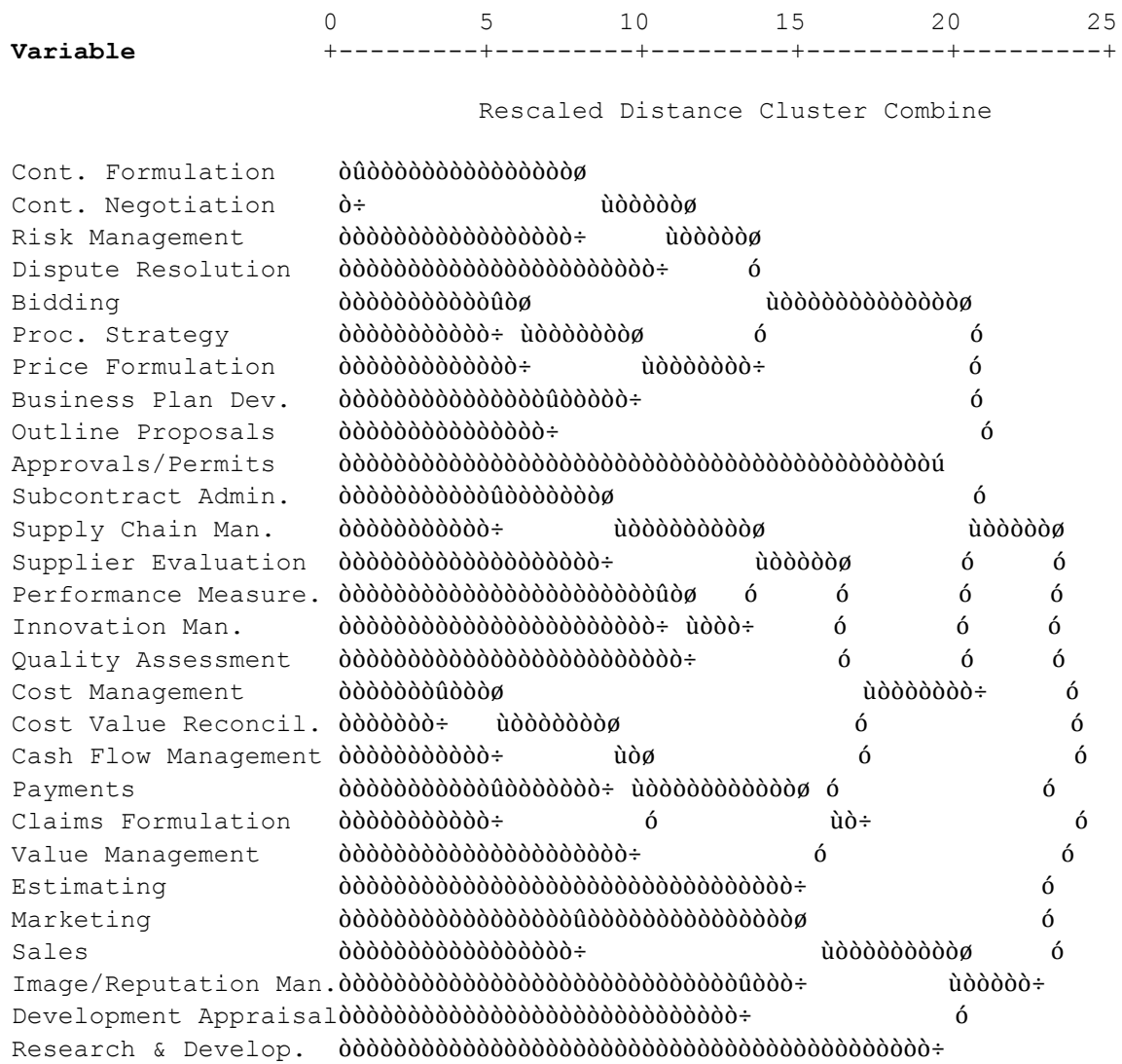
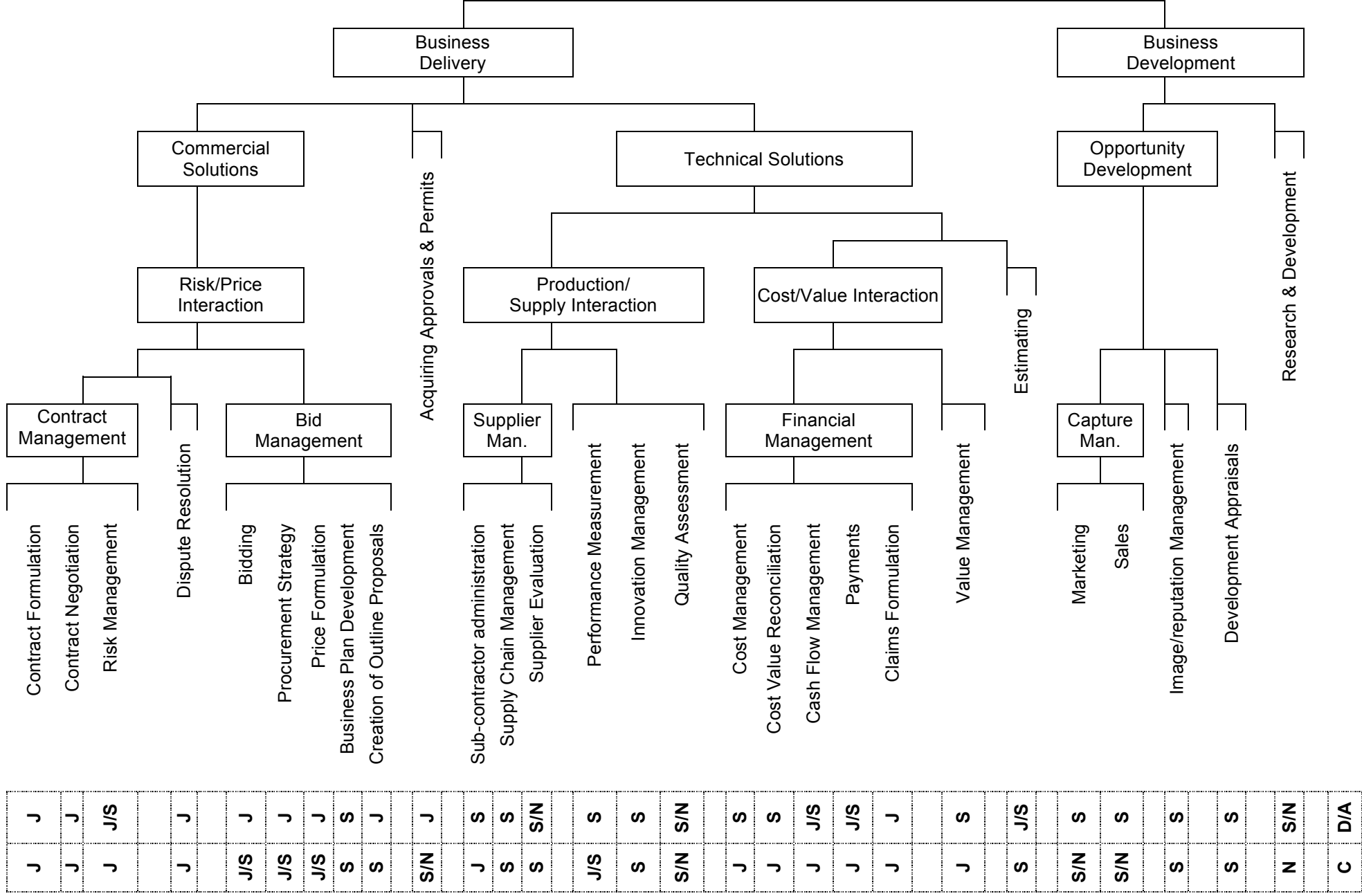


Figure 1: Hierarchical Cluster Analysis - Dendrogram using Average Linkage (Between Groups)







**Legend:** T = Telecoms/ICT; C = Construction; D = Defence/Aerospace  
J = Function part of job; S = Provides support/counterbalance to this function;  
N = Little or no contact with this function

Figure 2: Functions of a commercial manager

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<sup>i</sup> 'Project development' the period starting with prospect identification, then comprising qualification, proposal development, negotiation through to deal closure.