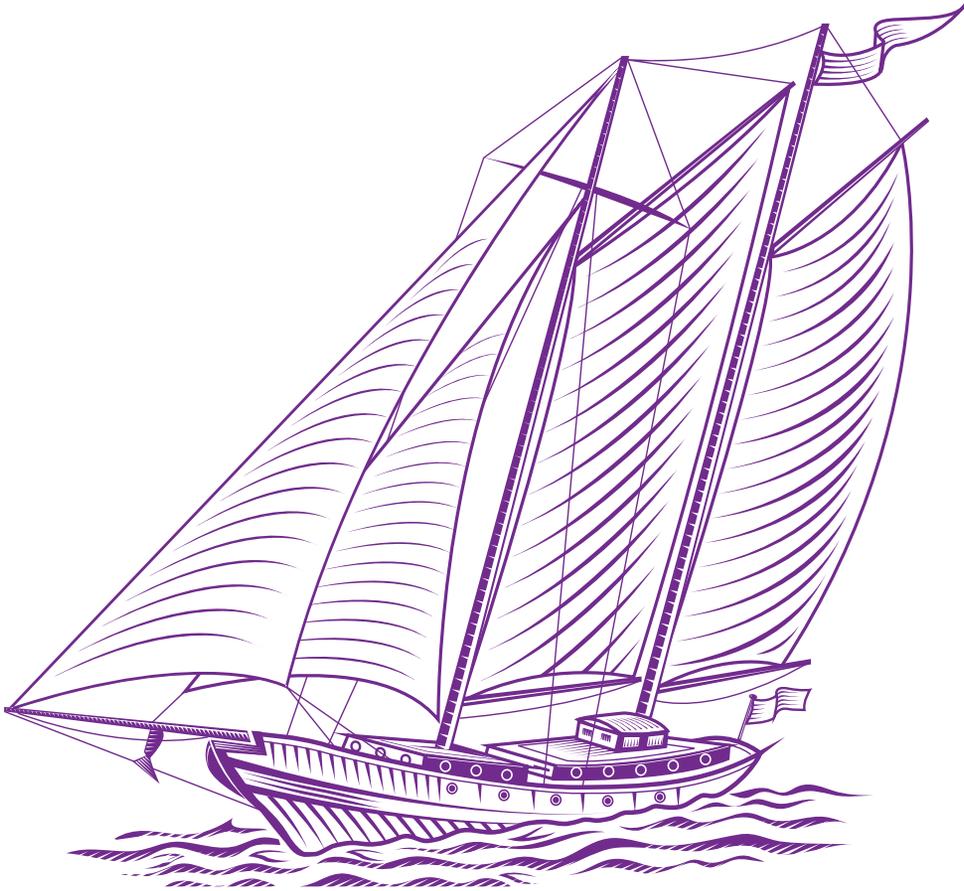




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A STUDY OF THE GAP BETWEEN THE EXPECTED SPECIALIZED SKILLS OF ACCOUNTING GRADUATES AND ACTUAL LEVEL IN IRAN

MAHDI SALEHI^{1,2}, HOSSEIN MIRZAEI³, MOSTAFA BAHRAMI⁴

ABSTRACT. Need for valuable experience and knowledge as well as support for graduates are the requirements of growth in societies. The purpose of the present research was to study the difference between the expected administrative and specialized skills of accounting graduates. This research was an applied study in which the data collected using a questionnaire and was analyzed using Mann-Whitney U test and Kruskal-Wallis one-way ANOVA. The population of the research consisted of auditors, financial statement preparers, and financial statement users. The results showed significant differences between the expected and the actual skills of graduates. Also group comparison suggested significant differences in terms of the expected skills, but no significant difference was observed between these groups in their actual skills.

Keywords: *expected skills, actual skills, accounting graduates*

JEL Classification: M41; M42; N25

1. Introduction

The education system as a dynamic and progressive institution is responsible to educate and guide human beings based on their social values and beliefs. Education is the key to the future and must be centered around forward-looking methods (Roudposhti and Taherabadi, 2010). The importance of knowledge and skills for graduates of different disciplines

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is unquestionable. Thus, the quality of education plays an essential role in training and cultivating people. Human beings must not be treated as inanimate objects; schools must educate humans, not merely as specialists, but as balanced individuals (Behayin, 2006). Today there is an ongoing competition for resources and capitals in large, industrial countries and the increasing advancement of these countries indicate how they drive the wheels of growth and development with the help of educated and specialized individuals.

Accounting has a six-thousand-year history and is regarded as the mainstay of the financial reporting system of all societies. Many definitions have been provided for accounting. Some call it an art, some call it a process, and others call it a service activity. Accounting knowledge has been imported to Iran and is more consistent with scientific advancements rather than the needs of the society, and the theoretical aspects of this field receive much more attention. Therefore, accounting students face many difficulties after graduation (Salehi, 2010). The gap between accounting education and its real-world application may suggest that accounting students either do not learn the state-of-the-art techniques of accounting or disregard the traditional aspects of the field that are used in practice. Studies have shown that complex mathematical concepts exist more in accounting texts than in the workplace (Beheshtian, 2008). Accounting education has been investigated both from the quantitative and qualitative perspective. From the qualitative perspective, historians have concluded that accounting education in first 65 years of the 20th century has centered on CPA examination. Then objectives expanded to such an extent that everyone came to believe that the role of accounting education is to create analytic thinking and to underline theory and philosophy (Behayin, 2006).

In the present research the gap between the expected and the actual general, administrative, and specialized skills of accounting graduates is examined from the viewpoint of auditors and financial statement preparers and users in Iran.

2. Review of Literature

In the majority of the studies, the researches maintain that educating the public about the objectives of an audit and the auditors' role and responsibilities will help to narrow the audit expectation gap. Hence, an attempt has been made in the present study to survey the literature available on the impact of education on narrowing the audit expectation gap.

A study on the effects of education on students' perceptions of the relative responsibilities of auditors and management and the reliability and decision usefulness of the audited and reviewed financial statements was conducted by Gay and Sullivan (1988). The survey was carried out among a group of auditors and three groups of students (second year financial accounting students at the beginning of the first semester, and third year auditing students at the beginning of the second semester (pre-auditing) and at the end of the semester (post-auditing)). They also analyzed the results by using the Mann-Whitney U-tests of comparison among the groups and between review and audit reports within each group. The results revealed that there was evidence of an expectation gap between the auditors and undergraduate commerce students in relation to both audits and review engagements.

There were significant differences between the auditors and students who had not completed an auditing course, auditors/reviewers' responsibilities, the reliability of audited/reviewed financial information, and the decision usefulness of the audited/reviewed financial statements. However, after completing their auditing course, the beliefs changed significantly. The results indicated that education might be an effective way to reduce the expectation gap.

Monroe et al., (1993) opined that the effects of education on the students' perceptions about the meaning of audit reports, duties and responsibilities of auditors, which examined the effects of professional education on the auditing undergraduate students' beliefs about the messages communicated through the audit reports in Australia. The first group consisted of final year undergraduate accounting students taking their auditing unit one and the second group consisted of marketing students who had not taken that unit. It was found that there were no differences between auditing and marketing students at the beginning of the semester about auditors' responsibilities. They believed that auditors had more responsibility and management had less responsibility for the prevention and detection of frauds, and safeguarding the assets. However, at the end of semester, the auditing students believed that auditors assumed a much lower level of responsibility, but there was little change in marketing students' beliefs.

Concerning the reliability factor, there were significant differences between both groups of undergraduates and auditors' viewpoints. The students believed at the beginning that the reports indicating financial

information were less reliable than did auditors. This supported the existence of an expectation gap. However, at the end of the semester, the auditing students believed that financial information was reliable. Regarding the prospects, both student groups held similar beliefs the same beliefs as did the auditors at the beginning of the semester; yet, at the end of the semester, auditing students' views changed significantly towards the belief that audit reports implied nothing about the future viability of the firm. Hence, the results implied that education was an effective approach to narrow the expectation gap. However, the study added that further research was needed to reveal the quantity and content of public education required to educate financial information users about the nature of auditing.

In another study, Monroe et al., (1994) reported that differences in perceptions between sophisticated users and auditors were smaller than those of unsophisticated users (in particular, shareholders and students) and auditors. Again they suggested education as a means to increase the sophistication level of user groups in order to reduce the audit expectation gap in Australia.

Pierce et al. (1996) examined the effects of education on the audit expectation gap in Great Britain. The study focused on the user-misunderstanding gap and the extent to which this gap could be narrowed through the provision of auditing education. The elements of user misunderstandings were investigated in this study: (i) duties, (ii) ethical and legislative framework, (iii) liability, and (iv) audit report. A survey was completed by five different groups of students at the start of the academic year and again at the end of the same year. The total number of completed responses received from the survey conducted at the start of the year and at the end of the year was 428 and 390 respectively. The statements in the questionnaire were designed on the elements of user -misunderstanding. The study revealed that the users who studied auditing showed evidence of a significant improvement in their understanding. However, the findings showed no improvement in understanding the regulations governing the auditor independence even by the auditing group. The central finding was that there was a significant reduction in misunderstanding of audit regulations by those students who had studied either a full course or a single module in auditing. Although other students achieved significant improvement in some specific areas, changes in their overall levels of understanding were considerably less than those achieved by the groups who studied auditing.

Gramling and Schatzberg (1996) conducted a survey among the auditors and undergraduate business students. Responses from the students were collected before and after they completed the auditing coursework. The students' perceptions were closer to those of the auditors after they completed the coursework, particularly about the roles and responsibilities of auditors, but signs of the expectation gap remained in areas pertaining to frauds. However, the gap was smaller than that before the students were about to start the audit coursework. Hence, audit education could still be considered as an effective way to reduce the expectation gap.

Ferguson et al. (2000) found that Canadian co-operative students had pre-scores on an expectation gap instrument that were closer to the practicing auditors than the pre-scores of Australian non-co-operative students, which they attributed to experience.

There were significant differences between the auditors and students who had not completed an auditing course about the auditors' responsibilities, the reliability of the audited financial information, and the decision usefulness of the audited or reviewed financial statements. After completing their course, the auditing students believed that the auditors assumed less responsibility for the soundness of internal control, maintaining accounting records, preventing and detecting frauds; management assumed more responsibility for producing financial statements; the auditor/reviewer was more independent; and the auditor/reviewer exercised more judgment in the selection of procedures than they did at the beginning of the course. These changes were in the direction of the auditors' beliefs indicating significant reduction in the expectation gap in relation to auditors or reviewers' responsibilities.

After finishing the auditing course, students believed to a greater extent that the auditor agreed with the accounting policies, and to a lesser extent that the entity was free from frauds. These changes were in the direction of auditors' beliefs indicating significant reduction in the expectation gap in relation to the reliability of the audited or reviewed financial statements. However, the auditors still had a significantly stronger belief that the audited financial statements gave a true and fair view and believed a significantly higher level of assurance was provided by the audit. All groups believed that an audit provided such a higher level of assurance that there were no material errors as in a review.

After the auditing course, students believed to a greater extent that reviewed financial statements were useful for monitoring the performance and making decisions. These changes were in the direction of auditors' beliefs indicating significant reduction in the expectation gap in relation to the usefulness of the reviewed financial statements. However, the students still believed that the limited or incomplete audit/review report meant that the entity was well managed.

The results indicated that education might be an effective way to reduce the expectation gap. However, several differences in expectations still existed. In addition, it must be remembered that it may not be practical to expect all participants to undertake the equivalent of an undergraduate auditing course. However, the importance of the accounting bodies retaining auditing as a prescribed subject for accreditation purposes for undergraduate tertiary degrees to help ensure that members of the accounting profession did not have misconceptions about the audit function was emphasized.

The study by Hussain (2003) regarding the expectation gap in Oman focused on auditors and the auditing process; auditors' role with respect to the audited financial statements; auditors' role with respect to the audited company; and auditors' responsibility towards the owners and creditors.

The questionnaire was administered among 35 students before taking auditing and after finishing it at Sultan Qaboos University in Oman. The results of this study showed that there were significant differences between the students before and after taking the course. It means the students before studying the subject were expecting highly from the auditors, while the same students after studying the subject had lower expectation from the auditors; therefore, education may reduce some degree of audit expectation gap.

The study by Siddiqui and Nasreen (2004) focused on identifying the existence of an audit expectation gap in Bangladesh. Students of accounting were chosen as a knowledgeable representative group of the society. Mail questionnaires were sent to the professional accountants and university accounting students. The questionnaire consisted of statements regarding three aspects (audit responsibility, audit reliability and decision usefulness of audited financial statements). The mean responses of the two groups were then compared. The audit expectation gap was found in all of the three aspects: perceptual differences being widest in the area of auditor responsibility. The findings of this study were indicative of a much wider expectation gap between auditors and other societal groups

in Bangladesh as these clusters possess lesser knowledge in auditing than do the students of accounting.

Chowdhury and Innes (1998) conducted the study on audit expectation gap in Bangladesh. This interview-based research explored whether or not an audit expectations gap existed in the public sector of Bangladesh between public sector auditors, members of the public accounts committee in the parliament and international funding agencies. The interviewees' responses revealed important differences between the public sector auditors and the audit report users in such important areas as auditor accountability, auditor independence, auditor competence, truth and fairness of the reported information and the role of the performance audit. It was found that auditors in the public sector provide information of mainly financial and compliance nature. However, users were more interested in management performance related information. Users believed that the reports were too long and irrelevant. The study also revealed that auditors believed that through their efforts, public interest was being protected, which was contradicted by the users. In the issue of audit independence, the government auditors believed that they were reasonably free from external influence. However, users believed that independence was hampered because of budgetary and administrative control by the Government, poor salary structure and status of public sector auditors, and auditor competence. The users groups expressed their dissatisfactions over the lack of auditing skills and training facilities. The study also identified a number of causes for such an expectation gap, namely independence from the ministry; absence of formal communications; scope of performance audit; format and contents of report; auditor's competence; objectives of audited entities; and timeliness of reporting. The study acknowledged that a number of perceived causes of the audit expectation gap were common to both the public and private sectors, such as fraud detection and auditor independence.

Similarly, a study on the impact of audit education on the perceptions of deficient auditors' performance was conducted by Boyle et al. (2005) to support the role that audit education can play in the reduction of the audit expectation gap. This study attempted to see whether exposure to auditing modules influenced the students' perceptions of the performance of duties by auditors. According to these authors, there was a lack of sufficient evidence available regarding the impact of audit education on the deficient performance gap. The study identified two areas of deficient performance, namely, auditor duties relating the

frauds and auditor duties relating the going concern. The objectives of the study were to investigate the impact of audit education on the deficient performance gap and to investigate the impact of audit education on the perceptions of deficient auditor performance when threats to auditor performance seemed to exist.

A survey comprising two parts (one part for each objective) was used to collect data on the impact of audit education on the perceptions of auditors' performance. The data were collected from three groups of students, each of whom was exposed to varying levels of audit education. The results indicated that there was a significant difference in perceptions of deficient performance between those who had received a full year or module of auditing and those who had not. It was also found that those classes with more audit education perceived audit independence threats to have a greater adverse effect on auditors' performance compared to those classes who had received less audit education.

Salehi (2010) and Paisey and Paisey (2009) examined the role of education in accounting and concluded that accounting graduates encounter many problems in real-world situations. They argued that accountants fail to put their knowledge into effective use because of their lack of understanding of the accounting profession and due to the gap between their knowledge and practice in the workplace. They further showed that a work placement period could serve as a very useful educational instrument in developing a range of skills in accounting students. Considering the evidence from the education system in the United States, Kaenzig and Keller (2011) argued that programs offered for professional development and out-of-classroom activities are the best opportunities for preparing students for the real world.

According to accounting practitioners, new educational methods are essential, while university professors believe that fundamental knowledge of accounting is of essence for accounting graduates. Thus, educators deliver this knowledge more vehemently, while it has been proven that the knowledge and skills delivered by universities are not efficient (Mojtahedzadeh, 2010; Lin et al., 2005). Ragothaman et al. (2007) and Blazey et al. (2008) argued that accounting graduates require general knowledge as well as technological, organizational, and commercial knowledge for succeeding in the current age. Mental skills from the perspective of accounting practitioners, and communication skills, accounting knowledge, and leadership capability from the perspective of educators are of utmost importance.

Ghadiri-Moghadam et al. (2008) studied the quality of accounting education in Iran and concluded that there are different perceptions of quality indicators and that the views of university professors are far away from what is seen in reality. Mashayekhi and Noravesh (2003) examined the views of accounting practitioners and educators and, while confirming the difference between the views of these groups, argued that problem-solving skills are the priority in accounting. However, it was shown that academics believe ingenuity to be the most important skill of an accountant, while practitioners consider professional attitude to be an essential element. Celik and Ecer (2009) examined the efficiency of accounting education in universities in Turkey and found that the delivered higher education was effective, but universities were using excessive resources for getting the output. Amen et al. (2010) examined the attitude of accounting students regarding the importance of oral communication skills in accounting in the beginning and at the end of their higher education program. They found that students enter the program with the purpose of preparing for the labor market and believe oral communication skills to be of little importance; however, their attitude toward these skills changes through the program. They concluded that most accounting graduates lack an important set of skills required for success in practical contexts. Supporting the theory of Brown and Hesketh (2004), Mehralizadeh and Armen (2007) showed that there is a mismatch between students' perceptions of employability and the demands of the labor market in Iran.

The major finding of the study was that the audit education appeared to create greater skepticism regarding the performance of existing duties by auditors. The perceptions of a deficient auditor performance augmented significantly for those students who were exposed to the greatest amount of audit education. The extent to which the deficient performance gap widened was directly related to the amount of audit education received. The authors justified this being as a different and contradicting finding when compared to the findings of the previous studies. The authors concluded that if the audit environment was perceived to be free from the various threats, then there was no reason to suggest that audit education would create perceptions of deficient auditor performance. The current study may give the strength since such gap may identify in Iranian situation. Further, the current study is the first study about the subject which conducted in Iran.

3. Methodology

The present research is descriptive-survey and the instrument is a researcher-made questionnaire. The population consists of accountants and financial statement preparers and users. The sample consists of 120 auditors employed in audit firms, 120 financial managers and heads of accounting of companies (as financial statement preparers), and 120 senior accounting students (as financial statement users). First, the expected and actual general, administrative, and specialized skills of accounting graduates are evaluated and then the differences are examined using Mann-Whitney U test and Kruskal-Wallis one-way analysis of variance.

Data collection

The required data was collected using a questionnaire that was comprised of two parts: (1) demographics including age, degree, graduation year, experience, major, and type of activity, and (2) questions of the research. Overall, 360 questionnaires were distributed among the participants and 300 usable questionnaires are collected. The demographics data is provided in Table 1.

Table 1.

Demographics data (including frequency and percentage)

Group	Degree		Major		Grad. Year		Experience		
Auditors	100	BSc	142	Accounting	237	30-45	7	Less than	110
	33.30%		47%		79%	yrs. ago	2%	5 yrs.	37%
Preparers	100	MSc	140	Management	38	20-30	9	5-10 yrs.	97
	33.3%		47%		13%	yrs. ago	3%		32%
Users	100	PhD	5	Economics	17	10-20	74	10-15 yrs.	54
	33.30%		2%		5%	yrs. ago	25%		18%
		Other	13	Other	8	1-10	210	More than	39
		4%		3%	yrs. ago	70%	15 yrs.	13%	
Total	300		300		300		300		300

Research hypotheses

The purpose of the present research is to examine the gap between the expected and the actual skills of accounting graduates. The research hypotheses are thus developed as follows:

H₁: There is a significant difference between the expected and actual general skills of accounting graduates.

H₂: *There is a significant difference between the expected and actual administrative skills of accounting graduates.*

H₃: *There is a significant difference between the expected and actual general specialized of accounting graduates.*

Hypotheses testing

The research hypotheses were analyzed sing Mann-Whitney U test, and by classifying the data with respect to the groups, the differences were evaluated (Tables 2 and 3).

Table 2.

Mann-Whitney U test statistics

Hypothesis	Skills	Sum of Ranks	Mean Rank
H1	Expected	124291	414.3
	Actual	56009	186.7
H2	Expected	115425	284.75
	Actual	64478	216.25
H3	Expected	124008	413.36
	Actual	56292	178.64

Table 3.

The results of Mann-Whitney U test

Hypothesis	Significance Level	z Statistic	U Value
H1	0.000	-16.08	10859
H2	0.000	-11.91	19724
H3	0.000	-15.95	11142

H₁: The results of Mann-Whitney U test show that the test is significant at the 1% significance level (Table 3). Thus, there is a significant difference between the expected and actual general skills of accounting graduates.

H₂: Table 3 shows that Mann-Whitney U test is significant at the 1% significance level. Thus, there is a significant difference between the expected and actual administrative skills of accounting graduates.

H₃: Data is Table 3 indicates that Mann-Whitney U test is significant at the 1% significance level. Therefore, there is a significant difference between the expected and actual specialized skills of accounting graduates. This suggests the gap between the specialized accounting courses and market demands.

4. Discussion

By analyzing the results of the comparison between the views of auditors and financial statement preparers and users (Table 4), the following were deduced: The results of Mann-Whitney U test suggest that there is no significant difference between the views of auditors and financial statement users in terms of the gap between the expected and actual skills of accounting graduates. While there is a significant difference between the views of auditors and financial statement preparers in terms of the expected skills of accounting graduates at the 1% significance level, there is no significant difference in their evaluation of the actual skills of accounting graduates. The results of Mann-Whitney U test showed that there is no significant difference between the views of financial statement preparers and users regarding the expected general skills of accounting graduates. There is also no significant difference between these groups in their evaluation of the actual general, administrative, and specialized skills of accounting graduates. However, significant differences were observed at the 1% level between the views of financial statement preparers and users regarding the expected specialized and administrative skills of accounting graduates (Table 4).

Table 4.

The results of Mann-Whitney U test for group comparisons

Groups	Hypothesis	Skills	Group	Sum of Ranks	Mean Rank	
Auditors and Users	H1	Expected	Auditors	9452	94.52	
			Users	10648	106.48	
		Actual	Auditors	9729	97.29	
			Users	10371	103.71	
		H2	Expected	Auditors	10197	101.97
				Users	9903	99.03
	Actual	Auditors	9950	99.50		
		Users	10150	101.50		
	H3	Expected	Auditors	9879.5	980.8	
			Users	10220.5	102.2	
		Actual	Auditors	9785.5	97.86	
			Users	10114.5	102.17	
Auditors and Preparers	H1	Expected	Auditors	8441.5	84.42	
			Preparers	116685.5	116.58	
		Actual	Auditors	10123.50	101.24	
			Preparers	9976.5	99.76	

Groups	Hypothesis	Skills	Group	Sum of Ranks	Mean Rank
Users and Preparers	H2	Expected	Auditors	8992	89.92
			Preparers	11108	111.08
		Actual	Auditors	10481	104.81
			Preparers	9619	96.19
	H3	Expected	Auditors	8494	84.94
			Preparers	11606	116.06
		Actual	Auditors	9970.5	99.70
			Preparers	10129.5	101.30
	H1	Expected	Users	9285	92.85
			Preparers	10814	108.14
		Actual	Users	10490	104.90
			Preparers	9609	96.10
	H2	Expected	Users	8908	89.08
			Preparers	11192	111.92
		Actual	Users	10651	106.52
Preparers			9448	94.48	
H3	Expected	Users	8878	88.78	
		Preparers	11222	112.22	
	Actual	Users	10137	101.37	
		Preparers	9864	98.64	

The results of Kruskal-Wallis one-way analysis of variance at the 1% level show that there is a significant difference between the views of auditors, financial statement preparers, and users regarding the expected skills of accounting graduates. However, no significant difference was found between the three groups in terms of the actual skills of accounting graduates (Tables 5 and 6).

Table 5.

