Emerging Markets Queries in Finance and Business

A multiple regression model for selecting audit team members

Florin Dobre[a],*, Daniel Vilsanoiu[a], Eugeniu Turlea[a]

[a]Bucharest University of Economic Studies, 6, Romana Square, district 1, Bucharest, 010374, Romania

Abstract

The optimization of the audit process has always been a priority for audit academics and professionals. Following a review of the audit literature on this topic, we conclude there is a consensus among authors that one of the auditor's primary concerns is to optimize the allocation of resources for audit missions while keeping the audit risk at an acceptable level. This paper focuses on one of the key issues identified by various authors regarding the optimization of the audit process: selecting the m of the audit team. All audit firms are aware that the human resource is their most important asset and recognize the importance of finding the balance between the skills of audit team members and the complexity of audit engagements. The main purpose of this optimization process is to help auditors not taking unnecessary risks avoid under-auditing and to keep costs to a competitive level avoid over-auditing. We propose a multiple regression model for determining the optimum number of hours to be involved on audit engagements depending on several client related parameters e.g. financial performance indicators, client size, complexity of client operations, etc.. Further, we examine the possibility of using the model for creating an expert system that would assist in selecting the right mix of audit team members depending on their experience and skills.

1. Literature review

The importance of the audit team is essential as the audit process is deeply influence upon it. It is require not only to have qualified individuals, but also to establish a proper estimation of the working time. Taking these

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* Corresponding author. Tel.: +40-0726-993-401.
E-mail address: flndobre@yahoo.com.

elements into consideration, Pratt, Jiambalvo, J., 2002, identified some intermediary factors which are related to audit team performance. Their study pointed out that high performance audit team is influenced by several factors such as their time budgets, their personal's needs or their numbers of tasks, while their supervised activity is affected by companies' profile and industry specification. On the other side, As are, S. Cohen, J., Tompeter, G., 2005, pointed out the qualitative role of the audit team. Moreover, Francis, J. R., 2004, suggested that the audit quality is important as it provides information about the public accounting firms, and about their reputation. As a fact, the audit performances are influenced by firm size, industry specialization, office characteristics and the fiscal indicators of the audited company.

Nevertheless, Scott, T., W., Tiessen, P., 1999, proved that performance of the audit team is influenced by their prior targets, and moreover, the number of working hours carried out by them is determined by the comprehensive of company's audited profile, while Jones, K., T., Hunt, S., C., Chen, C.C., 2007, focused on the skills that the audit team have, considering the feedback that the supervised can provide to them. Consequently, a proper feedback can influence not only the performance of the audit team, but also the necessary working hours estimated in an audit mission. Regarding the performance of the audit team, Burke, C. S. & all., 2006, emphasise that it is influence by managerial personnel resources, by managing material resources, by solving accounting problems, and moreover, proper feedback provided by the leader is essential in order to facilitate team effectiveness.

Not only the qualitative aspects are important, but also the models that are developed. Consequently, Bedard, J, C, Ettredgeb,M,K, Johnstone ,B., E., 2008, proposed a multiple regression model in which they tested not only if the audit firm management budgeting is influenced by the fee pressure and by other variables from the previous period, but also if the engagement teams 'reporting dynamics are induced by those factors. Deep evidence between fee pressure and the change in budget audit number of hours was identified in a negative correlation, while the connection between the current evaluation and the previous one cannot be denied. Another study is realized by Lennox, C., 2002 who proposed a logit model using companies that got an unfavorable audit opinion, identified by their profitability, liquidity, probability of default and leverage indeptness. The study involves that their is a connection between the hiring the executive's former audit firm and the executive management and moreover a the budget of the audit team is establish considering the performance of the company audited. Not at least, fuzzy models are provided as Dereli, T, Baykasoğlu, A, Daş, S., A., 2007, where the quality of audit team influence the managerial performances obtained by the company.

2. A multiple regression model for selecting audit team members

In order to obtain a realistic evaluation of the number of chargeable engagement hours, the authors considered splitting the analysis for each major rank involved in a typical audit: junior auditors staff, seniors, managers and the engagement partner.

For each of the ranks above, a function depicting the number of chargeable hours is proposed by the authors.

The variables we considered to have a significant influence on the number of hours for junior auditors were:

1. UW Understanding and Walkthrough, this variable quantifies time necessary to understand client's business and is affected by:

- FYA First Year Audit - this variable quantifies whether the client was audited before by the same audit firm;
- AEx Auditor Experience - this variable quantifies the experience of the junior auditor;
- BC Business Changes - this variable quantifies whether there were any significant changes in the client's business in the previous year if this is not the first year of audit for this client;
- IR Industry Risk - this variable quantifies the specific impact of the client's industry sector;
- N Nature of Transactions - this variable describes the nature of transactions routine - automatic, periodical - manual and judgmental - exceptions;
- AS Account Significance - the weight of the accounts affected by a class of transactions in the trial balance;