



## PAPER TITLE

# MATHEMATICAL ASPECTS REGARDING THE STATISTICAL - ECONOMIC ANALYSIS OF FINANCIAL AUDIT STRATEGIES

Rotariu Lia Sanda, Vărșăndan Adrian, Ocnean Monica, Tonea Elena, Antoanela Cozma, Adamov Tabita

### Abstract:

The paper aims to analyze the decision-making process of financial auditors with regard to the adjustments that can be applied in a model that describes how financial auditors may negotiate decision-making processes. Therefore, the analysis identifies the dependent and interdependent variables comprised within the category of competitive, concession or compromise tactics and distributive strategies. Several aspects are taken into consideration in the case study: socio-demographic, financial and technical positioning, as well as managerial aspects. The descriptive tests from the statistical processing of questionnaires that reflect the relationship between the auditor and the client with the help of SAS studio analyze the report in question but at the same time identify critical points in the negotiation techniques. Using the processing data and statistical tests improve market knowledge, resulting in better customer experiences and providing employees with more products and services. The result of discussions regarding adjustments following the clarification of some issues with clients involves the use of tactics that lead to the resolution of possible syncopes and the assessment of commitment risk.

### • Introduction

Through the case study, I want to analyze the decision-making process of financial auditors regarding adjustments, within a highly appreciated and renowned model in the spectrum of specialized literature. Many studies and researches have been conducted on the applicability and results generated through the lens of this model describing how financial auditors make their negotiation decisions.

### • Material and method

A total of 97 people responded to the invitation to answer the questions of the questionnaire. 57 are women and 38 are men. The average audit experience is approximately 12-14 years. Regarding the position within the audit firm, 17 people indicated the position of executive director, 35 manager and 45 have the quality of partner or associate. 18 respondents belong to Big 4 member companies, then 13 are members of another international group, 14 are members of another national group and 50 indicated that they are part of companies with Romanian majority capital acting individually.

The position of the respondents within the audit firm or the fact that the auditor is male or female, the length of time he was a member of the audit team of the same client, the experience according to the type of audit firm - represented ways of delimiting distinct groups within the sample. A frequently addressed research topic was to test whether or not different groups led to different responses to questionnaire questions.

Tabel 1. Experiența în audit (ani) a respondenților

Experiența în audit (ani) / M-F						
Sex	N	Media	Abaterea medie pătratică	Minimum	Maximum	N
Feminin	59	12.06	7.02	0	30	58
Masculin	38	13.78	4.63	5	22	37

Experiența în audit (ani) / Poziția în cadrul firmei de audit

Poziția în cadrul firmei de audit	N	Media	Abaterea medie pătratică	Minimum	Maximum	N
Director executiv	17	10.64	4.09	3	18	17
Manager	35	12.70	5.92	0	22	34
Partener/ asociat	45	13.56	7.02	1	30	44

### • Results and discussions

Pearson Correlation Coefficients Prob > |r| under H0: Rho=0 Number of Observations

	V1	V2	V3	V4	V5	V6	V7	V8	V9
Q1a_The result of your discussions	0.11953 0.2591 91	0.08704 0.4120 91	-0.10011 0.3424 92	0.08508 0.4226 91	0.25760 0.0132 92	-0.10767 0.3043 93	0.41868 <.0001 93	0.02389 0.8212 92	-0.03272 0.7568 92
Q1b_	-0.11705 0.2665 92	-0.17736 0.0908 92	0.13438 0.1966 94	-0.17977 0.0864 92	0.10909 0.2979 93	-0.04589 0.6588 95	0.04834 0.6436 94	-0.31749 0.0019 93	-0.30482 0.0030 93
Q1c_	0.36379 0.0004 90	0.17529 0.0984 90	-0.02617 0.8023 94	0.21984 0.0373 90	0.30931 0.0029 91	0.13111 0.2128 92	0.20583 0.0490 92	0.12203 0.2492 91	0.21840 0.0375 91
Q1d_Va rugamsaapreciati, in	0.19762 0.0716 84	0.01127 0.9190 84	-0.28846 0.0074 85	-0.04502 0.6824 85	0.14197 0.1950 85	-0.13598 0.2147 85	-0.07170 0.5143 85	0.00124 0.9910 85	0.09814 0.3716 85

### • Conclusions

The result of the discussions regarding the adjustments was accepted, regarding the testing of the mentioned hypotheses, even if group differences appear, they did not prove to be statistically significant, that is, the research hypotheses are accepted

More precisely, the null hypothesis H<sub>01</sub> is rejected in favor of the research hypothesis according to ANOVA,  $p < 0.001$ ,  $F=9.72$  only in the situation where the agreement regarding the initial position of the auditor is different from the position within the respondent's audit firm (director, manager, partner/associate). The corresponding boxplot diagram clearly indicates the values of the answers according to the position of the respondents within the audit firm.

Multiple comparisons between each two groups separately, using the Tukey-Kramer test, reveal statistically significant differences between groups where  $p \in [0.003, 0.001]$ . The null hypothesis H<sub>01</sub> is also rejected in favor of the research hypothesis according to ANOVA in the situation of rough agreement of a middle solution between the initial positions