Kruskal-Wallis one-way ANOVA statistics for group comparisons

Groups	Hypothesis	Skills	Group	Mean Rank	N
Auditors, Preparers, and Users	H1	Expected	Auditors	128.44	100
			Users	148.84	100
		Actual	Preparers	174.23	100
			Auditors	148.02	100
			Users	158.12	100
			Preparers	145.36	100
	H2	Expected	Auditors	141.39	100
			Users	137.61	100
			Preparers	172.5	100
			Actual	Auditors	153.81
			Users	157.52	100
			Preparers	140.188	100

Groups	Hypothesis	Skills	Group	Mean Rank	N
	H3	Expected	Auditors	133.24	100
			Users	140.48	100
			Preparers	177.78	100
		Actual	Auditors	147.06	100
			Users	153.54	100
			Preparers	194.44	100

Table 6.

The results of Mann-Whitney U test for group comparisons

Groups	Hypothesis	Skills	Sig.	z Statistic	U Value
Auditors and Users	H1	Expected	0.143	-1.46	4402
		Actual	0.433	-0.785	4679
	H2	Expected	0.719	-0.360	4753
		Actual	0.807	-0.244	4900
	H3	Expected	0.676	-0.417	4829
		Actual	0.597	-0.528	4735
Auditors and Preparers	H1	Expected	0.143	-3.93	3391
		Actual	0.857	-0.180	4926
	H2	Expected	0.010	-2.58	3942
		Actual	0.292	-1.054	4569
	H3	Expected	0.000	-3.81	3444
		Actual	0.846	-0.194	4920
Users and Preparers	H1	Expected	0.061	-1.86	4235
		Actual	0.282	-1.07	4559
	H2	Expected	0.005	-2.79	3858
		Actual	0.141	-1.47	4398
	H3	Expected	0.004	-2.87	3828
		Actual	0.141	-1.47	4398

Table 7.

The results of Kruskal-Wallis one-way ANOVA for group comparisons

Groups	Hypothesis	Skills	Sig.	df	χ^2
Auditors, Users, and Preparers	H1	Expected	0.001	2	14.29
		Actual	0.548	2	1.2
	H2	Expected	0.008	2	9.77
		Actual	0.330	2	2.21
	H3	Expected	0.000	2	15.24
		Actual	0.867	2	0.286

5. Conclusion

The present research investigated the gap between the expected and actual general, administrative, and specialized skills of accounting graduates from the perspective of auditors and financial statement preparers and users. The results indicated significant differences between the expected and actual skills of accounting graduates. Further, the results showed that there were no significant differences between the views of auditors and financial statement users regarding the expected and actual skills of accounting graduates. While there is a significant difference between the views of auditors and financial statement preparers in terms of the expected skills of accounting graduates at the 1% significance level, there is no significant difference in their evaluation of the actual skills of accounting graduates. The results of Mann-Whitney U test showed that there is no significant difference between the views of financial statement preparers and users regarding the expected general skills of accounting graduates. There is also no significant difference between these groups in their evaluation of the actual general, administrative, and specialized skills of accounting graduates. However, significant differences were observed at the 1% level between the views of financial statement preparers and users regarding the expected specialized and administrative skills of accounting graduates.

The findings of the present research are consistent with the results of Paisey and Paisey (2009), Salehi (2010), Kaenzig and Keller (2011), Mojtahedzadeh (2010), Lin et al. (2005), Ragothaman et al. (2007), Blazey et al. (2008), Ghadiri-Moghadam et al. (2008), Mehralizadeh and Armen (2007), and Mashayekhi and Noravesh (2003) who unanimously supported the inefficiency of accounting education for preparing the graduates for professional activities. However, the present findings are inconsistent with the results of Celik and Ecer (2009). In general, considering the results of the present research and the data from the literature, it can be argued that the current accounting education programs and courses lack the efficiency for transferring the required knowledge and skills to students. Thus, it is imperative to review programs and courses. According to the previous studies there is an expectation gap between users and auditors in different countries. So, it may leads to the Theory of expectation gap. We suggest that future research try to find strategies for reducing the current gap and provide models for improving the quality of education and delivery of courses in universities based on the views of accounting educators and practitioners.

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THE EFFECT OF DEMOGRAPHICS AND TRAVEL FREQUENCY ON THE RELATIONSHIP BETWEEN SERVICE QUALITY AND BRAND LOYALTY IN THE CASE OF TRADITIONAL TRAVEL AGENCIES

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ABSTRACT. The objective of the current paper was to analyze the relationship between service quality reflected by its five traditional dimensions (tangibles, reliability, responsiveness, assurance, and empathy), on one hand, and brand loyalty related aspects such as overall satisfaction, repurchase intention, recommendation intention, and actual recommendation (previous positive, negative or neutral word of mouth), on the other hand, and, moreover and especially, to investigate the influence of demographics (gender, age, education, and income) and travel frequency on the nature and intensity of the relationship, all in the context of traditional travel agencies. An online survey was conducted among a sample of 286 Romanians who travelled using the services of a traditional travel agency at least once during the last five years. In order to evaluate service quality, the SERVQUAL evaluation method was adopted and adapted. The results showed that even though gender does not generally have a significant effect neither on the nature nor on the intensity of the relationship between service quality and the loyalty related aspects analyzed, the intensity of the relationship is dependent on age, education, income, and travel frequency.

Key words: *Travel agency; Brand loyalty; Service quality; Demographics; Travel Frequency; SERVQUAL; Romania*

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1. Introduction

Due to the actual context of travel and tourism growth and development (according to WTTC, growing faster than manufacturing, retail, financial services and communication in 2012), the industry is now becoming more and more attractive and competitive. Therefore, price-based competitive strategies in this sector become obsolete, while quality is being recognized as a critical factor of competitiveness (Lewis, 1989), a great differentiator, and a powerful competitive weapon service organizations should strive to have (Berry et al., 1988). High service quality generates improved customer satisfaction (Johns et al., 2004). Moreover, service quality and customer satisfaction are significant determinants of customer loyalty (Cristobal et al., 2007; Cronin et al., 2000; Imrie et al., 2000), while loyal customers are likely to buy additional services, spread positive word-of-mouth, pay higher prices, and enhance service efficiency because of the experience curve effect (Reichheld and Sasser, 1990).

The goal of the current paper was to analyze the relationship between service quality and brand loyalty related aspects (satisfaction, repurchase, recommendation), and to investigate the influence of demographics and travel frequency on the nature and intensity of the relationship, all in the context of traditional travel agencies. A traditional travel agency is defined in this context as one which has a predominant offline activity, based on physical locations, staff directly interacting with customers, printed contracts and informational/promotional materials etc. Considering the fact that in Romania travel services and package tours can only be sold by travel agencies and that travel agencies are subject to strict national regulations, being obliged to obtain a tourism license issued by the state, most travel agencies in Romania have a predominant traditional activity.

2. Brief literature review

Due to the characteristics distinguishing services from physical products, service quality is a concept difficult to define (Radomir et al., 2012). One of the most popular approaches regarding the concept states that service quality is the consumer's judgment about an entity's overall excellence or superiority, an attitude, related but not equivalent to satisfaction, resulting from a comparison of expectations with perceptions

of performance (Parasuraman et al., 1988). Service quality can also be considered the extent to which a service meets customers' needs or expectations (Lewis and Mitchell, 1990; Dotchin and Oakland, 1994; Wisniewski and Donnelly, 1996). Measuring service quality can be done by evaluating the gaps between customer expectations and perceived service: as long as expectations are lower than the perceived performance, service quality is (at least) satisfactory, and the customer is satisfied (Parasuraman et al, 1985; Lewis and Mitchell, 1990; Shahin, 2006).

One of the most widely used methods for assessing service quality is SERVQUAL (Parasuraman et al., 1985, 1988). Starting from a model comprising ten quality attributes (tangibles, reliability, responsiveness, competency, courtesy, assurance, credibility, security, access, and understanding), its creators reduced the attributes to five: tangibles (physical facilities, equipment and appearance of personnel), reliability (ability to perform the promised service dependably and accurately, responsiveness (willingness to help customers and provide prompt service), assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence), and empathy (caring and individualized attention that the firm provides to its customers).

Customer satisfaction is another concept which is rather debated in the literature. Kotler and Armstrong (2012) define satisfaction as the post-purchase evaluation of products or services taking into consideration the expectations.

Naturally, higher service quality should increase customer satisfaction (Shahin and Janatyan, 2011). Analyzing the hotel industry, Mohajerani and Miremadi (2012) state that customer satisfaction depends on image, customer expectation, perceived value, and perceived quality, while satisfaction generates customer loyalty and a certain complaining behavior. Customer satisfaction and loyalty are strongly correlated in all service sectors, including the case of travel agencies (Horstmann 1998; Kobylanski, 2012; Campo and Jesús Yagüe, 2007). Highly satisfied customers of a travel agency are more likely to repeat purchases and to develop long-term commitment with the company, making recommendations to others and, thus, contributing to future revenues (Zairi, 2000; Anderson et al., 2004).

Along with service quality and customer satisfaction, brand loyalty is the third important concept upon which the current paper is based. Aaker (1991) considers that brand loyalty reflects how likely a

customer will be to switch to another brand, especially when that brand makes a change in price, product features, communication, or distribution programs. Moreover, Oliver (1999) states that loyalty is reflected by a commitment to rebuy a preferred product/service consistently in the future (repetitive same-brand or same brand-set purchasing), despite situational influences and switching behavior targeted marketing efforts.

Conceptually, loyalty can be seen as a tridimensional concept (Laroche et al., 2001): cognitive (willingness to choose an alternative perceived as better), affective (a positive brand attitude derived from satisfaction), and conative (repurchase intention). At the same time, loyalty can be approached as having two facets: behavioral and attitudinal (Moiescu and Vă, 2011). Attitudinal loyalty is reflected by cognitive, affective, and behavioral intent, while behavioral loyalty signifies the actual repeat buying behavior (Dick and Basu, 1994), or actual made recommendations.

3. Methodology

The objective of the current paper is to analyze the relationship between service quality reflected by the five traditional dimensions (tangibles, reliability, responsiveness, assurance, and empathy), on one hand, and brand loyalty related aspects such as overall satisfaction, repurchase intention, recommendation intention, and actual recommendation, on the other hand, and, moreover and especially, to investigate the influence of demographics (gender, age, education, and income) and travel frequency on the nature and intensity of the relationship, all in the context of traditional travel agencies.

A questionnaire based survey was conducted among a sample of 286 Romanian adults who purchased travel services or package tours from traditional travel agencies at least once within the last five years.

The data was collected online for a period of two months (March-April) in 2012, with the voluntary help of 42 master students, each of them disseminating and distributing the online link to the questionnaire by email and instant messages addressed to their own contacts, or by posting it within various online social and professional networks. Table 1 outlines the structure of the investigated sample considering respondents' demographics and travel frequency.

Table 1.*Sample demographics and travel frequency*

Age:		Highest graduated education level:		Gender:	
19-22 years	32	High-school	34	Male	104
23 years	35	Bachelor studies	157	Female	182
24 years	51	Master studies	84	Travel frequency (more than one day trips):	
25 years	26	PhD or higher	11		
26 years	23	Monthly individual net income:		Once a year	28
27 years	19			Under 1000 lei	65
28-29 years	19	1000–2000 lei	125	4-5 times a year	46
30-31 years	19	2001–3000 lei	42	6-10 times a year	44
32-34 years	21	3001–4000 lei	31	More frequently	92
35-39 years	17	Above 4000 lei	23		
40-50 years	24				

A traditional travel agency is defined in this case as one which has a predominant offline activity, within physical locations, with staff directly interacting with customers, often face to face, using printed contracts, and most often printed informational and promotional materials, offline payments etc. Travel agencies in Romania are subject to strict national regulations, each main agency and branch having to comply with several conditions and restrictions (regarding location, working space, staff qualification etc.), and to obtain a tourism license issued by the Romanian state. Due to this fact most travel agencies in Romania have a predominant traditional (offline) activity. Online sales of travel services and package tours and are a rather new business concept for both Romanian consumers and travel agencies, agencies with exclusive online activity being licensed by the Romanian state only from 2011.

In order to assess service quality the traditional SERVQUAL model was modified and adapted to the particular nature of services provided by travel agencies, 21 items being used in order to reflect the five classic dimensions of service quality: (1) tangibles – physical facilities, equipment, staff appearance; (2) reliability – ability to perform promised and advertised

service dependably, accurately; (3) responsiveness – willingness to help and assist customers, to provide prompt service; (4) assurance – staff competence, politeness, and ability to inspire trust; (5) empathy – customer care and understanding, customization, access. The items are outlined in Table 2.

Table 2.

Service quality items for traditional travel agencies

Tangibles	Modern equipment and facilities
	Documents and promotional materials appearance
	Agency staff appearance - clean, neat
	Outward appearance of agency – clean, neat, good condition
	Outward appearance of agency – esthetic look
	Inward appearance of agency – clean, neat, good condition
	Inward appearance of agency – esthetic look
Reliability	Providing services exactly as promised, in strict compliance with timeframes
	Providing services exactly as promised, for the first time, with no fixes needed
	Providing only high quality services to customers
Responsiveness	Agency staff being always available for helping/serving customers
	Agency staff communicating exact time frames of services or actions to help
	Agency staff delivering prompt service
	Agency staff quickly reacting to address any dissatisfaction/problem
Assurance	Agency staff inspiring trust and confidence
	Agency staff having a high degree of professionalism and knowledge in their field
	Agency staff being permanently courteous and polite
Empathy	Agency staff understanding of specific needs and wants of customers
	Agency staff showing genuine interest in customers and their needs
	Agency staff approaching each customer individually and customized
	Agency working hours being very convenient to customers

Initially, expectations were assessed for each service quality item using an extended Likert scale ranging from 1 = “strongly disagree” to 7 = “strongly agree” (e.g.: “In order for me to like it and consider it excellent, a travel agency should have modern equipment and facilities”). Secondly, perceptions were evaluated for each item using a scale ranging from 1 = “entirely false” to 7 = “entirely true”, asking respondents to relate to the travel agency from which they had made their most recent travel service or package tour purchase (e.g.: “The agency had modern equipment and facilities”). Finally, asking respondents to refer to the same travel agency, overall satisfaction was assessed on a scale from 1 to 5 (“Unsatisfied”, “Relatively/rather unsatisfied”, “Neither/nor”, “Relatively/rather satisfied”, “Satisfied”), while loyalty was depicted using three dimensions: repurchase

intention on a scale from 1 to 5 (“certainly not”, “probably not”, “don’t know”, “probably yes”, “certainly yes”), recommendation intention (idem), and previously made recommendation on a scale from 1 to 4 (“negative”, “none”, “neutral”, “positive”).

Gap-scores were computed for each item, while mean gap-scores for each of the five groups of items reflected the five classic dimensions of service quality:

$$G_{(i)} = \frac{1}{k_i} \cdot \sum_{j=1}^{k_i} G_{(ij)}, i = 1$$

$$G_{(ij)} = P_{(ij)} - E_{(ij)}$$

$$\left\{ \begin{array}{l} E_{(ij)} = \text{expectation regarding item "j" of dimension "i"} \\ P_{(ij)} = \text{perception regarding item "j" of dimension "i"} \\ G_{(ij)} = \text{gap score regarding item "j" of dimension "i"} \\ G_{(i)} = \text{mean gap score regarding dimension "i"} \\ j = 1..k_i; k_i = \text{number of items for dimension "i"} \end{array} \right.$$

As an appropriate metric to assess the internal consistency reliability associated with scores derived from scales, Cronbach's Alpha computed for the whole set of variables – expectations and perceptions – measuring service quality had a value of more than 0.9 (42 items; $\alpha=0.962$), suggesting an excellent internal consistency reliability. Moreover, the scales were not newly developed, but adapted and/or adjusted for our specific study regarding traditional travel agencies.

Given the main goal of the current paper and the specific case of traditional travel agencies, the following research hypotheses were formulated:

- $H_{1(ij)}$: Service quality dimension “i” has a significant and positive impact on loyalty related item “j”.
- $H_{2(ijk)}$: The impact of service quality dimension “i” on loyalty related item “j” differs among different “k” groups.
- $H_{3(ij)}$: The combined impact of the set of five dimensions reflecting service quality explains more than 30% of the variation of loyalty related item “j”.
- $H_{4(jk)}$: The variation of loyalty related item “j” explained by the combined impact of the set of five dimensions reflecting service quality differs among different “k” groups.

where:

- i = Tangibles / Reliability / Responsiveness / Assurance / Empathy;
- j = Overall satisfaction / Repurchase intention / Recommendation intention / Actual recommendation;

- k = Travel frequency / Demographics (Gender / Age / Education / Income).

Furthermore, in order to analyze the effect of demographics and travel frequency on the nature and intensity of the relationship between service quality, on one hand, and loyalty related items, on the other hand, the variables regarding age, education, income, and travel frequency were recoded into binary variables so that the sample of 286 items could be divided into sample groups large enough to support relatively significant bivariate correlation and multiple linear regression analyses within each sample group (Table 3).

Table 3.

Demographics and travel frequency variables recoding

Grouping variable	Compared sample groups	
Gender:	men (104)	vs. women (182)
Age:	19-25 years (144)	vs. 26-50 years (142)
Education level:	high-school or bachelor (191)	vs. master, PhD or higher (95)
Monthly income:	up to 2000 lei (190)	vs. more than 2000 lei (96)
Travel frequency:	2-3 times a year or less (104)	vs. 4-5 times a year or more (182)

Finally, in order to analyze the combined effect of the set of five service quality dimensions, taken as predictors, on loyalty related items, taken as dependent variables, and to estimate the amount of variance thus explained, several linear models were set, one for each loyalty related item (Figure 1).

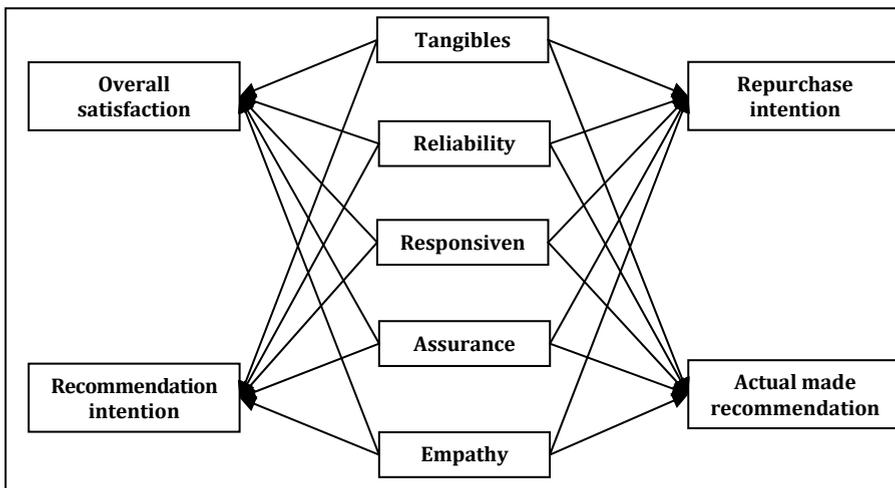


Figure 1. *Proposed models*

4. Results and discussion

In order to investigate the relationship between the dimensions of service quality, on one hand, and overall customer satisfaction, repurchase intention, recommendation intention and, respectively, actual recommendation, on the other hand (hypotheses $H_{1(ij)}$), and to test whether demographics and travel frequency have any sort of impact on this relationships (hypotheses $H_{2(ijk)}$), bivariate correlation analyses were conducted both considering the entire sample and the sample groups generated using the binary variable form of gender, age, education, income, and, respectively, travel frequency.

Table 4.

*Bivariate correlations between service quality dimensions and overall satisfaction (** = $p < 0.01$; * = $p < 0.05$)*

Grouping variable	Sample group	Pearson bivariate correlation coefficients				
		T	RI	Rs	A	E
	Entire sample	.267**	.540**	.503**	.457**	.462**
Gender	Men	.337**	.560**	.469**	.427**	.486**
	Women	.221**	.521**	.530**	.490**	.452**
Age	19-25 years	.210*	.421**	.433**	.458**	.423**
	26-50 years	.306**	.613**	.549**	.456**	.487**
Education	High-school / Bachelor	.254**	.534**	.507**	.470**	.471**
	Master / PhD or higher	.293**	.553**	.494**	.428**	.438**
Income	Up to 2000 lei	.346**	.586**	.577**	.568**	.554**
	More than 2000 lei	.084	.441**	.326**	.210*	.239*
Travel frequency	2-3 times a year or less	.218*	.447**	.494**	.474**	.341**
	4-5 times a year or more	.292**	.590**	.509**	.454**	.519**

(T=Tangibles; RI=Reliability; Rs=Responsiveness; A=Assurance; E=Empathy)

As results in table 4 show, all $H_{1(ij)}$ hypotheses are confirmed when “j” is “overall satisfaction”. Therefore, it might be said that each of the five dimensions of service quality has a significant and positive impact on overall satisfaction, the relationship being stronger in the case of reliability and responsiveness, and weaker in the case of tangibles.

The $H_{2(ijk)}$ hypotheses are entirely confirmed when “k” is “income”, and entirely rejected when “k” is “education”. Thus, the relationship between service quality and overall satisfaction is significantly stronger

within the lower income group (on all service quality dimensions), while there is no significant difference in the relationship when considering education based sample groups.

Moreover, in the case of men, the correlation between tangibles and overall satisfaction is stronger. Also, tangibles, reliability and responsiveness are more intensely correlated with overall satisfaction in the case of older respondents. Last, but not least, reliability and empathy are stronger correlated with overall satisfaction in the case of those who travel more often.

Table 5.

*Bivariate correlations between service quality dimensions and repurchase intention (** = $p < 0.01$; * = $p < 0.05$)*

Grouping variable	Sample group	Pearson bivariate correlation coefficients				
		T	RI	Rs	A	E
	Entire sample	.302**	.492**	.443**	.483**	.481**
Gender	Men	.293**	.472**	.401**	.460**	.501**
	Women	.305**	.499**	.467**	.504**	.479**
Age	19-25 years	.185*	.351**	.355**	.430**	.394**
	26-50 years	.384**	.579**	.502**	.516**	.538**
Education	High-school / Bachelor	.302**	.528**	.471**	.542**	.506**
	Master / PhD or higher	.300**	.413**	.379**	.344**	.426**
Income	Up to 2000 lei	.339**	.511**	.488**	.560**	.531**
	More than 2000 lei	.230*	.460**	.352**	.332**	.383**
Travel frequency	2-3 times a year or less	.249*	.357**	.378**	.483**	.475**
	4-5 times a year or more	.334**	.566**	.479**	.490**	.488**

(T=Tangibles; RI=Reliability; Rs=Responsiveness; A=Assurance; E=Empathy)

Table 5 shows that all $H_{1(ij)}$ hypotheses are confirmed when “j” is “repurchase intention”. Thus, each of the five dimensions of service quality has a significant and positive impact on repurchase intention, the relationship being less intense in the case of tangibles, as compared to the other service quality dimensions.

The $H_{2(ijk)}$ hypotheses are entirely confirmed when “k” is “age”, and entirely rejected when “k” is “gender”. Thus, the relationship between service quality and repurchase intention is significantly stronger within older respondents (on all service quality dimensions), while there is no significant difference in the relationship when considering gender based sample groups.

Also, the relationship between repurchase intention and service quality is significantly stronger in the case of lower educated respondents (except for tangibles), in the case of the lower income group (except for reliability), and in the case of those who travel more frequently (except for assurance and empathy in which cases there is no significant difference in the service quality - repurchase intention relationship if travel frequency is considered).

Table 6.

*Bivariate correlations between service quality dimensions and recommendation intention (** = $p < 0.01$; * = $p < 0.05$)*

Grouping variable	Sample group	Pearson bivariate correlation coefficients				
		<i>T</i>	<i>RI</i>	<i>Rs</i>	<i>A</i>	<i>E</i>
	Entire sample	.312**	.561**	.487**	.461**	.514**
Gender	Men	.344**	.563**	.453**	.456**	.507**
	Women	.291**	.555**	.514**	.480**	.540**
Age	19-25 years	.252**	.517**	.449**	.402**	.482**
	26-50 years	.355**	.594**	.518**	.503**	.536**
Education	High-school / Bachelor	.298**	.622**	.514**	.492**	.546**
	Master / PhD or higher	.347**	.435**	.434**	.395**	.447**
Income	Up to 2000 lei	.371**	.588**	.534**	.561**	.590**
	More than 2000 lei	.187	.508**	.392**	.253*	.339**
Travel frequency	2-3 times a year or less	.248*	.381**	.408**	.411**	.427**
	4-5 times a year or more	.347**	.655**	.527**	.488**	.559**

(T=Tangibles; RI=Reliability; Rs=Responsiveness; A=Assurance; E=Empathy)

Results summarized in table 6 suggest that all $H_{1(ij)}$ hypotheses are confirmed when “j” is “recommendation intention”. Thus, each of the five dimensions of service quality has a significant and positive impact on recommendation intention, the relationship being stronger in the case of reliability and empathy, and less intense in the case of tangibles.

Even though the $H_{2(ijk)}$ hypotheses are rejected when “k” is “gender” (the relationship between service quality and recommendation intention is similar in the case of men and women), there are several such hypotheses confirmed considering other demographics and travel frequency. Thus, the correlation between service quality and recommendation intention is stronger: within older respondents for tangibles and assurance, within lower educated respondents for reliability, assurance and

empathy, within the lower income group for all service quality dimensions except for reliability, and, respectively, within more frequent travelers for all dimensions except for assurance.

Table 7.

*Bivariate correlations between service quality dimensions and actual recommendation (** = $p < 0.01$; * = $p < 0.05$)*

Grouping variable	Sample group	Pearson bivariate correlation coefficients				
		T	RI	Rs	A	E
	Entire sample	.234**	.453**	.398**	.374**	.391**
Gender	Men	.231*	.436**	.372**	.328**	.401**
	Women	.233**	.460**	.419**	.428**	.408**
Age	19-25 years	.132	.324**	.296**	.314**	.312**
	26-50 years	.310**	.542**	.476**	.417**	.447**
Education	High-school / Bachelor	.240**	.497**	.410**	.414**	.432**
	Master / PhD or higher	.219*	.350**	.370**	.266**	.286**
Income	Up to 2000 lei	.295**	.486**	.444**	.453**	.463**
	More than 2000 lei	.106	.384**	.305**	.213*	.225*
Travel frequency	2-3 times a year or less	.201*	.295**	.333**	.388**	.318**
	4-5 times a year or more	.253**	.521**	.427**	.370**	.423**

(T=Tangibles; RI=Reliability; Rs=Responsiveness; A=Assurance; E=Empathy)

Finally, table 7 shows that all $H_{1(ij)}$ hypotheses are confirmed when “j” is “actual recommendation”, each of the five dimensions of service quality having a significant and positive impact on actual recommendation, the correlation being more intense in the case of reliability, and less intense in the case of tangibles.

Hypotheses $H_{2(ijk)}$ are entirely confirmed when “k” is “age” and, respectively, “income”. Thus, in the case of older respondents and, respectively, in the case of the lower income group, the relationship between actual recommendation and service quality is significantly more intense (on all dimensions). Moreover, the correlation is also stronger: within the lower educated respondents (for reliability, assurance and empathy), and, respectively, within more frequent travelers (for reliability, responsiveness and empathy).

Furthermore, multiple regression analyses were conducted both considering the entire sample and the sample groups generated using the binary variable form of gender, age, education, income, and, respectively, travel frequency, all in order to investigate the combined impact of the set of five dimensions reflecting service quality on loyalty related items

(tangibles, reliability, responsiveness, assurance, and empathy, as potential predictors, on one hand, and overall satisfaction, repurchase intention, recommendation intention and actual recommendation, as dependent variables, on the other hand) – hypotheses $H_{3(j)}$ – and to test whether demographics and travel frequency have any sort of impact on this combined impact – hypotheses $H_{4(jk)}$.

Table 8.

Multiple linear regressions for the proposed model regarding the relationship between service quality dimensions and overall satisfaction

Grouping variable	Sample group	Standardized coefficients					R^2	F-test result
		T	RI	Rs	A	E		
	Entire sample	-.050 p=.404	.344 p=.000	.151 p=.090	.094 p=.285	.059 p=.506	.319	26.25 p=.000
Gender	Men	.030 p=.769	.400 p=.005	.071 p=.598	-.045 p=.750	.175 p=.235	.333	9.772 p=.000
	Women	-.106 p=.162	.285 p=.007	.217 p=.080	.189 p=.102	-.009 p=.936	.328	17.192 p=.000
Age	19-25 years	-.054 p=.529	.151 p=.163	.105 p=.362	.250 p=.021	.136 p=.213	.269	10.180 p=.000
	26-50 years	-.101 p=.245	.550 p=.000	.229 p=.098	-.112 p=.442	.028 p=.851	.394	17.708 p=.000
Education	High-school / Bachelor	-.080 p=.294	.305 p=.004	.171 p=.124	.088 p=.428	.101 p=.369	.318	17.242 p=.000
	Master / PhD or higher	-.004 p=.971	.401 p=.004	.117 p=.449	.129 p=.389	-.008 p=.961	.330	8.761 p=.000
Income	Up to 2000 lei	-.051 p=.478	.253 p=.012	.176 p=.103	.177 p=.106	.125 p=.231	.403	24.797 p=.000
	More than 2000 lei	-.072 p=.528	.484 p=.001	.088 p=.578	.005 p=.973	-.114 p=.501	.210	4.771 p=.001
Travel frequency	2-3 times a year or less	.005 p=.959	.185 p=.163	.234 p=.149	.243 p=.148	-.107 p=.430	.278	7.538 p=.000
	4-5 times a year or more	-.072 p=.350	.429 p=.000	.074 p=.497	.026 p=.805	.158 p=.183	.364	20.133 p=.000

(Predictors: T=Tangibles; RI=Reliability; Rs=Responsiveness; A=Assurance; E=Empathy)

As it can be seen in table 8, $H_{3(j)}$ hypothesis is confirmed when “j” is “overall satisfaction”. The multiple regression model with all five predictors produced $R^2 = .319$, and therefore it might be stated that almost one third of the variation of overall customer satisfaction can be explained by the considered dimensions of service quality altogether. Nevertheless, only reliability significantly contributes to the model.

Regarding the effect of demographics and travel frequency on the relationship between service quality and overall satisfaction, hypotheses $H_{4(jk)}$ are confirmed when “k” is “age”, “income”, or “travel frequency”. Thus, the variation of overall satisfaction can be more widely explained by the considered dimensions of service quality altogether within the group of older respondents ($R^2=.394$ compared to .269), within the lower income group ($R^2=.403$ compared to .210), and, respectively, within the group comprising more frequent travelers ($R^2=.364$ compared to .278). It is also notable that in the case of younger respondents the service quality dimension which significantly contributes to the model is assurance, and not reliability.

Table 9.

Multiple linear regressions for the proposed model regarding the relationship between service quality dimensions and repurchase intention

Grouping variable	Sample group	Standardized coefficients					R^2	F-test result
		T	RI	RS	A	E		
	Entire sample	-.004	.263	-.020	.214	.142	.291	23.030
		p=.953	p=.002	p=.830	p=.018	p=.953		
Gender	Men	-.028	.226	-.028	.121	.282	.284	7.782
	p=.791	p=.117	p=.841	p=.414	p=.066			
	Women	.001	.279	-.040	.291	.078	.305	15.418
		p=.990	p=.010	p=.751	p=.014	p=.509		
Age	19-25 years	-.066	.103	.020	.288	.169	.221	7.843
	p=.455	p=.355	p=.869	p=.010	p=.134			
	26-50 years	.014	.406	-.050	.098	.168	.357	15.086
		p=.877	p=.002	p=.725	p=.515	p=.278		
Education	High-school / Bachelor	-.047	.277	-.052	.324	.115	.341	19.172
	p=.528	p=.008	p=.632	p=.003	p=.298			
	Master / PhD or higher	.103	.209	.000	-.047	.283	.222	5.077
		p=.354	p=.151	p=.998	p=.771	p=.104		
Income	Up to 2000 lei	-.023	.176	-.007	.322	.163	.345	19.390
	p=.758	p=.095	p=.949	p=.005	p=.138			
	More than 2000 lei	.016	.369	-.019	.095	.071	.182	5.241
		p=.889	p=.010	p=.902	p=.511	p=.674		
Travel frequency	2-3 times a year or less	.008	.048	-.098	.337	.255	.266	7.119
	p=.934	p=.718	p=.549	p=.047	p=.065			
	4-5 times a year or more	.006	.434	-.014	.198	.007	.342	18.257
		p=.943	p=.000	p=.904	p=.067	p=.954		

(Predictors: T=Tangibles; RI=Reliability; RS=Responsiveness; A=Assurance; E=Empathy)

As table 9 shows, $H_{3(j)}$ hypothesis is rejected when “j” is “repurchase intention”. The multiple regression model with all five predictors produced only $R^2 = .291$, and therefore, it might be stated that less than 30% of the variation of repurchase intention can be explained by the considered dimensions of service quality altogether. Though, reliability and assurance are the only dimensions that significantly contribute to the model.

Hypotheses $H_{4(jk)}$ are confirmed in all “k” cases, except for when “k” is “gender”. It can be stated that the variation of repurchase intention can be more widely explained by the considered dimensions of service quality altogether within the group comprising older respondents ($R^2=.357$ compared to .221), within the lower education group ($R^2=.341$ compared to .222), within the lower income group ($R^2=.345$ compared to .182), and, respectively, within the group containing more frequent travelers ($R^2=.342$ compared to .266).

It is also notable that in several demographic (as well as travel frequency) groups, either reliability, or assurance, loses its significant contribution to the model. For example, in the case of older respondents, lower income respondents and, respectively, more frequent travelers, only reliability significantly contributes to the model, while in case of younger ones, higher income ones, and, respectively, less frequent travelers, only assurance is a significant model contributor.

Table 10.

Multiple linear regressions for the proposed model regarding the relationship between service quality dimensions and recommendation intention

Grouping variable	Sample group	Standardized coefficients					R^2	F-test result
		T	Rl	Rs	A	E		
Gender	Entire sample	-.012 p=.843	.369 p=.000	.044 p=.613	.038 p=.657	.193 p=.028	.342	29.080 p=.000
	Men	.023 p=.824	.400 p=.004	-.002 p=.989	.018 p=.901	.200 p=.173	.342	10.169 p=.000
	Women	-.051 p=.496	.302 p=.004	.075 p=.539	.056 p=.620	.245 p=.033	.350	18.992 p=.000
Age	19-25 years	.005 p=.954	.303 p=.004	.074 p=.503	.062 p=.548	.208 p=.049	.316	12.777 p=.000
	26-50 years	-.039 p=.661	.453 p=.001	.014 p=.921	.021 p=.886	.175 p=.256	.367	15.762 p=.000
Education	High-school / Bachelor	-.074 p=.300	.472 p=.000	.023 p=.824	.026 p=.804	.201 p=.055	.406	25.292 p=.000
	Master / PhD or higher	.132 p=.226	.170 p=.232	.087 p=.592	.015 p=.924	.203 p=.232	.255	6.077 p=.000

Grouping variable	Sample group	Standardized coefficients					R ²	F-test result
		T	RI	Rs	A	E		
Income	Up to 2000 lei	-.010 p=.893	.295 p=.004	.005 p=.963	.139 p=.204	.264 p=.012	.406	25.158 p=.000
	More than 2000 lei	.004 p=.970	.463 p=.001	.134 p=.382	-.070 p=.621	-.018 p=.912	.264	6.473 p=.000
Travel frequency	2-3 times a year or less	.033 p=.752	.093 p=.496	.133 p=.428	.068 p=.697	.218 p=.126	.219	5.489 p=.000
	4-5 times a year or more	-.021 p=.769	.555 p=.000	-.023 p=.824	.034 p=.734	.138 p=.216	.438	27.422 p=.000

(Predictors: T=Tangibles; RI=Reliability; Rs=Responsiveness; A=Assurance; E=Empathy)

The results summarized in table 10 show that $H_{3(j)}$ hypothesis is confirmed when “j” is “recommendation intention”. The multiple regression model with all five predictors produced $R^2 = .342$, and therefore, it might be stated that more than one third of the variation of recommendation intention can be explained by the considered dimensions of service quality altogether. Reliability and empathy are in this model’s case the only dimensions that have significant contributions.

Also, hypotheses $H_{4(jk)}$ are confirmed when “k” is “education”, “income” or “travel frequency”. Thus, the variation of recommendation intention can be more widely explained by the considered dimensions of service quality altogether within the lower education group ($R^2=.406$ compared to .255), within the lower income group ($R^2=.406$ compared to .264), and, respectively, within more frequent travelers ($R^2=.438$ compared to .219).

It can be also emphasized that in some demographic (as well as travel frequency) groups, empathy loses its significant contribution to the model.

Table 11.

Multiple linear regressions for the proposed model regarding the relationship between service quality dimensions and actual recommendation

Grouping variable	Sample group	Standardized coefficients					R ²	F-test result
		T	RI	Rs	A	E		
	Entire sample	-.026 p=.690	.314 p=.000	.060 p=.528	.069 p=.466	.083 p=.387	.218	15.64 p=.000
Gender	Men	-.033 p=.769	.297 p=.051	.066 p=.649	-.077 p=.618	.225 p=.160	.211	5.255 p=.000
	Women	-.041 p=.613	.309 p=.006	.004 p=.978	.216 p=.079	.032 p=.796	.240	11.102 p=.000

Grouping variable	Sample group	Standardized coefficients					R ²	F-test result
		T	Rl	Rs	A	E		
Age	19-25 years	-.059 p=.525	.165 p=.160	.027 p=.827	.161 p=.166	.120 p=.308	.142	4.555 p=.001
	26-50 years	-.034 p=.715	.465 p=.001	.125 p=.399	-.067 p=.667	.060 p=.712	.300	11.655 p=.000
Education	High-school / Bachelor	-.059 p=.458	.377 p=.001	-.013 p=.910	.098 p=.397	.119 p=.307	.260	13.000 p=.000
	Master / PhD or higher	.039 p=.735	.164 p=.280	.246 p=.159	.002 p=.992	-.022 p=.904	.151	3.176 p=.011
Income	Up to 2000 lei	-.015 p=.848	.265 p=.018	.040 p=.734	.112 p=.354	.157 p=.175	.266	13.367 p=.000
	More than 2000 lei	-.023 p=.847	.383 p=.010	.108 p=.510	.033 p=.826	-.120 p=.492	.158	3.375 p=.008
Travel frequency	2-3 times a year or less	.036 p=.741	.045 p=.751	.026 p=.880	.295 p=.104	.037 p=.800	.156	3.616 p=.005
	4-5 times a year or more	-.037 p=.651	.459 p=.000	.038 p=.745	.004 p=.974	.063 p=.616	.274	13.301 p=.000

(Predictors: T=Tangibles; Rl=Reliability; Rs=Responsiveness; A=Assurance; E=Empathy)

Table 11 suggests that $H_{3(j)}$ hypothesis be rejected when “j” is “actual recommendation”. The multiple regression model with all five predictors produced only $R^2 = .218$. Less than one quarter of the variation of actual recommendation can be explained by the considered dimensions of service quality altogether. Nevertheless, just as in the case of overall satisfaction, only reliability significantly contributes to the model regarding actual recommendation.

Nevertheless, expect for when “k” is “gender”, hypotheses $H_{4(jk)}$ are confirmed entirely. Therefore, the variation of actual recommendation can be more widely explained by the considered dimensions of service quality altogether within older respondents ($R^2=.300$ compared to .142), within the lower education group ($R^2=.260$ compared to .151), within the lower income group ($R^2=.266$ compared to .158), and, respectively, within more frequent travelers ($R^2=.274$ compared to .156).

5. Conclusions, research limitation and future research directions

Considering the objectives of the current paper, the first conclusion to be drawn is that in the case of traditional travel agencies there is a significant and positive relationship between service quality reflected

by the five traditional dimensions (tangibles, reliability, responsiveness, assurance, and empathy), on one hand, and brand loyalty related aspects such as overall satisfaction, repurchase intention, recommendation intention, and actual recommendation, on the other hand. Reliability is the composite dimension of service quality which is the most correlated with all brand loyalty related aspects, tangibles being the least correlated.

Moreover, demographics and travel frequency have significant effects on the nature and intensity of the relationship between service quality and the loyalty related aspects taken into consideration.

Even though the relationship between tangibles (as service quality composite dimension) and overall satisfaction is significantly stronger within men, gender does not generally have a significant effect neither on the nature nor on the intensity of the relationship between service quality and the loyalty related aspects analyzed. Nevertheless, the intensity of the relationship between service quality and loyalty depends on age, education, income, and travel frequency. Thus, considering all loyalty related aspects (satisfaction, repurchasing, and word of mouth), there are several demographic and travel frequency segments among which the intensity of the relationship with service quality is significantly stronger in the case of traditional travel agencies: older travelers (above 25 years of age), travelers with lower income (up to 2000 lei individual monthly net income), travelers with lower education (no more than bachelor studies), and, respectively, travelers with higher travel frequency (4-5 times a year or more).

These findings have several practical implications for marketing travel agencies. The fact that the relationship between service quality, satisfaction and loyalty depends on consumers' demographics and travel frequency implies that travel agencies should not address their market homogenously, but rather try to segment it and adapt their service components to each targeted segment. More specifically, travel agencies which target older, poorer, lower educated and/or more frequent travelers should pay extra-attention to the five dimensions of service quality. Obviously, these implications are mainly relevant to Romanian travel agencies, given the specific sample investigated.

However, the current paper has some obvious research limitations, as well as some potential for future research developments. Some of the main limitations can be outlined as follows: firstly, the investigated sample only comprised Romanian customers, while the sampling method was

empirical and non-probabilistic, the nature of the research being rather exploratory; secondly, the data was collected online, limiting the sample only to those potential respondents who had access and were using the Internet; thirdly, the number of items considered as depicting each of the five service quality dimensions is reduced in comparison to the classic model, while the number of dimensions reflecting brand loyalty is rather limited. Moreover, not all specialists agree on the accuracy of considering gap scores as representative for evaluating service quality – the model could have been better focused on perceptions, rather than gap scores between perceptions and expectations (Cronin & Taylor, 1994). Another concern regarding the validity of the research could be the fact that the investigated population was set to comprise people who have used travel agencies at least once in the last five years, a time scale that could be considered too long to accurately extract experience elements from respondents' memory. Nevertheless, analyzing the sample's structure (Table 1), almost 99% of the sample consists of respondents who usually travel once a year (most of them even more frequently). Therefore, it is very probable that most of the respondents had used the services of a travel agency recently enough so as to accurately assess their most recent customer experience.

As future research developments, some of the directions could be outlined as follows: firstly, the data could be reanalyzed in order to investigate whether a model including only perceptions could be more explanatory for the variation in customer satisfaction and brand loyalty towards traditional travel agencies; secondly, a future data analysis could be better conducted by grouping service quality individual items differently, considering the fact that the traditional five-dimension grouping of service quality items might not be the most appropriate in the case of traditional travel agencies; last, but not least, the study could be revisited comprising a more diversified sample, using a more representative sampling procedure, and an offline collecting data procedure.

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TRANSFORMATIONS OF BUDGET DEFICIT BETWEEN 1980 AND 2012 IN POLAND

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ABSTRACT. A budget deficit finds itself among the issues most often discussed in the field of the public finance. A budget deficit is influenced by factors of a varied character. It can result from excessive budgetary expenditure on the militarization of economy, on developed state administration, transfers, public investments, or from the domestic and foreign debts service.

In Poland a budget deficit appeared for the first time in 1980 and since then has been an inseparable element of the Polish public finance. Thus the deficits in those times were of apparent character. They resulted from most of all a redistribution activity, which manifested itself in high grants. In the studied period of time the amount of the budget deficit both in the nominal terms and in the relation to GDP was changeable. Nevertheless, every year the state budget was closed with a budget deficit, apart from 1990, when a budgetary surplus appeared. It should be emphasized that the deficits of the 1980s in the relation to GDP were considerably smaller than those in the 1990s or in the first decade of the 21st century.

The aim of this paper is to describe the reasons for the occurrence of a budget deficit in Poland since the beginning of the 1980s and its relation to GDP in Poland until 2012.

Key words: *balance of budget, budget deficit, budgetary surplus, excessive deficit procedure, public finance crisis, fiscal policy*

JEL Classification: E62, H61, H68

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1. Introduction

Ensuring a balance between public revenue and public expenses is a basic element of public finance in each market economy. Both public revenue and public expenses, two opposing “poles” of a state budget, are cash flows. A balance between them indicates some synchronization between revenue and expenses. The flows width and the intensity of the payments for the budget funds disposers on the revenue side may differ from the flows on the expenses side. It results from the fact that a major part of expenses is of a fixed character. The fixedness has its connections with financing of the key public sector fields, which determine effective functioning of the state and thus of the society.

A balance of the budget means the need for a current and mutual adjusting of budgetary revenue and budgetary expenditure in such a way that ensures financial liquidity of the budget sector. In practice a full synchronization between revenue and expenses is really difficult to achieve, therefore we may observe an imbalance between revenue and expenses in the form of budgetary surplus or budget deficit (Ciak, 1997, p.38). In most countries a budget deficit occurs most often.

A budget deficit appears when expenditure exceeds accumulated revenue. Both deficits themselves and their consequences for economy have been and still are the focus of attention of economists, politicians and public opinion. Deficits are a phenomenon inseparable from currently passed budgets and they appear in many even highly developed countries (Ciak, 2002a, p.22). Currently, the negative influence budget deficits exert on economy is being more and more often emphasized. The negative evaluation of deficits has a long tradition and it has been thought for a long period of time that avoiding deficits is a healthy budgetary policy.

The aim of this paper is to describe the reasons for the occurrence of a budget deficit in Poland since the beginning of the 1980s and its relation to GDP in Poland until 2012.

2. Literature review and research method used in the paper

The main area of interest in extensive literature of the research subject are reasons of long-term budgetary disequilibrium and its consequences for economies and financial markets of analyzed countries or group of countries (in particular for the level of GDP, public debt, interest

rates, and current account balance), and influence of long-run budget deficits in one country on economies of economically related countries.

In addition, popular among researchers are i.a. issues connected with:

- 1) influence of public finance austerity plans on economies of analyzed countries or group of countries;
- 2) conditions necessary for budget discipline implementation;
- 3) reasons why budget projections in developed countries are over-optimistic.

Apart from the Polish literature of the research subject used in the paper in the first group of publications can be mentioned e.g. papers of Buiter (1983), Roubini and Sachs (1989a and 1989b), Ball, Elmendorf and Mankiw (1998), Ball and Mankiw (1995) or Bohn and Inman (1996) as well as more recent works of Friedman (2006), Reinhart and Rogoff (2009), Kumhof and Laxton (2009), Clinton et al. (2010), Baldacci and Kumar (2010), Devries et al. (2011) or the most recent of Cottarelli and Jaramillo (2012), Mauro et al. (2013) or Wyplosz (2013).

The influence of public finance austerity plans on economy is analyzed e.g. by Perotti (2011) and Jorda and Taylor (2013). Among the newest publications analyzing what is necessary to implement the budget discipline by policymakers to avoid menace of long-term budget deficits can be mentioned e.g. works of Brender and Drazen (2005 and 2008), Fabrizio and Mody (2008), Diaz Roldan and Montero Soler (2011), Debrun (2011) and Alesina, Carloni and Lecce (2013). Reasons why budget projections are over-optimistic are analyzed e.g. in Frankel (2011) and Frankel and Schreger (2012).

Descriptive analysis of statistical data in relation to GDP was used in the paper as the basic research method.

3. The reasons and effects of budget deficits

The analysis of the occurrence of deficits and their effects on economy needs to be started with two opposing views that are the views of classics and those of keynesists. According to classics a government should limit its expenditure to its tax revenue aiming at balancing the expenditure and the tax revenue. A deficit in time of peace was treated as fiscal irresponsibility. This reasoning was supported by the assumption

that a government is like a household, thus constant deficits constitute a threat of going bankrupt (Kamerschen, McKenzie and Nardinelli, 1990, p.325).

It was the theory of Keynes that challenged the theory of a balanced budget. It turned out that budget deficits do not have to be treated explicitly as a sign of a bad financial situation of a state, and sometimes they can be accounted for by stabilizing budgetary policy (Keynes, 1985; Kosterna, 1995, p.5). J.M. Keynes showed the positive aspects of budget deficits within stabilization of economic fluctuations. According to his theory, we should neither fear a budget deficit nor aim at wiping it out. He claims it should be allowed, in certain conditions even wanted. The level of a balanced income derived by means of a deficit is higher than the level to which it could be lowered without a deficit. Moreover, an increase of a budget deficit financed by means of an issue of securities makes it possible to eliminate excess savings. Government expenditure is financed through the sources that in other case would not be used for consumption or investments. In this situation government expenditure supplements insufficient personal expenditure, thus supporting aggregate demand and increasing the usage of production potential, and enable the increase of the future consumption and investments.

With low demand and high unemployment, a budget deficit does not generate current or future costs. On the contrary, causing the increase of global expenses a deficit leads to employing more people, generating higher revenue and producing more goods. Resources like people or equipment could be unused (Ciak, 1997, p.40).

Currently the Keynesian views are advocated by some economists; still the belief that a budget deficit is not beneficial for economy is sustained. It concerns especially a long term budget deficit. Such a situation contributes to worsening the general economic climate, causes insecurity, risks and high inflationary expectations. Many decision-makers in the field of public finance voice the opinion that in the present-day conditions any increase in the budget deficit will accelerate inflation (price increase), when its financing leads to the increasing of the amount of money, or will cause the so-called "*crowding-out*". Thus it will decrease the amount of loan for economy and consequently will contribute to slowing down the growth of the economic activity or to declining in it.

The necessity to balance arithmetically the state budget revenue and expenditure or generally the individual units of the public finance sector when a deficit appears involves the need to search for the ways of its financing, thus balancing the budget.

It can be stated that the abilities to finance the financial resources shortage are of various effectiveness. Thus dilemmas concerning the choice of the correct way according to the situation appear. Basically there are three ways to balance a budget. The first one concern the expenditure side of a budget, the second one the income side, and the third one the revenue side.

In the first case analyses are made: whether expenditure saving exists and where it can be found. In the second case it is checked whether there are real possibilities that enable introducing new fiscal burden, placing a bigger number of entities under the existing tax system or introducing additional tax rates on goods and services that have not been taxed. On the other hand using the state budget revenue becomes necessary when it appears impossible to balance a budget with the usage of the above mentioned ways. It must be considered that the amount of the budgetary revenue results from specific obligations of the state, including the necessity to finance the budget deficit. It is beyond doubt that the above mentioned abilities to balance the state budget and cover a deficit are of different character and influence the economic processes differently.

4. Budget deficits in the 1980s - the beginnings of the state budget shortages

A deficit appeared in Poland for the first time in 1980. It resulted from the expanding of the state budget expenditure at the beginning of the 1980s. But the deficits in those times were of apparent character. They resulted from most of all a redistribution activity, which manifested itself in high grants. The most meaningful were the specific subsidies on official prices in consumption, which did not cover the manufacturing costs, and also the specified-user subsidies paying for unprofitable enterprises (Ciak, 2002b, p.78).

The deficit was also being created with the increasing costs of specialized government services (the army, the police) and subsidies on investment financing, which, due to delayed investment project completion

dates, did not earn any money. Sometimes they caused inflation. In order to prevent the above expenditure from causing inflation and to limit assuming obligations in the National Bank of Poland, the budget put a bigger tax pressure on enterprises. It made it possible to reduce the budget deficit, but the reduction was of apparent character. Enterprises, in order to pay taxes and continue their activities assumed obligations in the same bank as the budget. The National Bank of Poland then, playing the role of a bank both of the central and commercial characters, with a debt load for the budget, was itself accumulating a deficit since the deposits of the enterprises and the population were insufficient for an increased crediting. In such a situation, the financial resources shortage could be eliminated only by an additional issue of money (without coverage). The additional issue went to the budget in the form of taxes as its income thus covering a part of its deficit. Therefore we saw a kind of a vicious circle (Ciak, 2002a, pp.40-41).

The government budget balances in Poland in the period 1980-2016 in relation to GDP are shown in the table 1.

Table 1.

The government budget balances in Poland in 1980 – 2016 (in relation to GDP)

Specification- years/balance	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Balance:	-1.0	-4.0	-3.6	-0.3	-0.7	-0.1	-0.1	-0.1	-0.1	-3.0
Years	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Balance:	+0.4	-3.8	-6.0	-2.8	-2.7	-2.6	-2.5	-1.1	-2.4	-2.0
Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Balance:	-2.2	-4.5	-5.1	-4.5	-4.7	-3.9	-2.4	-1.4	-3.7	-5.0
Years:	2010	2011	2012	2013*	2014*	2015*	2016*	-	-	-
Balance:	-5.7	-4.3	-3.9	-3.5	-3.3	-2.7	-1.6	-	-	-

Source: Statistical Yearbooks of the Central Statistical Office in 1980 - 1999, Council of Ministers reports on budgetary performance in 2000-2012, in 2013 - 2016 Convergence Program; updates April 2013.

The budget deficits in the 1980s were relatively small. Taking into account their relation to GDP, then they amounted to 0.1 – 0.7% of GDP, except for the years 1981 – 1982, when the deficit was respectively 4.0% and 3.6% of GDP (Owsiak, 1994, p.31) and 1989, which was considered exceptional because of the scale of the lack of regulation of the Polish economy (Ciak, 2002b, p.78).

5. Public finance crisis – the deficit in 1991 – 1992

After a small surplus of 0.4% of GDP that appeared in 1990, in the years that followed the budget deficits returned. The surplus turned into a big deficit of 3.8% of GDP in 1991. The main reasons were the lack of execution of budgetary revenues, particularly on account of income tax and dividends. The reason for that situation was among other things financial difficulties of state enterprises, on which the budget mostly based its revenue² (Ciak, 2002b, p.101). Another, all-important reason was the mistakes made on the stage of estimating the revenue side of the budget, which caused irrationality in the policy of budgetary expenditure cuts made mostly under the pressure of the situation in the budget. It leads to generating excessive obligations of budget entities. As indicated in reference books, the budget deficit in that year was a cyclical deficit (recession) and a structural deficit, and most of all a transformation deficit.

The deficit in 1992 was particularly serious when considering its relation to GDP. It almost doubled and amounted to 6% of GDP. In connection with such a high index, a significant change in the fiscal strategy of the state occurred. It resulted from unfavourable real processes in the Polish economy. In 1991 it was noticeable that the budgetary expenditure adjusted passively to the budgetary revenue, characterized by a downward trend, whereas in 1992 it was agreed that it was not possible to balance the budget despite a balance assumed in the budget bill for 1992. From a time perspective it can be stated that it was a display of realism in interpreting the economic processes.

The financial deficit that appeared between the budgetary revenue and the budgetary expenditure limited the possibility to perform basic functions by the state. The crisis then became so deep that it started to threaten the system transformations having a destabilizing influence on the economic, social and political situation of the country (Kosek-Wojnar, 1995, p.199). The period of 1991 – 1992 is considered the time of public finance crisis.

² So-called payment backlogs appearing between individual enterprises prevented the state budget from collecting taxes due.

6. The years 1993 – 1997 – a positive tendency in the budget deficit

Disciplining the state budget by limiting the budgetary expenditure (mainly that for annuities, pensions, unemployment benefits, family allowances, endowment and subsidies) and also by increasing the revenue by means of continuing the tax system reform led in 1993 to a reduction of the budget deficit (-2.8% of GDP, see Table 1).

Further limiting of the budgetary expenditure with increased incomes mainly from indirect taxes³, tax threshold freezing in individual income tax and freezing of depreciation charges in relation to the investments made before 1990 and also earning considerable incomes from the privatization of the state-owned assets contributed to a further reduction of the budget deficit and its relation to GDP. It must be emphasized that the activities that disciplined the budgetary expenditure were connected with a reduction of pensions in relation to the average wage by 9%, a limitation of the real wage in the public sector and a reduction of the current non-payroll expenses in the public sector. The introduced activities brought expected results. The budget balance improved (the budget deficit amounted to 2.8% of GDP). The improvement was accompanied by an upward movement of the economy, since 1993 was another year in which the rate of GDP real growth was positive⁴.

A similar tendency in the improvement of the budget balance appeared in the following years as well, i.e. since 1995 to 1997, when the deficit was respectively 2.6% of GDP, 2.5% of GDP and 1.1% of GDP.

7. The deficits at the end of the 1990s

The end of the 1990s observed a different tendency both in the economic growth rate and in the budget deficit growth rate. At that time a slow down in the significant economic dynamics appeared. There was a real GDP growth by 4.8% with respect to almost 7% in 1997. The budget bill itself was based on very careful macroeconomic assumptions. A lower

³ A new goods and services tax VAT was introduced, the excise duty, the provisional import levy of 6%, so-called tax on importation.

⁴ For comparison in 1990 the real growth rate of GDP amounted to 11.6%, in 7.0% and in 1992 I 1993 respectively 2.6% and 3.8%. Cf. *A report on budgetary performance for the period from 1st January to 31st December 1994*, Council of Ministers, Warszawa 1995, p.9.

rate of economic growth was calculated (5.6%). The budgetary policy was neither of expansive (the expenses were to increase slower than GDP, the deficit was to become reduced) nor restrictive (assumed a smaller income from taxes) character (Wernik, 1999, p.149). The actual execution of the budget bill showed that the assumed amounts of the revenue or expenditure were not achieved. It was partly the effect of the introduced changes in the functioning tax system. The rate of company tax was lowered from 38% to 36%, in the individual income tax each tax threshold was changed respectively: from 20%, 32% and 44% to 19%, 30% and 40%. The goods and services tax VAT and the excise duty were increased. It did not exert a significant influence on the state budget revenue. A similar tendency was observed in the budgetary expenditure. The level assumed in the budget bill was not reached. The public debt service expenditure, the Labour Fund subsidy and the specific provision were all lower than planned. The treasuries service expenditure⁵ and credits and domestic credit guarantee service expenditure exerted the most decisive influence on the public debt service expenditure (Ciak, 2002b, p.142).

The accumulated deficit was smaller than planned, but in connection with the smaller rate of GDP growth, its relation to GDP was 2.4%. It must also be mentioned that a change was introduced in the methodology of the state budget revenue classification. From 1998 current incomes generated by the privatization, included in the state budget revenue, were changed into privatization revenue, becoming one of the sources of financing the financial resources shortage.

To sum up, the characteristic qualities of the state budgets then were a significant contribution of fixed charges, excessive burdening of the economy with premiums like taxes, subsidizing of inefficient sectors and a faulty structure of public expenditure. The substantial budget deficit was also a disadvantage, since when it exceeds 3% of GDP, when the economic growth is weak, the state financial requirements may increase. In the previous years the high level of the budgetary expenditure was caused by among other things a high level of social expenditure, high costs of the public debt service and the existence of an extensive public sector. Extensive budgetary expenses were closely connected with the increase of the burden of taxation, which in the long run threatens the economic growth

⁵ A report on budgetary performance for the period from 1st January to 31st December 1998, Council of Ministers, Warszawa 1999, p.131.

and can contribute to the development of the parallel economy⁶ (Ciak, 2005, p.367). A high contribution of the social expenditure and the public debt service expenditure limit the state's possibility to support other vital public tasks that include the justice financing, military modernization, financing of pro-developmental expenditure, i.e. education, scientific research, higher education, infrastructure development, etc. (Ciak, 2012, p.201).

Looking at 1999 it must be noticed that when compared with 1998, a smaller budget deficit was accumulated, 2.0% of GDP, despite many obstacles both internal and external. Most socio-economic phenomena in Poland were under the influence of unfavourable external circumstances, i.e. the effect of the financial crisis in Russia in August 1998 and a lower rate of economic growth in the European Union member countries at the end of 1998 and the beginning of 1999, and the circumstances resulted in a slower rate of economic growth in Poland, especially in the first half of 1999.

It is worth emphasizing that the financial situation of the country then was rather stable despite financial difficulties in connection with the introduction of a number of economic reforms. A reform of the public insurance scheme and of the territorial self-governments was started. The introduction of additional two levels of a territorial self-government (districts and provinces) caused a reduction in the state budget revenue in 1999 in connection with the transfer of some of the revenue to the province self-governments and the district self-governments together with the increase of the contribution of communes in the central taxes (i.e. individual income taxes and company taxes). At the same time the state budget revenue was partly reduced by the expenditure connected with the health service reform. The changes in the revenue were accompanied by the changes in the budgetary expenditure. The health

⁶ In the reference books the parallel economy is explained in many different ways. It is connected with its hidden and unofficial character. According to the SNA-93 (System of national Accounts), parallel economy includes two groups of production: **an illegal one** – manufacturing products or providing services prohibited by the law or manufacturing products or providing services by unauthorized people; and **a hidden one** – manufacturing products or providing services whose manufacturing or providing is not illegal but the volume of the activity is deliberately in full or partially hidden from the state administration bodies or unobserving law regulations and neglecting the duties they impose (tax, payments, duties or social security contributions avoidance).

protection expenditure was decreased, as was the expenditure on the tasks entrusted to the district and province self-governments as their own tasks. It considered mainly the education expenditure, administration expenditure and social assistance expenditure⁷. From a time perspective it can be claimed that the introduction of such significant reforms influenced the further increase of expenditure, especially those in the forms of endowment and subsidies, which now constitute a significant part of the general budgetary expenditure.

In 2000 the execution of economic processes differed greatly from the forecast made in 1999, on which the whole calculation of the state budget revenue and expenses based. The main differences concerned first and foremost the rate of the economic growth, the rate of inflation and the structure of the GDP distribution. The differences mentioned above influenced the level structure of the budgetary revenue and expenses and also the government budget balance itself. The budget increased when compare with the one in the previous year and amounted to 2.2% of GDP.

Both the budgetary revenue and expenditure amounted to a level lower than the budget bill had assumed. The revenue derived from the indirect taxation, the individual income tax and the profit of the National Bank of Poland was lower than forecast, whereas the revenue derived from the company tax, dividends, duties and foreign earnings was slightly higher. Undoubtedly, the worse than predicted budget performance resulted in the inability to execute the expenditure in its full amount as forecast in the budget bill. It resulted in the necessity for the Minister of Finance to present the Council of Ministers a scale of the budgetary expenditure limitation so that the budget deficit as planned in the budget bill would not be exceeded. Cutting of the budgetary expenses was done in the last quarter (at the end of November and the beginning of December) and it concerned all of them.

It should also be emphasized that in 2002 the real costs of the reforms started to manifest themselves, especially of the retirement reform started in 1999. There is no doubt that the burden of the reform did influence the conducted policy. In practice it was noticeable that a part of the reform costs was shifted to other segments of the public finance sector. The Social Security Fund became a special segment in this field. Undoubtedly, such activities artificially understated the state deficit.

⁷ A report on budgetary performance for the period from 1st January to 31st December 1999, Council of Ministers, Warszawa 2000, p.112.

Surely, such a policy could not be further conducted without any effect on the real situation in the state budget, and the first symptoms manifested themselves in the following year.

8. Further increase in the budget deficit in 2001 – 2004

The greatest widening of the deficit started from 2001. In this year the deficit increased more than two times. It resulted from first and foremost a small revenue dynamics and a significant and increasing expenditure dynamics, which consequently meant a difference in the dynamics index amounting to about 11 percentage points. The reference books also indicate other factors that caused the imbalance. Firstly, an increase of the budget deficit by 5 billion zloty planned in the budget bill, which resulted from the necessity to manage the pension liabilities from 2000 (in 2000 the pension adjustment index was understated). Secondly, the necessity to pay banks the outstanding commitments due to building society books and interest on mortgage guarantees. Thirdly, the mistakes made on the stage of planning, particularly the issue of conducting of deliberate budgetary policy allowing the increase of the budget deficit (Wernik, 2007, pp.207-209). Taking into account the data from table 1, the budget deficit in 2001 increased more than two times when compared with 2000.

The imbalance in the state budget increased again in 2002; the increase was not that dramatic as in the previous year, but it indicated a continuing tendency for the deficit to widen. The increase was not significant, but it can be stated that the index in relation to GDP was second largest taking into account the started process of the system transformation in Poland. Surely, the enormous imbalance did not come as a surprise. As early as during planning the budget it was said that the deficit can grow till about 90 billion zloty, which could amount to 10% of GDP. It was colloquially called "Bauc's gap"⁸ (Jankowiak, 2003).

⁸ The concept was named after the contemporary Minister of Finance Jarosław Bauc, who in the summer of 2001 presented the assumptions of the draft budget for 2002. They proved shocking because of the shortage of financial resources and the suggested recovery plan. The problems with interpreting the budgetary assumptions project resulted from the fact that it was not in the strict sense a plan of state revenue and expenditure, but rather variant scenarios of the fiscal policy development. Thus the amount of the official central budget deficit oscillated between 35 and 88 billion zloty.

Another solution was then so-called “Belka’s rule”⁹ (Jankowiak, 2003). It was to discipline the budgetary expenditure by determining an indicator of maximum growth of expenditure on the level if inflation increased by 1 percentage point. It could only slow down the fast speed of the deficit increase. In practice the rule was not basically followed (Józefiak, Krajewski and Mackiewicz, 2006, pp.60-62).

2003 brought a temporary decrease of the budget deficit, which amounted to 37 billion zloty, and was limited to 2.4 billion zloty only and a decrease in relation to GDP by 0.6 percentage point. An economic recovery started and it contributed to a small increase of the budgetary revenue with a steady increase in the budgetary expenditure.

In 2004 a growth of the real budgetary deficit to the level of 41.4 billion zloty was noticed. In relation to GDP it amounted to 4.7%, thus a small increase appeared here as well. In this year a change in the way the budget expenditure was recorded was introduced for the first time, which consequently influenced the showed real state budget deficit. It can be claimed that the accounting records in the state budget that showed some of the outgoings from the state budget as outflows and not budgetary expenditure made it difficult to estimate the actual situation of the state budget. The accounting records take place even today. An example can be the supplementary financing of the Social Security Fund, the biggest of all the systematic funds in Poland¹⁰ (Piotrowska-Marczak, 2006, pp.24-25). Since 2004 the endowment for the Social Security Fund for the reimbursement of contributions to Open End Pension Funds have

⁹ The concept was named after the contemporary undersecretary of finance, who in 2002 presented an independent project of the budget bill. Belka prepared an emergency budget, which was to protect us from falling into the above mentioned Bauc’s gap, but it was not a budget of the public finance sector reform. It was mainly about waiting a year avoiding a fiscal catastrophe. The first decision of the new government was blocking expenditure on the level of 8.6 billion zloty. The savings proved insufficient. The most pessimistic scenario of the loss of revenue prepared by Bauc was increased by 3 billion zloty. Predicting the revenue amounting to 141.4 billion, the government decided to increase the deficit by about 4 billion. The catastrophic budget in 2001 had to be amended again. It was assumed that a part of the resources from the amendment would be used to pay the budgetary commitments (as items of among other things warrant premium refunds, additional payments to mortgages interest, health insurance for the unemployed contributions). As many works show, it was only bluffing. Belka’s rule was to be introduced in 2003, but its author gave up on the changes he had put forward at the moment he became the Ministry of Finance.

¹⁰ The Social Security Fund is a fund whose resources are in part (26%) an aid from the national budget.

been excluded from the budgetary expenses, which resulted in just formal decrease of the state budget deficit. For example, if it had not been for the above measure, the total amount of the state budget deficit with the amount of the reimbursement of contributions to Open End Pension Funds would have amounted to 52 billion zloty, which in relation to GDP would have been the amount similar to that in the recessionary 1992. In practice it amounted to 4.7% GDP.

Lowering subsidies in 2004 and in the years that followed resulted from the change in the way the public insurance scheme reform was financed. From that year the financial resources for that reform were recorded as outgoings and not the state budget expenditure. Although in fact the expenses were borne, they did not increase the real state budget deficit. The effect of the state of affairs was a debit balance in the privatization revenue disposition, which required financing with the treasuries issue, which in turn generated another loan requirement of the state, thus creating a government debt.

To sum up the above points, it can be stated that in the 2001 – 2004 the deficit was of a typically transformational character. The reference books list the factors that exerted the biggest influence: the beginning of the system reforms, which revealed and caused a rise in the costs of their implementation; the issues connected with the settlement of liabilities in connection with insufficient endowment from the state budget; an economic slowdown (1.2% in 2001 and 1.4% in 2002) together with a succeeding process of disinflation. Moreover, Poland joining the European Union on 1st May, 2004 had a significant influence, as it on one hand meant significant revenue from the EU budget for the state budget as an item of resources from the structural funds, and on the other hand it was a security of the national part of the contribution to the projects and programs executed with the help the union resources. Additionally, the necessity to spend some money from the state budget in the form of the membership fee for the EU budget meant a significant burden of the state budget. The reform of the territorial self-government revenue, particularly the bigger contribution of the self-government's levels in the central taxes (i.e. individual income taxes and company taxes) constituted a similar burden. Despite the increase of the contribution, the expenditure resulting from the cash flow for the territorial self-government on account of endowment and subsidies was not limited (Owsiak, 2006, pp.699-703).

Undoubtedly, the beginning of the four system reforms, among them the pension reform and the self-government reform, solidified the structural character of the budget deficit. As it is often indicated in the financial literature, the reforms were often unfinished in all details with regard to the concept and unsecured financially. Additionally, apart from a badly conducted policy of “cooling down the economy”, the issue of periodicity of economic processes, which influence the financial possibilities of the state, was overlooked on the stage of shaping and then implementing the above reforms. One might venture an opinion that Poland was not prepared to introduce four such significant reforms at the same time, as they meant significant financial costs (Owsiak, 2006, p.700).

At the same time *Program naprawy finansów Rzeczypospolitej*¹¹ (Kołodko, 2004) was drafted, whose author was the contemporary deputy prime minister and the Minister of Economy and Labour Grzegorz Kołodko. The program was executed to only a small extent unfortunately.

The difficult situation of the state budget forced the official authority to try to limit the budget deficit. Unfortunately, the majority of the planned activities did not bring the expected results or were not put into practice. For instance, from *Program naprawy finansów Rzeczypospolitej*¹² (Kołodko, 2004), only the plan concerning the reduction of direct taxes was implemented, and many of the suggested solutions aiming at a reduction of the budgetary expenditure were not applied.

¹¹ The plan had three parts.

- The first part considered the economy, first of all the restructuring of the Polish National Railways (400 million zloty), the restructuring of the coal mining (380 million zloty a year), the financial restructuring of the public health care centres (250 million zloty), the liquidation of inefficient systems of additional payments (70 million zloty) and the change in the rules of financing the military needs of Poland (1.26 billion zloty in 2005).
- The second part concerned activities in the administration and also expenditure and revenue of the state budget. The savings were to concern among other things a reduction of workplaces in the administration (54.6 million zloty) and limitations in using company cars (5 million zloty). Those two areas were to bring savings of 20 billion zloty by the end of 2007.
- The third part was a reform of the state social expenses, mainly in the employee social insurance fund and agricultural social insurance fund (KRUS) and also in the system of aid for disabled people. The savings in this area were to amount in 2007 to 12 billion zloty (in the years 2004 – 2007 they were to amount to 30 billion zloty).

¹² The program aimed at reforming the financial system in Poland and improving Poland's economic situation. The maintaining of the high rate of economic growth for a longer period of time was the priority.

9. The deficit stabilization in 2005 – 2007

In 2005 – 2007 the growth processes in the budgetary deficit slowed down. Undoubtedly, a good economic trend was of a significant meaning in this aspect. Additionally, steps were taken in the tax system, particularly in the goods and services tax (VAT) and in the excise duty and small changes in the income tax (PITa and CITs) were introduced.

In the budget of those years a high budgetary dynamics on the level of 110% a year could be observed. At the same time, the budgetary expenditure grew at a reasonable speed, which ensured a favourable balance between those two figures. The budgetary deficit in 2005 amounted to 28.4 billion zloty, which with a favourable economic trend resulted in the deficit amounting to 3.9% of GDP. The situation was similar in the following 2006 year.

A good situation of the state budget in 2007 resulted mainly from suitable conditions, including a good economic trend. Favourable trends in the budgetary revenue as well as a significant decrease in the expenditure dynamics became an indispensable condition for the budgetary deficit to decrease¹³. The decrease in the expenditure dynamics, and thus in the relation to GDP, did not result from the system reforms, but rather from the occurrence of factors that could be assumed to be incidental. Moreover, an important role here was played by the decrease mainly in the social expenses dynamics (they grew only by 4.9% in 2007 compared to 6.6% in 2006) but it resulted mainly from the lack of the pension adjustment. Undoubtedly, the adjustment is inevitable and its lack in 2007 influenced the expenditure dynamics in 2008. Thus, notwithstanding the cause of the expenditure level, the public finance deficit decreased considerably to 1.9% of GDP (the budgetary deficit itself amounted to 1.4% of GDP). It was the first significant limitation of the deficit since Poland had joined the European Union¹⁴ (Wernik, 2009, pp.61-62).

¹³ In 2007 the budgetary expenditure grew by only 6.7% when compared with 2006, whereas in 2006 when compared with 2005 it grew by 8.9%. Cf. *Council of Ministers reports on budgetary performance in 2006 – 2007*.

¹⁴ In connection with the relation of the deficit amounting to below 3% of GDP, the Council of European Union on 8th July, 2009 decided to finish the excessive deficit procedure for Poland, which was introduced on 5th July, 2004.

10. The trends of the budgetary deficits after 2007 and the budgetary deficit in the time of crisis

The second half of the first decade of the 21st century started to be considered the time of crisis. It was clearly seen in the second half of 2008, whereas the beginning of 2009 brought its reinforcement. The Polish economy started to feel the effects of the world crisis, especially when its fundamental symptoms are taken into account:

- 1) a decline in the industrial production
- 2) a reduction of employment in enterprises
- 3) decreasing wage development
- 4) a decrease in the state budget revenue
- 5) a growth in the deficit of the whole public finance sector, generated by the state budget deficit

But despite the crisis, in the first quarter of 2008 Poland reached the growth level of 1.9%, the calculations of the European Union were slightly lower and amounted to 1.3%¹⁵. It was smaller than the economic growth from the previous years. Zloty was still very weak, which also influenced the situation of the whole financial system, the budgetary system including.

In 2008 the deficit grew significantly and reached the level of 3.9% of GDP. It cannot be considered to be a result of a weak market, since the GDP dynamics was still high. Many studies indicate that the main reason was an irresponsible fiscal policy of the previous government, which as early as in 2006 made a few decisions that resulted in a reduction of the public revenue. The decisions concerned the following issues:

- Firstly, as an item of the individual income tax, family reliefs were introduced, thus reducing the budgetary revenue by 5.4 billion zloty;
- Secondly, the pension insurance contribution was reduced (from 13% to 6%), which in 2008 brought about a reduction of the revenue by over 20 billion zloty;
- Thirdly, changes were introduced in the tax progression, in the individual income tax. Instead of the three tax thresholds of 19%, 30% and 40%, two were introduced: 18% and 32% (they started to be applicable in 2009). Simultaneously, as conducted research and simulations indicate,

¹⁵ *With such a deficit we will not let you into the Euro area*, an interview with J. Almunia, the Union Commissioner for the economic and currency affairs, *Rzeczpospolita*, 133 (8339), 8th June, 2009, pp.28-29.

only 1% of taxable persons were taxed with the tax of 32%. In connection with the above, the negative profit on this ground was estimated as about 8 billion zloty¹⁶.

The budget deficit amounting to 5.0% of GDP in 2009 and to 5.7% of GDP in 2010 showed that the situation of the Polish public finance had deteriorated. It meant that both the budgetary revenue and expenditure were determined and will be in the coming years by factors of macroeconomic character and by introduced system changes. At the same time in 2009 the Economic and Financial Affairs Council (Ecofin) stated that the deficit in Poland is alarming and recommended its wiping out till 2012 the latest¹⁷.

In connection with the above, consolidating actions were undertaken and they contributed to a slow improvement of the government budget balance. The Budgetary deficit in relation to GDP was getting reduced (in 2011 it amounted to 4.3% of GDP, and in 2012 to 3.9% of GDP). Among the expenditure actions that influenced the limitation of the expenditure by 2.3% of GDP the following must be mentioned:

- introduced in 2011 a disciplinary rule¹⁸ whose role was to limit the rate of increase of the discretionary expenses (flexible ones) and the new fixed expenses to 1% realistically annually;
- the reduction of the early retirement privileges;
- a limitation from 2011 of wages funds in the state budgetary units by means of a general rule of its freeze on the nominal level from the previous year;
- current (modified in 2009) rules for the territorial self-government units, i.e.
 - a rule of at least balanced current result as described in article 242 of the Law on Public Finance (since 2011);
 - individual debt limit – described in article 243 of the Law on Public Finance (from 2014 – the limit will be calculated according to a three-year moving average, for the first time for the years 2011 – 2013);

¹⁶ Cf. Council of Ministers reports on budgetary performance in 2008 – 2009.

¹⁷ Among other things by a reduction of the structural deficit (so-called fiscal effort) by at least 1 and ¼ percentage points of GDP on average in 2010 – 2012. More: *Convergence Program. Update 2013*, The Republic of Poland, Warszawa, April 2013, p.4.

¹⁸ Article 112c of the law on *Public Finance* passed on 27th August, 2009, the Official Journal of Law 157, item 1240.

- a periodic (at the time when Poland is liable to the excessive deficit procedure) ban on introducing by the government bills that could result in the reduction of the public finance sector units revenue in relation to the amounts arising from the binding regulations and projects causing increasing expenditure (article 112c of the law on Public Finance);
- a limitation in 2011 of the funeral receipt to 4000 zloty.

The most important actions for the budgetary revenue were the following:

- a limitation of a part of the pension insurance contribution transferred to Open End Pension Funds (OFE). The part transferred was reduced in May 2011 from 7.3% of basis of assessment to 2.3%;
- an increase of VAT from 22% to 23% and from 7% to 8% and a simultaneous decrease from 7% to 5% on basic foodstuff (since January 2011);
- an increase in the disability pension contribution chargeable to the employer by 2 percentage points (since February 2012);
- a limitation of the possibility to deduct VAT calculated on purchasing passenger cars with the type approval for goods vehicles and petrol for their driving (since the beginning of 2011);
- freezing of the scale in the individual income tax (on the nominal rate from 2009);
- the abolition of the allowance for the excise tax on bio components;
- an increase in the excise tax on cigarettes (every year since 2010);
- an increase in the excise tax on diesel oil and in the petrol fee (since January 2012);
- changes in the bank deposits profits tax limiting the possibility to avoid the tax (introduced in 2012);
- introducing a fee for using some of the natural resources (tax on the exploitation of some mineral resources¹⁹: copper and silver since April 2012)²⁰.

¹⁹ Cf. the law passed on 2nd March, 2012 *on the tax on the exploitation of some mineral resources*, the Official Journal of Law 2012, item 362.

²⁰ *Convergence Program. Update 2013*, The Republic of Poland, Warszawa, April 2013, pp. 13-14.

It is worth emphasizing that the worsening economic conditions around Poland contributed to the lower rate of economic growth of the country, which caused a significant change of the macroeconomic conditions. The lower rate of economic growth manifested itself clearly in the slower rate of the increase of the budgetary revenue, particularly the tax revenue (influenced by of the automatic stabilizers). Moreover, the slowdown was so significant that in view of significant budgetary expenditure the budget deficit could not be lower than 3% of GDP in 2012. The amount was a condition Poland had to meet so that the excessive deficit procedure was no longer applied from 2013²¹. In such a state of affairs Poland was given another two years to improve the budget balance (and first of all the general government balance).

Taking into account the forecasts for the budget deficit in the following years (2013 – 2016), it can be noticed that its considerable limitation is planned, so that in 2016 it will not be higher than 1.6% of GDP (see table 1). Time will tell whether the plan is realistic, especially that this year the situation in the state budget is not satisfactory. The first months of 2013 indicated some mistakes made on the stage of planning the state budget and thus the revenue amount was assumed too optimistically. More and more often the necessity to introduce a budget amendment is indicated. It is estimated that there will be a shortage of additional 24 billion zloty in the state budget²² (Sofuł, 2013).

In order to achieve the planned limitation of the budget balance in the following years, significant changes in the tax system are necessary, namely in the indirect taxes – the goods and services tax (VAT) and the excise tax, which constitute the basis of the state budget revenue (about 60%); abolition of some allowances both in the VAT and in the direct taxes. In the case of the individual income tax (PIT) – from 2014 on the

²¹ The procedure was included in the item 126 of the Treaty on the European Union. According to its rules, *'The member countries avoid an excessive deficit'* (item 126.1). The European Commission was granted the rights to control the budget situation and the level of the government debt in the member countries in order to discover possible mistakes when executing the budgetary Policy (item 126.2 TFUE). The procedure is used in a member country if the *general government* deficit (i.e. of the government and self-government bodies) exceeds 3% of GDP.

²² The Polish government to suspend the Law on Public Finance in order to increase the deficit in this year's budget. As economists indicate it is not the best solution but the government did not have much freedom for maneuver in this issue.

Internet allowance is to be limited, and in the case of the company tax (CIT) – from 2014 on limited joint-stock partnerships, and from 2015 on also limited partnerships, are to be taxed. Additionally, exclusion of the right to get a tax exemption on dividend payments and other income (revenue) from profit sharing of legal persons that are deducted in the company paying the dividend.

It is worth noting that thanks to the good results achieved by enterprises with the participation of the State Treasury the increase of the income from the dividends from companies and payments from single member State Treasury companies profits is planned. From 2014 on a system of auction sales of the rights to CO₂ emission introduced in 2013 will become a constant source of the budgetary revenue. Nevertheless, the actions indicated above are only forecasts and if they bring the expected results, they will contribute to improving of the situation in the state budget and the public finance in Poland.

11. Conclusions

Deficits and the characteristics of their effects are nothing new in the reference books, it can even be said that the deficit issues have been discussed for many years. Yet it is difficult to find an unambiguous assessment of the occurrence of deficits in economy. Simultaneously the evaluation of the impact of deficits depends on the economy functioning and also on the market efficiency.

A budget deficit is inseparable with the situation in which current revenue are insufficient to cover current expenses. It constitutes a revenue gap with planned expenditure, which must be covered by assuming different kinds of obligations. The appearance of such a gap results from the inability to collect sufficient income in the conditions of the existing economic system or it is the effect of a conscious decision about financing a part of expenditure with loans (an issue of treasuries) and credits. It is vital though that a deficit influences the amount needed for loans. A deficit in the *ex ante* approach is an expected inflow of money, whereas in the *ex post* approach it is a realized inflow of money.

It is worth emphasizing that deficits have become an immanent quality of economies of a market character. They appear not only in developing countries but also cause problems for numerous countries with well developed economies. Burdens of the necessity to repay earlier assumed obligations of different character bring about profound effects

for the budget itself and the whole economy of a given country. When we take into consideration communities, like for example the European Union, the imbalance of the budgets in individual countries may cause a so-called snowball effect.

The problem of a budgetary imbalance in Poland started in the 1980s. The deficits at that time in relation to GDP were considerably smaller than those in the 1990s or in the first decade of the 21st century. Unfortunately, both then and now the main reasons for the imbalance concerned excessive expenditure. 1990 was an exception, when a budgetary surplus of 0.4% of GDP appeared. Discussing the inability to cover expenditure with revenue, it can be stated that on average the budgetary revenue covered the expenses only in 88%.

In the following years the only balance in Poland was a budgetary deficit. In the individual periods of time the deficit was characterized by an upward movement in real terms. In the relation to GDP the trend was changeable. It should be mentioned that the deficit was small in relation to GDP in 1997 or 2007. Nevertheless, in the last few years it has increased greatly in this aspect. In connection to this it required and still requires more additional financial resources to be covered. This in turn means burdening the budgets in the following years.

As it was indicated above, a budget deficit has become an immanent quality of the state budget. Its reasons varied in different years, but it has always resulted from excessive public expenditure, which was not covered by the current revenue. Despite many activities done by the official authorities, so far Poland has not been able to regain a balanced budget. Hopefully, the planned actions indicated in the paper will be effective enough to bring about a significant improvement in the public finance. A long term imbalance in the state budget results in a substantial increase of the government debt, and this in turn has a harmful influence on the expenditure aspect – the debt service costs rise.

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THE PRESENCE OF SMES AT BUCHAREST STOCK EXCHANGE

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ABSTRACT. The importance and contribution of the SME sector to the economic growth was frequently stated and discussed. While Bucharest Stock Exchange does not have a dedicated segment for SMEs, we concentrate our attention on this stock exchange, considered to be a frontier emerging market, due to the fact that the market capitalization was notoriously low. The natural question that arisen was: how many of Bucharest Stock Exchange listed companies are SMEs? The present paper documents the presence of SMEs within Bucharest Stock Exchange 2nd category and tests the size effect for a number of 10 selected companies, which were split in two portfolios.

Key words: *SMEs, stock exchange, size effect, Romania*

JEL classification: M19, G1, G19

1. Introduction

The importance and contribution of the SME sector to the economic growth is well established. Their role in terms of employment creation, upholding the entrepreneurial spirit and innovation has been crucial in fostering competitiveness in the economy. Though SME contribute to GDP, their contribution is neither duly recognized nor they have access to cheaper funds resulting in index realization of their potential growth (www.smeworld.org).

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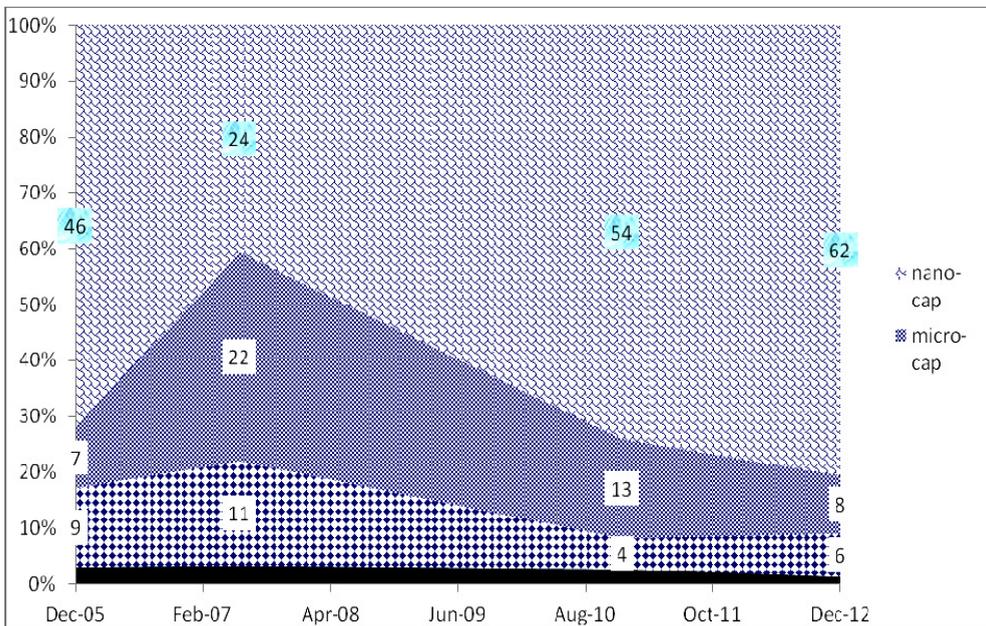
In order for the SMEs to be listed on a stock exchange, certain conditions have to be fulfilled (www.smeworld.org): a platform should be provided for trading SMEs' shares; an improvement of the visibility of performing SMEs in order to generate and increase the investor's interest. Once these conditions fulfilled, they might enable SMEs to raise funds at reasonable rates.

An exchange for SMEs is a stock exchange/platform dedicated to trading the shares/securities of SMEs who otherwise find it difficult to get listed on a main market segment (www.smelisted.net). The concept originated from the difficulties faced by SMEs in gaining visibility and attracting sufficient trading volumes when listed along with other stocks on the main market segments of various stock exchanges. World over, dedicated SME trading platforms or exchanges exist; they are known by different names such as 'Alternate Investment markets' or 'growth enterprises market', 'SME Board' etc. Some of the most known markets for SMEs are AIM (Alternate Investment Market) in UK, TSX Ventures in Canada, GEM (Growth Enterprise Market) in Hong Kong, MOTHERS (Market of the high-growth and emerging stocks) in Japan, Catalist in Singapore and the latest initiative in China - Chinext. As a matter of fact, NASDAQ also started as an SME exchange (www.smelisted.net). The OTC Exchange of India (OTCEI), set up in 1990, was also dedicated to SMEs. However, it failed to take off. Some regional Indian stock exchanges were meant to cater to SMEs, but could not grow (www.smeworld.org). As it can be observed from the several examples mentioned above, SMEs trading platforms have the tendency to succeed within mature and more sophisticated markets, rather than in emerging markets. One explanation might be provided by the investors' attitude toward trading SMEs, their knowledge and understanding of SMEs growth potential and risks.

While Bucharest Stock Exchange (BVB³ henceforth) does not have a dedicated segment for SMEs, we concentrate our attention on this stock exchange, considered to be a frontier emerging market, due to the fact that the market capitalization was notoriously low. As shown by Pop et al. (2012), BVB's capitalization was half of Budapest Stock Exchange

³ This abbreviation (BVB) was chosen, instead of the more natural BSE in order to avoid any confusion with Budapest Stock Exchange, Bratislava Stock Exchange, Belgrade Stock Exchange and Bulgarian Stock Exchange. Any of these exchanges might be abbreviated BSE.

capitalization, and almost 9 times smaller than Warsaw Stock Exchange capitalization. This situation triggered a brief investigation of BVB's listed companies' capitalization and the results indicate a massive presence of nano-cap⁴ companies, as graph 1 below shows. As it can be observed, only when BVB reached its pick (June-July 2007, before the first signs of the financial crisis started to manifest and triggered an over 18 months downward trend) the number of nano-cap companies decreased in favor of small and micro-cap companies. Annex 1 provides further details regarding the capitalization intervals for the BVB listed companies.



Graph 1. BVB listed companies' structure by capitalization

Source: authors' calculations based on BVB data

⁴ Based on www.investopedia.com the levels of capitalizations are: mega capitalization (mega-cap): over 100 billion USD; large capitalization (large-cap): between 10 and 100 billion USD; mid capitalization (mid-cap) between 2 and 10 billion USD; small capitalization (small-cap): between 250-300 million USD to 2 billion USD; micro capitalization (micro-cap) between 50 and 250-300 million USD; nano capitalization (nano-cap): less than 50 million USD. For the current paper we respect the value intervals, but we applied them at the capitalization calculated in EUR for the BVB listed companies.

The natural question that arisen was: how many of BVB listed companies are SMEs? Along with this question, two other subsequent questions followed: the presence of size effect can be identified for those companies that will be found as SMEs? and did those companies used BVB as a financial resources provider for further development? Neither of these topics was investigated at BVB level. The present paper, by answering to the questions above, will bring a new point of view regarding the types of companies listed within a frontier market exchange, the Romanian main stock exchange.

2. Literature review

The academic literature regarding the topic of SMEs listed on stock exchange platforms is relatively scarce. However, during the recent years a number of papers emerged, discussing different aspects. Bang (2012) discusses the solution represented by a SMEs exchange for India. Caccavaio et al. (2012) discuss the problem of Italian SMEs of going public. Fadil (2012) discuss the growth choices of French listed SMEs. Lardon & Deloof (2012) investigate the financial disclosure policy of small and medium-sized enterprises listed on a stock market with very low disclosure requirements: the Free Market of the Euronext Stock Exchange. Mwarari (2013) discuss the factors influencing the listing of Kenyan SMEs. Neither of these papers discusses the topics we try to investigate within the current paper.

While various aspects of the Bucharest Stock Exchange (BVB) were analyzed in several papers like the aspects regarding the development of Bucharest Stock Exchange (Matei, 2008), directions of change at the Bucharest Stock Exchange (Lupu & Tudor, 2008), the evolution and the perspectives of Bucharest Stock Exchange (Grecu, 2008), the number of companies listed on Bucharest Stock Exchange (Giurca Vasilescu & Tufan, 2007) and the factors that determine the capital structure of the listed companies (Duca, 2012), none have taken into consideration the presence of SMEs among the BVB listed companies. Only the paper of Curutiu (2010) discusses the initiative that existed between 2005 and 2006 to create a platform for SMEs trading at BVB, however nothing was achieved. Thus, in a presentation done by BVB officials in June 2013, their willingness to consider SMEs and to promote among them the financing alternative offered by the exchange was declared again (http://www.bvb.ro/info/2013_07_24_BVB_IR_presentation_en.pdf).

The size effect is one of the oldest and most important anomalies observed for capital markets. Banz (1981) was the first to discover this anomaly in their event study. The size effect can be observed that companies with smaller capitalization register abnormally high yields compared to those which register high capitalization values. This topic is investigated in this paper in relation with the SMEs listed at BVB in order to see if there investors can establish a profitable investment strategy by considering these small companies as an alternative portfolio.

At international level, the size effect is a frequently investigated phenomenon. Among the most recent studies we mention Kassimatis (2008) examining the significance of the size effect in explaining portfolio trends in the Australian stock market to find that the size effect has significant explanatory power; Amel-Zadeh (2011) investigating the size effect in the German stock market to find a conditional relationship between size and returns with strong momentum across size portfolios; Wu (2011) makes use of the Fama–French three-factor asset pricing model in the case of Chinese A-share markets to show, by contrast, no significant size effect. Shubita & Al-Sharkas (2010) evaluate the ‘size-effect’ utilizing a relatively large sample of NYSE stock prices to show that size impacts stock returns. All these studies concentrate on mature or on advanced emerging stock markets.

The size effect presence at BVB was investigated by Balint (2012) and the paper found that this effect did not manifest itself and the Romanian investors cannot obtain profit by investing in companies that register small capitalization.

The present paper continues, at a niche level of SMEs, the investigation started by Balint (2012).

3. Questions, data and methodology

The questions asked in order to shape this study

Q1: How many of BVB listed companies are SMEs?

Q2: Did these companies use BVB as a financial resources provider for further development?

Q3: The presence of size effect can be identified for those companies that will be found as SMEs?

Data

As a first step, the data was collected, as of December 2012 from BVB. Only the 52 companies listed within second category (tier) companies were considered, since the first category contains the blue chips, supposed to be larger than SMEs companies.

The 52 companies of the 2nd category/ tier were analyzed from the perspective of equity capital and the number of employees. The data regarding the number of employees was collected from the Ministry of Public Finance website.

The legal requirements for a company to be considered a SMEs (at European level, including Romania) are: an equity capital of maximum 50 million EUR, the number of employees between 10 and 249. These two requirements should be fulfilled simultaneously.

As Table 1 below shows, of the 52 companies under scrutiny, 22 (42.30%) fulfilled the conditions to be considered SMEs.

Table 1.

General information regarding the companies listed on the 2nd tier of BVB as of December 2012

Company	Field of activity (as listed on the dedicated page at BVB)	Equity capital (EUR*)	Number of employees	Comments
ALU	Wholesale of metals and metal ores	1,402,603.23	167	Listed since April 16 th 2007 IPO December 2006
AMO	Production of electricity	24,969,885.32	18	Listed since December 11 th 1997
APC	Manufacture of railway locomotives and rolling stock	1,656,108.39	205	Listed since June 20 th 1997
ARM	Manufacture of other taps and valves	897,666.07	202	Listed since February 20 th 1997 Suspended; share capital decrease (March 20 th 2013)
BCM	Hotels and similar accommodation	3,755,377.02	65	Listed since May 12 th 2008 IPO December 2007
BVB	Administration of financial markets	17,222,167.86	53	Listed since June 8 th 2010 <i>Highest capitalization</i>
CAOR	Beverage serving activities	11,548,996.18	151	Listed since May 11 th 2012
CBC	Production of abrasive products	2,178,186.27	220	Listed since February 11 th 1997
CEON	Manufacture of bricks, tiles and construction products, in baked clay	5,899,292.86	100	Listed since April 6 th 2010

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Company	Field of activity (as listed on the dedi- cated page at BVB)	Equity capital (EUR*)	Number of employees	Comments
CGC	Manufacture of instru- ments and appliances for measuring, testing and navigation	4,349,846.72	228	Listed since December 12 th 2008 IPO February 2008
CMCM	Manufacture of ready- mixed concrete	5,303,336.62	118	Listed since April 7 th 2009
COTR	Construction of residen- tial and non-residential buildings	7,004,375.90	125	Listed since July 11 th 2008
ECT	Manufacture of electricity distribution and control apparatus	3,254,039.50	131	Listed since December 24 th 1998
ELJ	Manufacture of electricity distribution and control apparatus	1,450,075.18	116	Listed since November 14 th 1997 Became SME only in 2011
ENP	Electrical installation	1,135,914.95	167	Listed since January 30 th 1998 Suspended; insolvent; not traded since (Feb 18 th 2013)
MECF	Manufacture of agricul- tural and forestry machinery	5,383,942.10	206	Listed since February 15 th 2006
MEF	Manufacture of other parts and accessories for motor vehicles	1,187,773.79	16	Listed since March 4 th 1997
MJM	Manufacture of plastic plates, sheets, tubes and profiles	3,261,167.19	24	Listed since April 4 th 2001 <i>Lowest capitalization</i>
PEI	Wholesale of solid, liquid and gaseous fuels and related products	1,375,775.36	19	Listed since January 4 th 1999
PPL	Manufacture of other plastic products	3,831,325.18	75	Listed since August 11 th 1997
RTRA	Manufacture of electric motors, generators and transformers	2,244,435.59	122	Listed since June 14 th 2011
STZ	Manufacture of other organic basic chemicals	2,225,513.69	94	Listed since May 12 th 1997

Source: authors' calculations based on BVB data (www.bvb.ro) and Ministry of Public Finance (www.mfinante.ro)

*The exchange rate used: 1 EUR = 4.4560 RON

It is interesting to mention that the market capitalization of the 22 SMEs listed at BVB as of December 2012 represented less than 1% (0.60%) of BVB market capitalization, indicating the direct relation that exists at BVB between the low (nano) capitalization and the low level of equity capital.

Q1 and **Q2** were answered by analyzing the general data available at BVB.

Answer to **Q1**: as of December 2012, 22 companies listed within the 2nd category/ tier fulfill the requirements to be considered SMEs. They represented over 40% of the second category companies.

Answer to **Q2**: of the 22 listed companies identified as SMEs, only 3 raised their capital through an initial public offering (IPO). None of the 22 companies used BVB for new share offerings or for corporate bond offerings.

For the second step, in order to test for the size effect, from the 22 SMEs listed at BVB, in order to have an uniform series of data, 2 (the extreme ones) were eliminated, respectively: BVB symbol (the company with the largest capitalization) and MJM symbol (the company with the lowest capitalization). Further, from the remaining 20 companies, two more were eliminated because they were suspended from trading for a long period: ARM symbol due to a decrease in equity capital and ENP symbol due to insolvency.

When the remaining 18 companies were further investigated, it was observed that several of them could be enlisted in the SMEs category only from 2010 or 2011 according to the number of employees, while their equity capital was in the range of a SME since long (in most cases since their listing at BVB). Therefore, it can be stated that one of the effects of the financial crisis was the increasing number of SMEs (in terms of number of employees) listed at BVB.

Based on the findings regarding the moment when a company could be considered as SME, the 18 companies were divided into two portfolios. The first original one contains the companies that fulfill the requirements as SMEs since they start listing, while the second original portfolio contains companies that could be considered SMEs from January 2010. Because of this, ELJ symbol was eliminated due to the fact that it became a SME only from 2011, while CEON symbol was eliminated because it start trading only in April 2010.

Based on these first findings, for the first portfolio we considered 7 companies, while for the second one 9 companies were taken into consideration, as presented in Table 2.

Table 2.

The companies considered for the two portfolios

Portfolio 1 original	Portfolio 2 original
APC - voestalpine VAE APCAROM	ALU - ALUMIL ROM INDUSTRY
BCM - CASA DE BUCOVINA-CLUB DE MUNTE	AMO - AMONIL
CAOR - CALIPSO	CBC - CARBOCHIM
ECT - GRUPUL INDUSTRIAL ELECTROCONTACT	CGC - CONTOR GROUP
PEI - PETROLEXPORTIMPORT	CMCM - COMCM
RTRA - RETRASIB	COTR - TRANSILVANIA CONSTRUCTII
STZ - SINTEZA	MECF - MECANICA CEAHLAU
	MEF - MEFIN
	PPL - PRODPLAST

Further, the observation period was established from January 2010 to June 2013 in order to include the companies that became SMEs at the end of December 2009/ beginning of January 2010. Due to this choice of observation period, two companies were eliminated from the original Portfolio 1 due to their more recent listing date: CAOR (listed since May 2012) and RTRA (listed since June 2011).

In order to have uniform portfolios, from the original Portfolio 2 four more companies were eliminated. We chose to eliminate the companies with the lowest capitalization and low trading frequency: AMO, CGC, MEF and PPL symbols.

The final portfolios contain the following companies, as presented in table 3. Portfolio 1 includes the companies that could be considered SMEs since they start listing, while Portfolio 2 contains the companies that became SMEs at the beginning of 2010. In order to test the size effect for these portfolios, the sample data consists of monthly capitalization values of the 10 SMEs considered.

Table 3.

The final portfolios

Portfolio 1	Portfolio 2
APC - voestalpine VAE APCAROM	ALU - ALUMIL ROM INDUSTRY
BCM - CASA DE BUCOVINA-CLUB DE MUNTE	CBC - CARBOCHIM
ECT - GRUPUL INDUSTRIAL ELECTROCONTACT	CMCM - COMCM
PEI - PETROLEXPORTIMPORT	COTR - TRANSILVANIA CONSTRUCTII
STZ - SINTEZA	MECF - MECANICA CEAHLAU

Methodology

After the companies have been divided into the two portfolios according to the recorded values, for each portfolio it has been calculated the average capitalization of each company contained (CB), the total capitalization (CBT) and the weight that each of these companies has in total capitalization (X_i).

$$CBT = \sum_{i=1}^{10} CB_i \quad (1)$$

where i represents the companies included in each portfolio, and CB_i the average return of each company.

The weight of every company has been calculated as following:

$$X_i = \frac{CB_i}{CBT}, i = \overline{1,10} \quad (2)$$

The weighted capitalization of each portfolio was calculated, in order for the size effect to be tested on the Romanian capital market.

For a better analysis and comparison the following three indexes were taken into account: BET (blue chip index), BET-C (the composite index that includes all ten companies considered) and BET-FI (the financial sector index).

4. Discussions and empirical results

The companies included in the two portfolios, were also analyzed taking in consideration the net profit ratio, the amount of dividend paid and the loan to equity capital ratio.

Table 3 shows the situation of net profit/ loss for the selected companies. The best company is APC, which exhibit constant net profit over the 4 year period, while the worst performer is ECT, which registered losses for 4 years in a row. Both these companies were SMEs since they start listing and both are included in Portfolio 1. Three of the companies considered for Portfolio 2 registered profit for the entire period taken into consideration, while two registered losses in just one year. From this point of view, the companies selected for Portfolio 2 show better end year results than those selected for Portfolio 1.

Table 3.

*Net profit/loss of the companies included
in the two portfolios (2009-2012)*

	P1 (EUR*)				
	APC	BCM	ECT	PEI	STZ
2009	2,618,291.36	341,951.24	-565,399.66	-936,693.41	113,168.29
2010	1,381,808.59	204,089.17	-97,799.24	-365,998.95	3,641.18
2011	1,690,437.01	186,898.94	-140,750.14	55,532.46	-313,949.36
2012	1,191,456.69	177,751.12	-133,861.09	257,585.05	247,323.83
	P2 (EUR*)				
	ALU	CBC	CMCM	COTR	MECF
2009	1,971,501.19	417,19.26	47,405.90	71,502.37	-1,854,950.32
2010	516,365.71	505,406.07	-768,721.11	79,613.53	52,7931.78
2011	869,079.26	346,401.05	268,975.44	256,243.89	171,0004.48
2012	714,907.32	64,125.22	643,431.33	483,978.01	1,662,239.23

Source: authors' calculation based on [Ministry of Public Finance data \(www.mfinante.ro\)](http://www.mfinante.ro), and Romanian National Bank data (www.bnro.ro) for the exchange rates

*The exchange rates used: 1EUR = 4.2373 RON (2009), 1 EUR = 4.2099 RON (2010), 1 EUR = 4.2379 RON (2011), 1 EUR = 4.4560 RON (2012)

In terms of dividends paid between 2009 and 2012, as it can be observed from Table 4, two companies (ECT and PEI) from Portfolio 1 and one company (CMCM) from Portfolio 2 never paid dividends for the period under scrutiny. Five companies paid dividends only once, three of them paying dividends for 2012. Only APC paid dividends for three consecutive years. The amount of dividend paid is small or very small. The highest dividend value was paid by COTR in 2012 (0.2693 EUR) and the smallest by MECF in 2012 (0.0013 EUR). As Table 4 shows, the SMEs currently listed at BVB are not interesting from the dividend payment point of view. Table 4 information combined with Table 3 information show that in most cases, when the selected companies register profit, they are reluctant in distributing even a part of it as dividends. This indicate that the profit is retained for further developments and gives a nuance to the Q3 previous answer, showing that the selected companies did not use BVB facilities for raising funds. However, due to the relative small dimension of their profits, the development they could finance is rather modest. This behavior explain why a number of companies instead of growing since listed, remained at the level of SMEs.

Table 4.

*Dividend per share⁵ paid by the selected companies
(2009-2012)*

	P1 (gross value - EUR)					P2 (gross value - EUR)				
	APC	BCM	ECT	PEI	STZ	ALU	CBC	CMCM	COTR	MECF
2009	0	0	0	0	0	0.0189	0	0	0	0
2010	0.0523	0	0	0	0	0	0.0736	0	0	0
2011	0.0212	0.0021	0	0	0	0	0.1298	0	0	0
2012	0.0153	0	0	0	0.0042	0	0	0	0.2693	0.0013

Source: authors' calculation based on BVB (www.bvb.ro) data and Romanian National Bank data (www.bnro.ro) for the exchange rates

*The exchange rates used: 1EUR = 4.2373 RON (2009), 1 EUR = 4.2099 RON (2010), 1 EUR = 4.2379 RON (2011), 1 EUR = 4.4560 RON (2012)

Further, the presence of the size effect has been tested. For each portfolio based on the average capitalization recorded, the total capitalization and the weight of each company in the total were calculated. Further, the capitalization-weighted portfolios were calculated, in order for the size effect to be tested for the selected companies listed at BVB. The results are presented in Table 5 and 6 below.

Table 5.

*Descriptive values of portfolios studied for effect size
(January 2010- June 2013)*

	P BET	P BET-C	P BET-FI	P1	P2
Mean	0.000148	-0.000112	-0.002355	0.003344	-0.003072
Median	0.000595	-0.000066	0.008276	0.002098	0.001186
Std.dev.	0.010673	0.006146	0.072244	0.114418	0.081718
Skewness	-0.459432	-0.186826	-1.531450	0.663554	-1.148109
Kurtosis	2.822759	3.088882	6.749668	4.997419	5.340258

Source: authors' calculation

⁵ We chose this set of data instead of the reported dividend yield (DIVY) within BVB monthly reports due to the fact that we identified some mistakes regarding the respective officially reported ratio.

Table 6.*Correlation between the portfolios and the considered indices*

	P BET	P BET-C	P BET-FI
P1	0.363336	0.361142	0.518996
P2	0.402199	0.435191	0.526476

Source: authors' calculation

Answer to **Q3**: The SMEs capitalization of Portfolio 1 achieved higher returns. As such, we can say that the size effect is present for this Portfolio 1. For the Portfolio 2 the size effect does not exist.

In the case of Portfolio 1, the return is positive compared with BET-C and BET-Fi which exhibit negative returns, and is higher than BET positive return, indicating that the companies that were SMEs since start listing performed better than the BVB's blue chips. However, the standard deviation analysis shows that Portfolio 1 is also the most risky. This situation is natural, given the small dimensions of the considered companies.

In the case of the five companies that became SMEs since January 2010, the size effect does not exist. Their Portfolio 2 exhibit a negative return, lower than the returns of BET-C and BET-Fi, and a higher standard deviation compared with the same indices. The absence of size effect in the case of Portfolio 2 needs further investigations. Up to a point, an explanation can be found in the absence of a consistent dividend policy for these companies and their low growth capacity despite the retained profit for further developments.

The negative skewness recorded for all the indices and for Portfolio 2 indicates that the distribution is tilted to the left. Only for Portfolio 1 the skewness is positive, with a distribution tilted to the right, indicating a higher percentage of positive returns. A normal distribution has a kurtosis of 3. BET and BET-C are the closest to this value. However, the kurtosis of Portfolio 1 is lower than in the case of Portfolio 2 and significantly lower than in the case of BET-Fi.

Table 6 presents the correlation between the two portfolios and the selected indices. The results need also further investigation because the highest correlation with the BET-Fi index is not normal. Since all the selected companies are included in the portfolio of BET-C index, the highest correlation should have been registered there. However, these results do not come as a surprise and might be explained by BET-Fi position as an index leader at BVB, as presented by Pop et al. (2012).

5. Conclusions

The present study showed that while BVB has no special segment dedicated to SMEs trading, a number of 22 companies listed within the 2nd category of the main market, as of December 2012, fulfill the conditions to be considered SMEs. They represent over 40% of the companies listed at this category. (Answer to Q1)

The general data showed also that only three companies used IPOs for raising capital and that after listing none of the selected companies used BVB facilities to raise capital either through the issuance of new shares or through corporate bond offerings. One reason for this situation was given by analyzing profit/ loss situation of a selection of 10 companies in combination with their dividend payment. The results showed that in most cases, these companies prefer to retain the profit for further development. However, the relative modest amount of the profit generate only modest developments, which do not attract investors' interest and can explain why companies that started listing as SMEs remained SMEs after years of trading. (Answer to Q2)

Further investigations showed that a number of 9 companies of the 22 identified as SMEs could be considered SMEs only since the beginning of January 2010, due to personnel dismissal. This situation shows that one of the effects of the global financial crisis was the transformation of these companies in SMEs. Another group of 7 companies were SMEs since they start listing.

The size effect was tested for two portfolios composed of selected companies. Portfolio 1 included 5 companies that were SMEs since listed at BVB. Portfolio 2 included 5 companies that became SMEs since January 2010. The size effect was present in the case of Portfolio 1 and absent in the case of Portfolio 2, despite the fact that Portfolio 2 included companies with less losses than Portfolio 1. However, the risk associated with the profit of size effect is important and should be well understood by any investor considering investing in a portfolio of listed SMEs. (Answer to Q3).

Through these findings the present paper documents the existence of SMEs listed within BVB 2nd category, and the fact that these companies do not use their listed position to raise capital through BVB channels. The paper also partly confirm the absence of size effect as presented by Balint (2012), thus shows that this size effect can be found for selected companies. However the size effect should be considered with care due to the high risk involved by such an investment.

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Annex 1

Intervals of market capitalization at BVB and the companies in the respective category

Time	Capitalization type	Value intervals	Number of companies
December 2005	mid-cap	2.6 to 7.3 billion EUR	2
	small-cap	300 to 800 million EUR	9
	micro-cap	50 to 170 million EUR	7
	nano-cap	1.2 to 49.8 million EUR	46
June 2007	mid-cap	6.2 to 9.6 billion EUR	2
	small-cap	390 million EUR to 1.9 billion EUR	11
	micro-cap	50 to 270 million EUR	22
	nano-cap	2.1 to 49.7 million EUR	24
December 2010	mid-cap	2.0 to 4.4 billion EUR	2
	small-cap	330 to 770 million EUR	4
	micro-cap	51 to 290 million EUR	13
	nano-cap	0.4 to 43.9 million EUR	54
December 2012	mid-cap	5.5 billion EUR	1
	small-cap	315 million EUR to 1.7 billion EUR	6
	micro-cap	52 to 210 million EUR	8
	nano-cap	0.4 to 48.9 million EUR	62

Annex 2

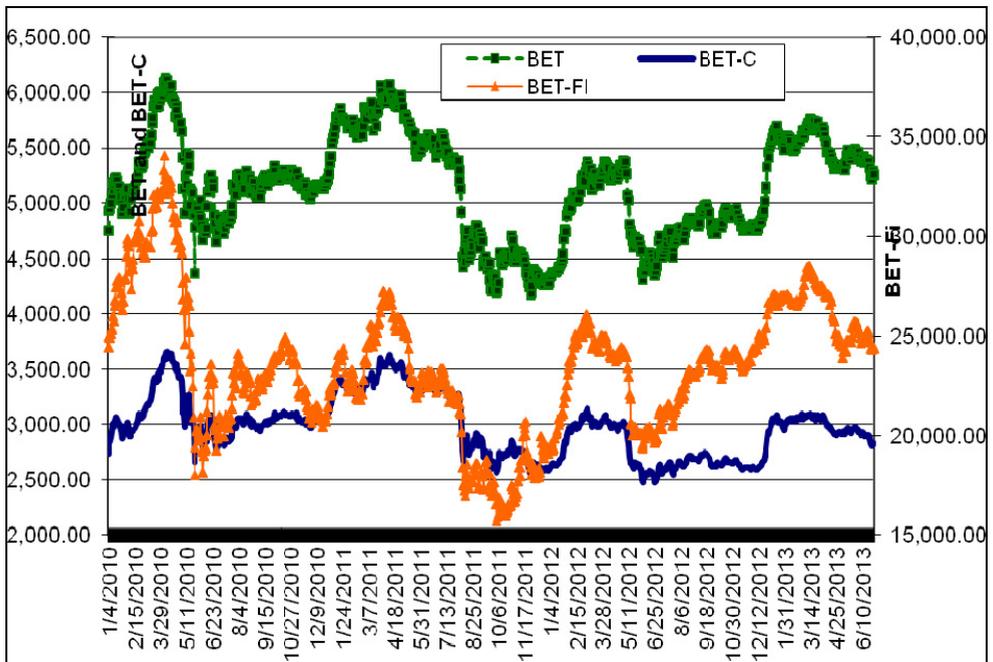
The 22 SMEs market capitalization (EUR)

Company	Market Capitalization (2012)
ALU	7,714,317.77
AMO	1,722,922.09
APC	11,940,540.71
ARM	984,739.68
BCM	3,154,516.70
BVB	39,610,986.09
CAOR	9,701,156.89
CBC	6,534,558.46
CEON	1,964,464.49
CGC	1,326,703.22
CMCM	9,546,005.84
COTR	7,280,305.86
ECT	911,131.06
ELJ	1,856,096.26
ENP	617,937.79

Company	Market Capitalization (2012)
MECF	8,878,120.52
MEF	2,280,525.67
MJM	101,096.18
PEI	1,650,930.43
PPL	4,846,626.35
RTRA	3,591,097.09
STZ	5,637,967.73

Source: authors' calculation based on the data available at BVB (www.bvb.ro); the exchange rate used: 1 EUR = 4.4560 RON

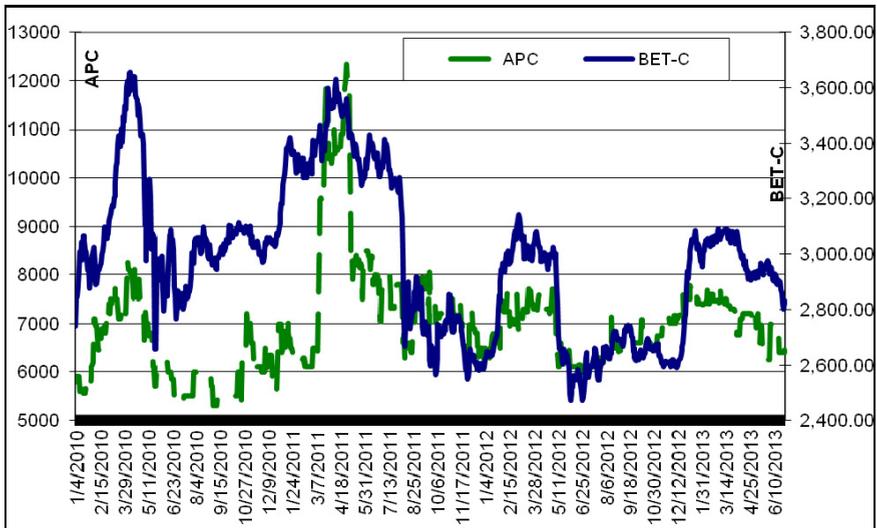
Annex 3



Source: based on BVB data (www.bvb.ro)

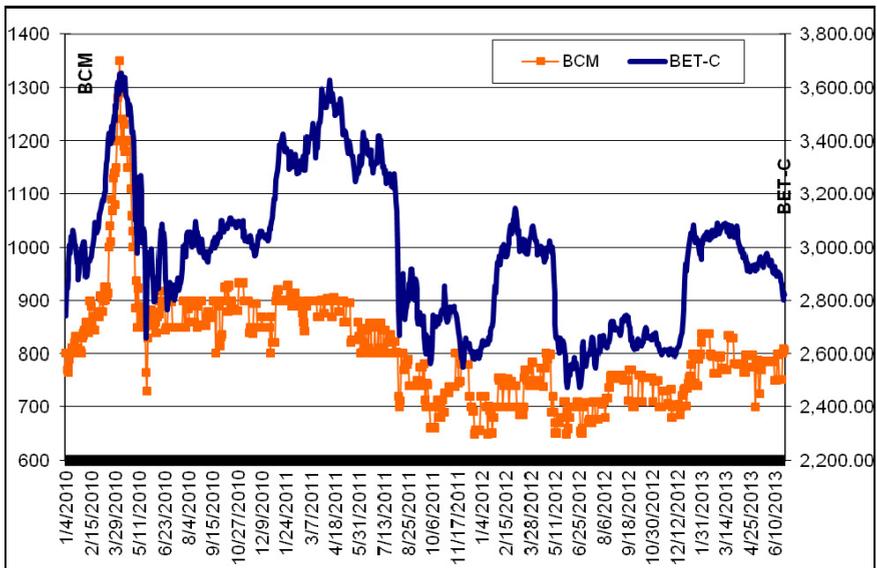
Graph 3.1. The selected indices evolution (closing values) between January 2010 and June 2013

Portfolio 1 companies



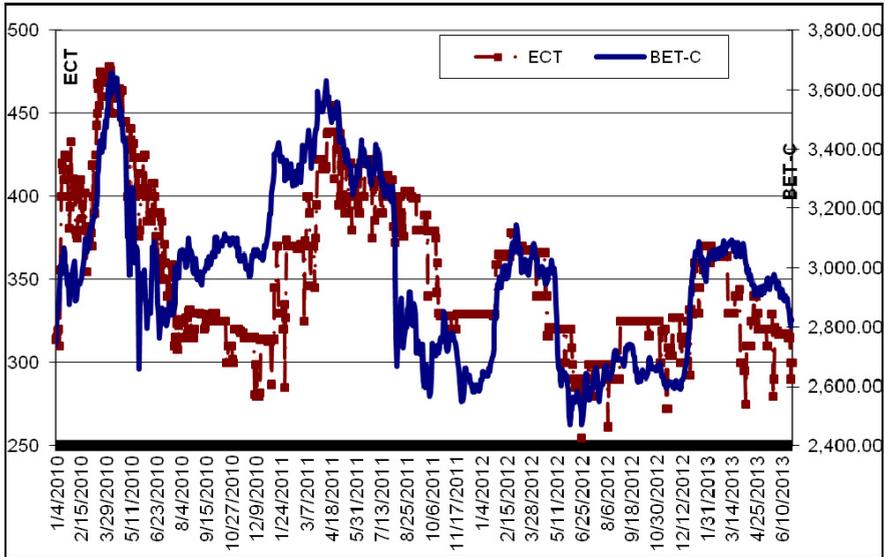
Source: based on BVB data (www.bvb.ro)

Graph 3.2. Closing price evolution of APC against BET-C between January 2010 and June 2013



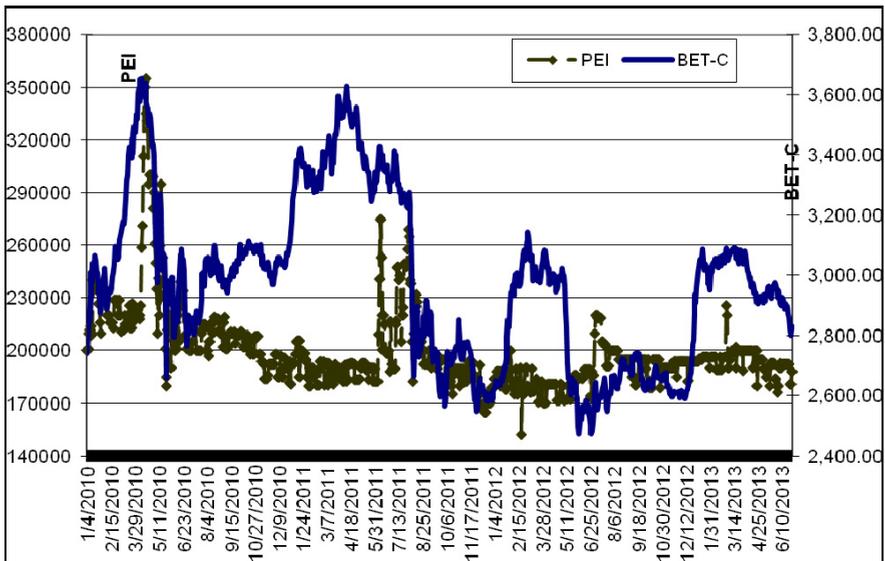
Source: based on BVB data (www.bvb.ro)

Graph 3.3. Closing price evolution of BCM against BET-C between January 2010 and June 2013



Source: based on BVB data (www.bvb.ro)

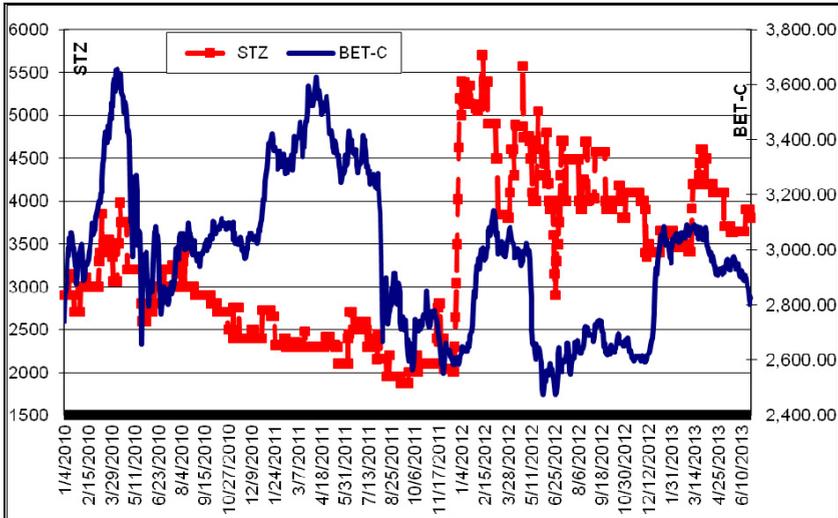
Graph 3.4. Closing price evolution of ECT against BET-C between January 2010 and June 2013



Source: based on BVB data (www.bvb.ro)

Graph 3.5. Closing price evolution of PEI against BET-C between January 2010 and June 2013

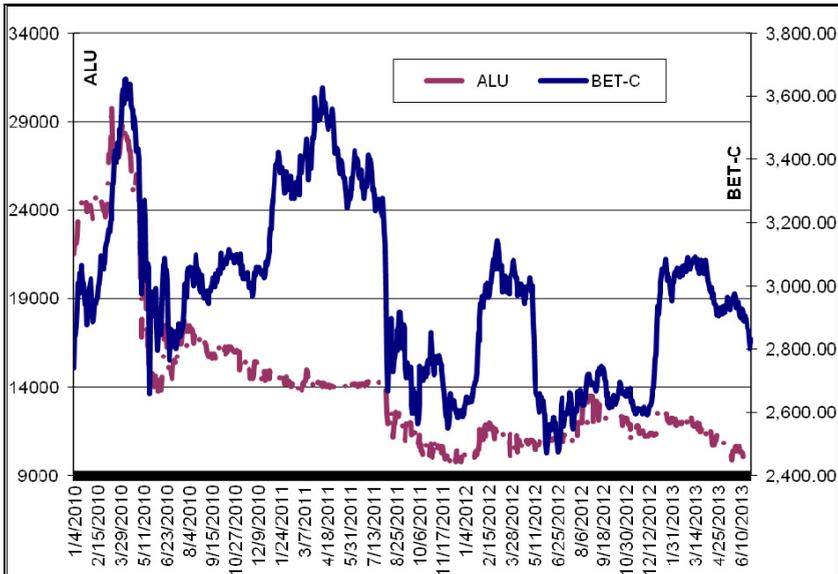
THE PRESENCE OF SMES AT BUCHAREST STOCK EXCHANGE



Source: based on BVB data (www.bvb.ro)

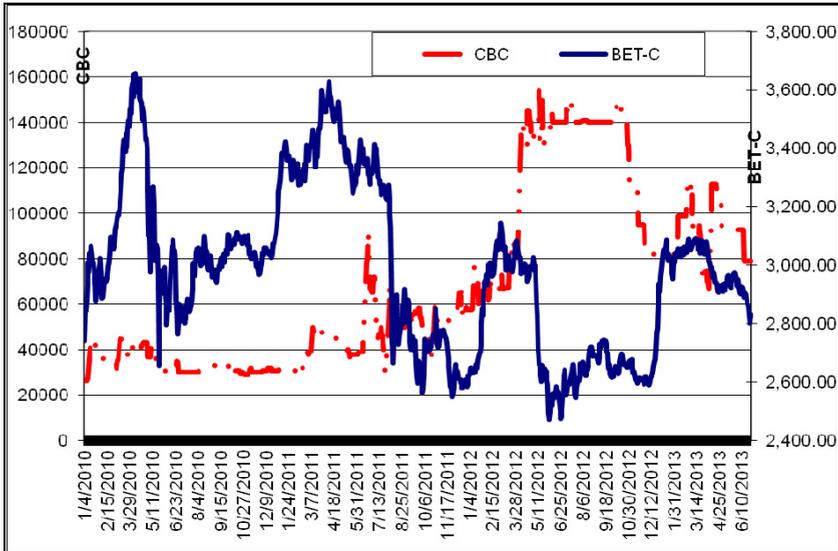
Graph 3.6. Closing price evolution of STZ against BET-C between January 2010 and June 2013

Portfolio 2 companies



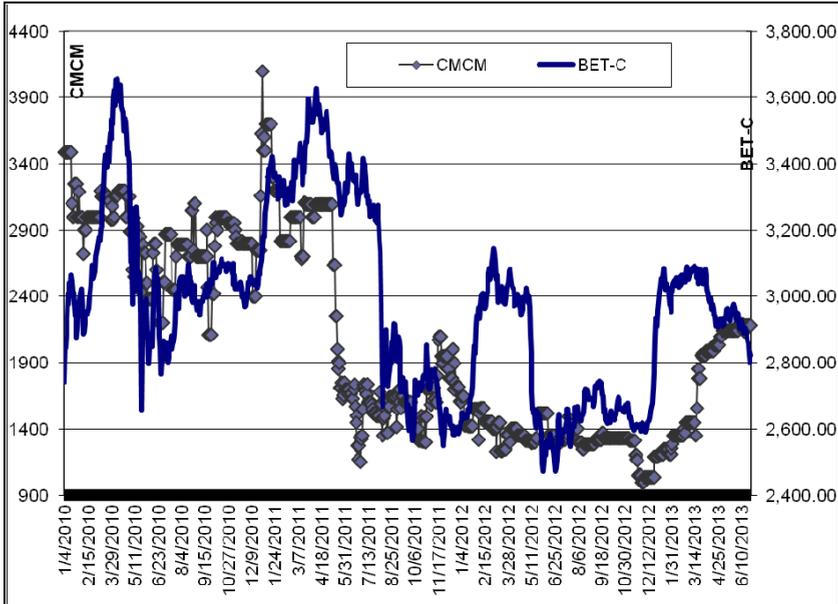
Source: based on BVB data (www.bvb.ro)

Graph 3.7. Closing price evolution of ALU against BET-C between January 2010 and June 2013



Source: based on BVB data (www.bvb.ro)

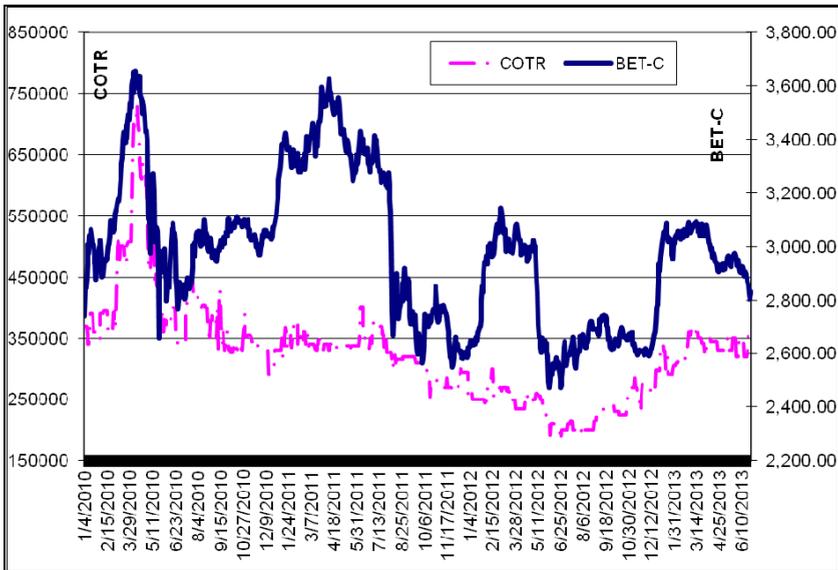
Graph 3.8. Closing price evolution of CBC against BET-C between January 2010 and June 2013



Source: based on BVB data (www.bvb.ro)

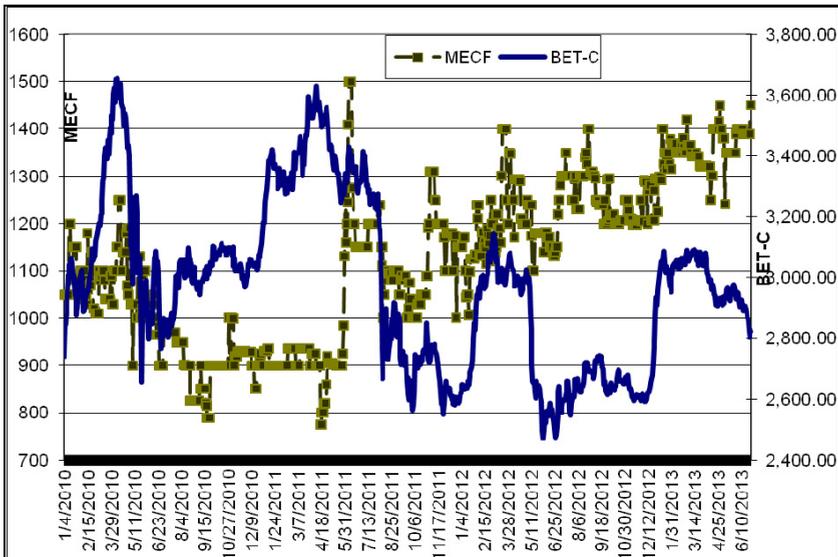
Graph 3.9. Closing price evolution of CMCM against BET-C between January 2010 and June 2013

THE PRESENCE OF SMES AT BUCHAREST STOCK EXCHANGE



Source: based on BVB data (www.bvb.ro)

Graph 3.10. Closing price evolution of COTR against BET-C between January 2010 and June 2013



Source: based on BVB data (www.bvb.ro)

Graph 3.11. Closing price evolution of MECF against BET-C between January 2010 and June 2013

FORECASTING THE STRUCTURE OF THE ROMANIAN AUDIT MARKET

SORIN ROMULUS BERINDE¹

ABSTRACT. This study aims to establish a methodology starting from certain criteria pertaining to the performance level of audited companies, according to which one may achieve a forecast of the changes in the financial audit services market, from the viewpoint of three categories of financial auditors: Big Four companies, Non-Big Four companies and accredited individuals that carry out audit missions by means of individual private practices. Following the application of the optimal regression models established, it results a measurement of the differences between the present level and the one anticipated with the help of a competition analysis technique: the distance procedure. Starting from these forecasts regarding the evolution of the activity of the three categories of financial auditors within a time-span of five financial years, on the basis of a set of criteria pertaining to the size, position and financial performance of audit beneficiaries, it is estimated that Big Four auditors will experience an ascending trend in terms of market share, while Non-Big Four auditors will meet with a significant decline, to a greater extent than individual audit practices of accredited professionals.

Key words: *Big Four companies, financial audit, forecasting, regression model, investors*

JEL classification: M42, M41, M48

1. Introduction

Achieving a forecast with regard to the evolutionary perspectives of the structure of the audit market is important for both providers and beneficiaries of audit services. The objective of this study is to conceive a statistical methodology, so as to produce forecasts regarding the evolution of the structure of the audit market, within the next five financial years.

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Albeit the verification of the latter has been accomplished at the level of a sample group established by double stratification, this procedure can be explained at any level, on any sample, regardless of its size.

There is a plethora of factors that may favour one type of auditor or another. In light of this, our study aims to split auditors into three major categories: Big Four auditors, Non-Big Four auditors and auditors that work independently, in the form of accredited individuals, organised into private professional practices.

In this regard, specialised literature acknowledges that the following may influence audit service providers, both Big Four and Non-Big Four ones: the adoption or not within national legislation of international accounting regulations, in order to facilitate the access of foreign auditors to audit services; the size of audited companies and of the financial performance recorded and reported by means of financial statements; the quality and performance of government systems; the quality of internal control services provided by external audit beneficiaries; the area of activity; the structure of management and shareholders; the predominant source of financing; the capital market or the monetary market; the existence or lack of operations meant to restructure the activity; mergers and splits. Even the national level of culture is likely to influence the option of audit services beneficiaries for one category of auditors or another.

2. Review of literature

If a state adopts international accounting regulations, certain specific nationally-applicable procedures are removed from that country's legislation. Hence, foreign audit companies overcome the hurdle of learning national regulations, whilst making fewer efforts to undergo specific operations pertaining to financial audit (Tsipouridou and Spathis, 2012). A country with poor government systems may favour the increase in market share of audit companies from the Big Four category (Houqe et al., 2012). Hence, such companies with a high level of credibility are able to fill in, in the eyes of foreign investors, the confidence gaps stemming from a poor government system, one that is unable to ensure the stability of its legal environment, thus having an effect on the confidence of foreign investors in the reality and sincerity of the annual accounts published. On the other hand, the more effective a company is, it appears the more it

will be tempted to contract audit services from the Big Four. Effectiveness can be given by the level of income, total assets; profits achieved or even the level of dividends and taxes paid. (Walace, 1998). Moreover, widespread companies from a territorial point of view will be more open towards Big Four audit companies, as they require a great workload to be dealt with simultaneously in different locations. Hence, the auditor will need not only qualified personnel, but also a greater number of employees. Companies that do not have an efficient internal control system or that lack one altogether will try to compensate for this deficit through more expanded financial audit services, which are more likely to be provided by large audit companies, namely the Big Four (Krishnan and Visvanathan, 2007). Companies that are active in the area of manufacturing have a more complex activity from an accounting perspective, which entails more thorough professional knowledge on the part of auditors and the availability to undertake a higher workload, naturally associated with greater audit fees. (DeFond et al., 2000; Craswel et al., 1995). Foreign investors will always grant extra confidence in international auditors, (Citron and Manalis, 2001), as the latter ensure more credibility to audited companies before potential investors (Tu, 2012). The existence of changes in the structure of the activity (absorption or joint mergers, splits) entails a high level of professional preparation, which provides Big Four auditors with premises for contracting audit services from aforementioned companies (Firth, 2003).

Countries with Anglo-Saxon customs, which exhibit greater openness towards the public that uses financial-accounting information: investors, commercial and financial creditors, state institutions (Răchișan and Groșanu, 2010), where the level of conservatism is low, while professional reason prevails, will also have more confidence in an international auditor, from the Big Four category (Jenkins and Velury, 2011; Hope et al., 2008).

3. Material and methods

This study aims to conduct research on the evolution of financial auditors at the Romanian level, with regard to their capacity of dominating the audit market. The methodology of our paper relies on double stratified sampling. From this point of view, we have firstly selected the North-West region, at the national level. This can be considered representative of the entire country, as, according to forecasts produced by the National

Prognosis Commission for the time-span 2013-2016, economic perspectives there are at the level of the national average, in terms of gross domestic product, average salaries, unemployment rate, average number of employees and structure. On the other hand, in order to explain double stratification, we have to mention the fact that the second selection criterion involves taking into account, at the level of this region, the largest companies that benefit from financial audit services. This has been achieved due to the provisions of accounting laws, which, in accordance with the European regulations in the financial-accounting area, require audited companies to transmit to the National Commerce Register Office information regarding the contracting of audit services: name of auditor and duration of audit contract. The research method is inductive, starting from data pertaining to audited companies and auditors, while the study concludes by presenting a theoretical model of forecasting the evolution of audited companies. To achieve this, the auditors have been divided into three categories: Big Four companies, Non-Big Four companies and accredited professionals. We have selected, from all companies in the North-West region, those that were subjected to financial audit in the time-span 2005-2012. Moreover, from the latter, we have eliminated those that failed to publish, by means of the Ministry of Finance or the National Commerce Register Office, their annual statements in each financial year from the period 2008-2012. Thus, the sample group has been reduced to 185 audited companies, selected from the North-West region of Romania.

Our paper aims to study the perspectives of expanding the audit services market of these companies, through several financial indicators of the audited companies, extracted from financial statements. These indicators are owned capitals and net profit, while there are other parameters which, in accordance with national regulations matching European directives, establish the criteria pertaining to the obligation of undergoing the audit of financial statements: total assets, net turnover and average number of employees. For each of the three categories of auditors: Big Four companies (C_{BF}), Non-Big Four companies (C_{NBF}) and private individuals as auditors (C_{PA}), we have calculated a sum of these five indicators in the case of each financial year comprised between 2008 and 2012. From a monetary perspective, the values of indicators have been calculated in the national currency (lei), and, subsequently, we have converted the latter into euros, on the basis of the average exchange rate set by the National Bank of Romania for each respective

year. The data obtained has been statistically interpreted with the help of STATgraphics Plus 3.0. Hence, we have verified, for each of the five indicators (performance criteria), which regression model is optimal, in order to be used in the subsequent forecasting process. The following regression models have been analysed from this point of view:

Table 1.

Diversity of regression models tested in order to forecast the evolution of performance criteria in the time-span 2013-2017, starting from values recorded in the 2008-2012 period

No.	Name of regression model tested	General formula for regression model tested
1	Reciprocal - X	$Y = a + b / X$
2	Reciprocal - Y	$Y = 1 / (a + bxX)$
3	Double reciprocal	$Y = 1 / (a + b/X)$
4	Exponential	$Y = e^{a+bxX}$
5	Square root - X	$Y = a + b\sqrt{X}$
6	Square root - Y	$Y = \sqrt{a + bxX}$
7	Linear	$Y = a + bxX$
8	Multiplicative	$Y = axX^b$
9	Logarithmic - X	$Y = a + bx\ln X$
10	S curve	$Y = e^{a+b/X}$

Source: Statistical data calculated by the author

In this context, Y is the symbol utilised successively to measure the value of total assets, net turnover, capitals owned, net result and average number of employees for audited companies (dependent variable), whilst X depicts the financial years 2008-2012 (independent variable).

In order to establish the optimal regression model, we have analysed the values calculated for the following statistical parameters and their meaning:

- correlation coefficient, which measures the connection between two variables;

- R-squared, indicating the extent to which a certain regression model explains the evolution of the dependent variable Y;

- p-Value, utilised in order to pinpoint any statistically significant relation between the dependent variable and the independent one, for a pre-established confidence level.

After the statistical calculation of data starting from these premises, we have obtained a situation depicting the most relevant regression models that can be used in order to forecast (establishing an option for a regression model has meant taking into account not only the statistical parameters calculated, but also the economic relevance of the results obtained, in other words the fact that each statistical model should be adequate from an economic viewpoint).

Once the values forecasted for the five performance criteria of audited companies have been statistically grounded, so as to study the evolution of the three categories of auditors, we have additionally calculated the effective values of the latter, according to the financial statements published in 2008-2012.

In order to analyse the differences between the current values (2008-2012) of the dimensions of audited companies by each of the three categories of auditors and the ones that have been forecasted (2013-2017), we have opted for a popular competition analysis method: the distance procedure. This implies measuring the distance for each category of audited entities, for each performance criterion, from the value recorded to the one considered to be optimal for a certain criterion. In the case of direct criteria (which are optimised through maximisation), the optimal value, from the perspective of this study, will be considered the greatest, while for indirect criteria (which are optimised through minimisation), the optimal value will be the smallest recorded. The category of entities with the lowest value of this indicator can be regarded as the most competitive one, as we shall consider that it exhibits the shortest distance from the optimal values of effective performance criteria, as forecasted on a case by case basis.

Depending on application variants (statistical - without taking into account importance or economic criteria - while considering importance criteria to establish competitiveness), the calculation of distances becomes as follows:

$$De(k) = \sqrt{\sum_{i=1}^n \left(1 - \frac{Ii(k)}{Ii(e)}\right)^2} \quad (1)$$

Where,
 $De(k)$ - the distance between each category of audited entities "k" and the standard category;
 $Ii(k)$ - the direct or indirect indicator of performance "i" of the category of audited entities k;
 $Ii(e)$ - the indicator of performance criteria „i" of the category of audited entities considered standard (with an optimal value for the respective criterion).

In this way, one will be able to estimate the evolution of the audit services market over a five-year time-span, compared to the current situation of Big Four companies, Non-Big Four ones and accredited professionals, depending on the size of audited companies.

4. Results and discussions

Based on the econometric calculations achieved with the help of the application STATgraphics Plus 3.0, we have assessed the optimal variant for each of the ten regression models, from the perspective of the correlation coefficient, R-Square, p-Value, the confidence level for forecasting, prediction and confidence limits. These results are presented synthetically in Table 2.

Table 2.

Selecting the best fitted models for regression analysis of performance criteria and the respective statistical parameters

No.	Performance criteria	Type of audit companies	Best fitted regression model for analysis from an economic and statistical viewpoint	Statistical parameters calculated for the evolution of performance criteria in the time-span 2008- 2012, regarding the most appropriate statistical model			
				Correlation coefficient	R-Squared	p-Value	Confidence level for forecasting
1	Total assets (mil euro)	Big Four (C_{BF})	Reciprocal - Total Assets	-0,9280	86,13%	0,0229	95%
		Non Big Four (C_{NBF})	Reciprocal - Year	0,8681	75,36%	0,0563	75%
		Professionals authorized (C_{PA})	Double reciprocal	-0,0402	0,16%	0,9488	95%
2	Net Turnover (mil euro)	Big Four (C_{BF})	Double reciprocal	0,3239	10,49%	0,5950	95%
		Non Big Four (C_{NBF})	Reciprocal - Year	0,9006	81,11%	0,0370	75%
		Professionals authorized (C_{PA})	Square root - Net turnover	-0,8931	79,77%	0,0413	75%
3	Equity (mil euro)	Big Four (C_{BF})	Reciprocal - Equity	-0,2169	4,70%	0,7261	85%
		Non Big Four (C_{NBF})	Square root - Year	-0,9877	97,56%	0,0016	95%
		Accredited professionals (C_{PA})	Linear	-0,9481	89,89%	0,0141	95%

No.	Performance criteria	Type of audit companies	Best fitted regression model for analysis from an economic and statistical viewpoint	Statistical parameters calculated for the evolution of performance criteria in the time-span 2008- 2012, regarding the most appropriate statistical model			
				Correlation coefficient	R-Squared	p-Value	Confidence level for forecasting
4	Net Result (mil euro)	Big Four (C_{BF})	Reciprocal - Year	0,5898	34,79%	0,2952	60%
		Non-Big Four (C_{NBF})	Double reciprocal	-0,7380	54,46%	0,1545	95%
		Accredited professionals (C_{PA})	Linear	-0,7006	49,09%	0,1875	75%
5	Number of employees (number)	Big Four (C_{BF})	Reciprocal - Year	0,8596	73,89%	0,0618	95%
		Non-Big Four (C_{NBF})	Reciprocal - Year	0,8962	80,32%	0,0395	90%
		Accredited professionals (C_{PA})	Reciprocal - Year	0,8930	79,74%	0,0413	85%

Source: Statistical data calculated by the author

The majority of statistical parameters calculated for each model indicate an average intensity - strong between dependent variables (Y) and the independent variable (X). Thus, the values calculated for the correlation coefficient within the intervals [-1; -0,3], respectively [0,3; 1], become particularly relevant. The regression models established are representative of the vast majority of dependent variables (a level calculated for an R-square of over 50%), while the values calculated in order to exhibit any statistically relevant relation are reasonable in the case of most statistical models, compared to the confidence level. On the basis of these statistical models, we have achieved a forecast of the value of the dependent variable over a five-year time-span. This period of time, comprised between 2013 and 2017, has been shaped at the same level (5 years) as the time-span from which we have extracted data in order to argue in favour of our forecast (2008-2012). The forecast results, as well as the intervals marking their potential variation, are presented in Table 3:

Table 3.*Values of performance criteria and safety intervals forecasted*

No	Performance criteria	Type of auditors	Best fitted model for regression analysis from an economic and statistical viewpoint	Value predicted	Predicted values for the period of time 2013- 2017 (5 years) with an average probability of 85,67%			
					Prediction limits for new observations		Confidence limits for the mean of many observations	
					Lower	Upper	Lower	Upper
1	Total assets (mil euro)	Big Four (C_{BF})	Reciprocal - total assets	7.783,53	6.047,20	10.918,6	6.619,60	9.444,08
		Non-Big Four (C_{NBF})	Reciprocal - Year	1.044,97	709,53	1.380,42	873,01	1.216,94
		Accredited professionals (C_{PA})	Double reciprocal	171,99	133,72	240,98	149,98	201,57
2	Net Turnover (mil euro)	Big Four (C_{BF})	Double reciprocal	2.739,54	-5.103,86	1.079,94	1.532,32	12.912,3
		Non-Big Four (C_{NBF})	Reciprocal - Year	644,76	511,94	777,58	576,67	712,85
		Accredited professionals (C_{PA})	Square root - Net turnover	65,64	45,69	89,18	52,99	79,63
3	Equity (mil euro)	Big Four (C_{BF})	Reciprocal - Equity	1.101,40	967,08	1.279,07	1.015,76	1.203,80
		Non-Big Four (C_{NBF})	Square root - Year	331,10	266,44	395,75	293,03	369,17
		Accredited professionals (C_{PA})	Linear	51,80	42,19	61,41	45,91	57,69
4	Net Result (mil euro)	Big Four (C_{BF})	Reciprocal - Year	74,56	25,36	123,76	49,34	99,78
		Non-Big Four (C_{NBF})	Double reciprocal	-23,37	-4,38	7,00	-7,25	19,10
		Accredited professionals (C_{PA})	Linear	-3,07	-6,04	-0,09	-4,89	-1,25
5	Number of employees (number)	Big Four (C_{BF})	Reciprocal - Year	14.046,6	13.241,4	14.851,8	13.633,8	14.459,4
		Non-Big Four (C_{NBF})	Reciprocal - Year	16.466,6	13.768,3	19.164,8	15.083,3	17.849,9
		Accredited professionals (C_{PA})	Reciprocal - Year	1.381,12	881,81	1.880,44	1.125,14	1.637,10

Source: Statistical data calculated by the author

To compare the current situation of audited values by each of the three categories of auditors (2008-2012) to the one forecasted (2013-2017), we shall turn to the application of the competition analysis method: the distance procedure or that of the standard company. This data is synthesised in Table 4:

Table 4.

Average values calculated (2008-2012) of parameters considered, so as to establish the evolution of audit companies for the time-span 2013-2017

No.	Parameter name	Effective value for the period 2008-2012			Statistically-estimated value over a five-year timeframe		
		(C_{BF})	(C_{NBF})	(C_{PA})	(C_{BF})	(C_{NBF})	(C_{PA})
1	Total Assets (mil euro)	6.653,51	1.312,08	172,76	7.783,53	1.044,97	171,99
2	Net Turnover (mil euro)	2.167,81	829,33	95,55	2.739,54	644,76	65,64
3	Equity (mil euro)	1.087,73	445,35	59,27	1.101,40	331,10	51,80
4	Net result (mil euro)	100,00	-22,16	-1,33	74,56	-23,37	-3,07
5	Number of employees (number)	14.297	17.829	1.684	14.047	16.467	1.381

Source: Statistical data calculated by the author

For each of the two time intervals, we have measured, for the three categories of auditors, the optimal value of total assets, net turnover, equity, net result and number of employees. Since it is desirable that each of these five performance criteria should yield the highest possible results for each audited company, it is considered that they become optimised through maximisation, namely the better value recorded will be the higher one. The distance procedure has involved, for each criterion associated with every auditor for all time intervals, measuring the distance to this greater value, considered to be optimal (standard value). The distance calculated has been measured in indicators. The shorter the distance to the standard value, the smaller the value recorded by the indicator (the respective auditor is closer to the standard, i.e. to the optimal level).

Table 5.

Forecasted evolution of audit companies for the time-span 2013-2017, on the basis of the distance procedure (points accumulated)

Category of auditor	Indicators calculated by applying the distance procedure for auditors		
	Average value calculated for the 2008-2012 period	Statistically forecasted value over a five-year timeframe	Variation
	Calculated value	Calculated value	
Big Four Companies (C_{BF})	0,198	0,148	-25,25%
Non-Big Four Companies (C_{NBF})	1,694	3,548	109,45%
Accredited professionals (C_{PA})	2,146	2,177	1,45%
Total	4,038	5,873	45,44%

Source: Statistical data calculated by the author

Results indicate the fact that, statistically speaking, auditors from the Big Four category are closer to the optimal level, in both cases. From an economic standpoint, this means they audit altogether the largest share of net turnover, total assets, capitals owned, profits and average number of employees. If we take into account the five aspects, we notice that Big Four companies lag behind only when it comes to the part dedicated to employees, namely the sole segment where they do not cover most of the audit market. From this point of view, we may state that the leaders of the audit services market are Big Four audit companies. If we consider the results of our research from a statistical and evolutionary perspective, it becomes evident that in the next five years, Big Four audit companies will experience smaller values with regard to the distance to the optimal level, by 25,25%. The economic importance of this is the fact that they will tend to increase their market share in the future, at the expense of Non-Big Four audit companies and accredited professionals. This conclusion relies on the tendency to increase the net turnover, total assets, average number of employees, capitals owned and audited profits in the future, dealt with by Big Four companies. The explanation may consist either of the increase in the number of companies that will contract audit services from the Big Four, or in the further enhancement of performance on the part of companies audited by the Big Four, at the expense of companies audited by the other categories of auditors.

On the other hand, Non-Big Four audit companies will meet with the most significant increase in distance, compared to the standard considered to be optimal, statistically speaking, in the next five years (109,45%). We expect these companies to lose some of their market share at a higher pace, as portrayed by the five performance criteria. Individual accredited auditors will not experience such a drastic decrease in terms of the segment of companies audited, since the distance to the standard company will only increase insignificantly (1,45%).

5. Conclusions

The methodology of our research has prompted us to combine several econometric notions, so as to select adequate regression models, with elements of financial analysis, in order to apply the distance procedure in measuring the remoteness to the standard company, i.e. to the optimal level. This paper has revealed the fact that Big Four auditors will meet with a steady improvement of their market share, in the next five years, from the viewpoint of total assets, net turnover, equity, profits and number of employees of audited companies. This does not necessarily mean that the number of companies audited by the Big Four will increase. It is likely that this context is also due to the increase in profitability and size of audited businesses by this category of companies. On the other hand, auditors from Non-Big Four companies will experience a prominent shrinkage of services provided, whilst individual financial auditors will not perceive this diminution of services at a very acute level, in the future.

The methodology is relevant, irrespective of the size of the sample group. Nevertheless, a thorough selection of the latter has led to our gathering pertinent information. For a more punctual prediction, one may expand this database, by collecting financial accounting data by means of financial statements from audited companies for a broader timeframe (more financial years). Such an endeavour would enhance the econometric parameters that measure the relevance and accuracy of the statistical models evaluated. This would entail building several models, based on higher values of correlation coefficients (tighter connection amongst the variables of the model), greater figures for the R-square (better representativeness of the regression model for the evolution of the quantified phenomenon), lower p-Values (a more representative statistical relation between variables, with a higher confidence indicator, i.e. over 95%). A

consequence of this would be the ability to predict more accurate values, over a broader time interval, with more restrained forecasting and confidence limits. The research may be furthered by including into the database, as well as into the forecast study, other parameters that are likely to paint a more complex picture of the growth that the audit services market exhibits: the evolution, for each of the three categories of auditors, of the number of audited companies, with foreign management or shareholders, of the structure based on areas of activity of audited companies, of the frequency of restructuring operations, of the territorial dimension (the number of locations where audited companies conduct their activity), of the form of organisation of the activity of audited companies (limited liability companies or joint-stock entities), of whether such audited companies are traded or not on the capital market. According to literature in the field, these are the determining factors in the matter of orientation of audited companies towards Big Four or Non-Big Four auditors. Thus, a more complex and accurate image may be formed, with regard to the evolutionary perspectives within the structure of audit services in Romania.

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FILM PRODUCTION FINANCING IN ROMANIA (THE NATIONAL CINEMA CENTRE)

BOGDAN ANDREI ILIESIU¹

ABSTRACT. There is a major difference regarding the audience numbers and the recorded revenues between the American film and the Romanian film. The Romanian film still benefits from limited audience even though it has obtained remarkable prizes in international festivals. Therefore, the necessity of financing the production of Romanian films, inclusively by the state granting financial support through the National Cinema Centre. The state financial support can take the form of interest-free reimbursable financial loans granted for the film production and the development of film projects (direct credit), non-reimbursable financial grants offered for the audience success of the film, its distinct artistic quality, its promoting and distribution (automatic non-reimbursable financial support) or fiscal facilities for the film production and distribution (indirect financial support). The purpose of this article was to create an information tool for all the film production companies interested in accessing funds from the National Cinema Centre in Romania.

Keywords: *National Cinema Centre, State support, Direct credit, Non-reimbursable support, Indirect support*

JEL Clasiffication: G390, H54

1. Introduction

From an economic point of view, the film possesses an atypical character. One first feature of this atypicality is represented by the film itself as a product, which is at the same time both a material product (film print) and an immaterial product (spectacle effect). By film as material

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product we understand the negative copy resulted from the production activity, meaning the matrix which is then multiplied in order to obtain positive copies, which are the release print copies, meant to be broadcast in cinema theatres. Multiplying these release prints is done from a few tens to thousands, and the unitary cost of their creation has nothing to do with the intrinsic value of the original matrix. The matrix is kept safe, the release prints are the ones that circulate among cinema halls. For the price of the entrance ticket the spectator receives a seat in the hall where he can see the film. Not for a moment does he have ownership of the film copy or, even less, of the original matrix. Thus, in relation to the spectator in the cinema hall, the film does not have the status of merchandise which is sold and bought, but it is consumed as an immaterial product. The merchandise status of the film remains only in relation between the producer, the distributor and the cinema theatre, but, in this situation too, the ones going around are the release prints, while the matrix remains the producer's property. It is similar in the case of digital technology, which tends more often to replace the film print. There is a matrix, by the multiplication of which are obtained the copies meant to be broadcast in cinema theatres. The second important feature of the film economy atypicality is represented by the cost of the act of consuming, meaning the price of the entrance ticket for the cinema hall. This price does not vary by film production cost, nor by the quality resulted from the performance effect. It is true that there may be variations in ticket price from one country to another, from capital to province or even from one hall to another, but these variations are not connected to the production cost or film quality either. In exchange for the ticket price, the viewer receives not as much the privilege of seeing a film, but more the service offered by the cinema hall owner: interaction with hospitable staff, the comfort of a seat, high visual and audio conditions. This fixed price of the entrance ticket pays more likely for the space than for the film. The viewer pays the same amount, regardless of the production cost of the film, which may differ from hundreds to thousands of times. The third feature of the film economy atypicality is represented by the fact that cinematography is a market for prototypes, as each film is in itself a unique and original creation, the commercial career of it depending on the viewer's subjectivity.

The Romanian film represents a widely-spread cultural commodity, as it conveys ideas and symbolic values which are important for the process of educating the civil society, and also a cultural service, as it responds to a cultural need. The major differences regarding the audience numbers and

the recorded revenues between the American film and the Romanian film in the last years risk threatening the cultural identity of the cinema of Romania. Although the Romanian film has recently achieved great success, it still benefits from a limited audience. The remarkable success obtained in international festivals proves the necessity of financing the production of Romanian films, inclusively by the state granting financial support through the National Cinema Centre (from now on referred to as NCC), for the companies which invest in the film production. The purpose of this article was to create an information tool for all the film production companies interested in accessing funds from the NCC in Romania.

Up to now, there is no paper or article in the academic literature discussing the topic of film production financing neither at international level, nor in Romania.

Among the most recent international studies, Ruelling & Pedersen (2010) discuss film festival from an organizational perspective. The authors also highlight the little research that exist on film festivals and productions from economic viewpoint.

At Romanian level, the Pricop's (2011) book must be mentioned. Even though it only tangentially approaches the topic of film production financing in Romania, the book is the only we could find that discusses film production economy aspects.

The methodology used during research was that of document analysis. In order to collect data, both qualitative and quantitative, I have searched, evaluated and selected information from official documents, such as the Government Ordinance no. 39/2005 regarding cinematography approved with modifications and completions by Law 328/2006 or numerous rapports, press releases, correspondences, databases, press materials of the NCC, available on the official site of the institution (<http://www.cncinema.abt.ro/>).

2. Discussion

In the year 2012, there are 81 functioning cinemas in Romania, with a total of 58,096 seats. Out of the 430 feature films exhibited, 221 are American films, and 56 are Romanian films. American films manage to gather almost 90% of the total audience numbers, 7,290,028 out of 8,348,538, generating almost 90% of the total revenues, 128,223,180 out of 144,793,811 RON. Romanian films only manage to gather 3.5%

of the total audience numbers, 297,487 out of 8,348,538, only generating 2.7% of the total revenues, 3,898,579 out of 144,793,811 RON (http://www.cncinema.abt.ro/Vizualizare-DocumentHTML.aspx?htm_ID=htm-284).

Table 1.

The Romanian film, the European film and the American film in Romanian cinemas

	2010	2011	2012
A. Functioning cinemas	68	75	81
B. Seats	50,733	56,728	58,096
C. Feature films	426	481	430
▪ Romanian Films	73	72	56
▪ European Films	147	152	131
▪ American Films	189	229	221
▪ Other countries	17	28	22
D. Audience	6,508,747	7,235,382	8,348,538
▪ Romanian Films	159,834	98,860	297,487
▪ European Films	527,948	389,573	747,095
▪ American Films	5,793,458	6,716,597	7,290,028
▪ Other countries	27,507	29,352	13,928
E. Revenues	111,640,783 RON	124,706,985 RON	144,793,811 RON
▪ Romanian Films	1,996,608 RON	1,214,255 RON	3,898,579 RON
▪ European Films	8,195,427 RON	5,685,462 RON	12,537,973 RON
▪ American Films	101,119,639 RON	117,416,920 RON	128,223,180 RON
▪ Other countries	329,109 RON	390,348 RON	134,079 RON
F. Frequency per inhabitant	0.30	0.38	0.43
G. Average ticket price	17.15	17.24	17.34

Source: author's research results based on http://www.cncinema.abt.ro/Vizualizare-DocumentHTML.aspx?htm_ID=htm-284

The main financing means for the film production in Romania consists in the state support scheme. The public authority responsible for implementing and administering the state support scheme is the NCC. NCC is a national interest institution, with legal entity, which is subordinated to the Ministry of Culture, Cults and National Heritage (<http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>, p. 2).

The state support scheme has the following aims: promoting culture and preserving the cultural heritage by supporting the development of film industry and cinematographic education in Romania; supporting film production by encouraging private initiative in creating, financing,

producing and distributing Romanian films or co-productions with Romanian participation (<http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>, p. 2).

In the year 2012, 30 out of the 37 Romanian productions or co-productions with Romanian participation (fiction, documentary, animation) are produced with NCC support.

Table 2.

Romanian films/co-productions with Romanian participation produced between 2010-2012

Romanian films/co-productions with Romanian participation produced	2010	2011	2012
A. Feature fiction films	19	11	19
A.1. With NCC support	18	11	14
▪ With 100% national financing	8	8	4
▪ Co-produced	10	3	10
National majority	8	2	8
National minority	2	1	2
A.2. Without NCC support	1	-	5
▪ With 100% national financing	1	-	5
▪ Co-produced	-	-	-
National majority	-	-	-
National minority	-	-	-
B. Feature documentary films	10	4	7
B.1. With NCC support	8	4	6
▪ With 100% national financing	6	2	4
▪ Co-produced	2	2	2
National majority	2	1	1
National minority	-	1	-
B.2. Without NCC support	2	-	1
▪ With 100% national financing	2	-	-
▪ Co-produced	-	-	1
National majority	-	-	-
National minority	-	-	1
C. Feature animations films	-	1	1
C.1. With NCC support	-	1	1
▪ With 100% national financing	-	1	1
▪ Co-produced	-	-	-
National majority	-	-	-
National minority	-	-	-
C.2. Without NCC support	-	-	-
▪ With 100% national financing	-	-	-

Romanian films/co-productions with Romanian participation produced	2010	2011	2012
▪ Co-produced	-	-	-
National majority	-	-	-
National minority	-	-	-
D. Short fiction film	5	11	9
D.1. With NCC support	5	10	8
▪ With 100% national financing	5	9	8
▪ Co-produced	-	1	-
National majority	-	1	-
National minority	-	-	-
D.2. Without NCC support	-	1	1
▪ With 100% national financing	-	1	-
▪ Co-produced	-	-	1
National majority	-	-	1
National minority	-	-	-
E. Short documentary films	5	-	-
E.1. With NCC support	3	-	-
▪ With 100% national financing	2	-	-
▪ Co-produced	1	-	-
National majority	1	-	-
National minority	-	-	-
E.2. Without NCC support	2	-	-
▪ With 100% national financing	2	-	-
▪ Co-produced	-	-	-
National majority	-	-	-
National minority	-	-	-
F. Short animation films	1	-	1
F.1. With NCC support	1	-	1
▪ With 100% national financing	1	-	1
▪ Co-produced	-	-	-
National majority	-	-	-
National minority	-	-	-
F.2. Without NCC support	-	-	-
▪ With 100% national financing	-	-	-
▪ Co-produced	-	-	-
National majority	-	-	-
National minority	-	-	-

Source: author's research results based on http://www.cncinema.abt.ro/Vizualizare-DocumentHTML.aspx?htm_ID=htm-284

The maximum intensity of the state support which can be granted is 50% out of the total budget of the production, except for the low budget films² or the difficult films³, situations for which the intensity of state support will not be higher than 80% of the total budget of the production. The maximum amount of the state support which can be granted to a cinematographic project is 16,000,000 RON (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, p. 20).

The current scheme of state support functions for the period of time between November 19th 2010 and December 31st 2014 and has a general budget of 347,000,000 RON, which means 80,680,000 EUROSt⁴ (<http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>, p. 2).

Table 3.

The budget distribution pattern for the period 2010-2014 (RON)

Allocated sum	2010	2011	2012	2013	2014	Total 2010-2014
Direct support	60,000,000	60,000,000	60,000,000	70,000,000	80,000,000	330,000,000
Indirect support	1,660,000	2,160,000	3,160,000	4,660,000	5,360,000	17,000,000
Total support	61,660,000	62,160,000	63,160,000	74,660,000	85,000,000	347,000,000

Source: <http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>

Table 4.

The budget distribution pattern for the period 2010-2014 (EURO)

Allocated sum	2010	2011	2012	2013	2014	Total 2010-2014
Direct support	13,950,000	13,950,000	13,950,000	16,280,000	18,600,000	76,730,000
Indirect support	390,000	500,000	730,000	1,080,000	1,250,000	3,950,000
Total support	14,340,000	14,450,000	14,680,000	17,360,000	19,850,000	80,680,000

Source: <http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>

² The low budget film is the film which has a budget minimum 50% lower than the medium budget of a film in the same category produced during the previous year.

³ The difficult film is the film with reduced chances of cinematographic exploitation, of cultural interest, the production of which is highly difficult and complex, for example historical films.

⁴ Exchange rate for November 19th 2010: 1 EURO=4.2972 RON

We notice in the table that the state support has two components: the direct support and the indirect support.

The direct support has two forms: the first one refers to interest-free reimbursable financial loans granted for the film production and the development of film projects (direct credit); the second one refers to non-reimbursable financial grants offered for the audience success of the film, its distinct artistic quality, its promoting and distribution (automatic non-reimbursable financial support).

The indirect support refers to granting fiscal facilities for the film production and distribution (indirect financial support).

The direct and indirect state support are granted from the Cinema Fund, which is constituted through collecting budgetary and extra budgetary contributions meant to finance this fund. The extra budgetary sources of which the Cinema Fund is constituted are the following: collecting a 2% contribution from the selling or renting price of a DVD or any other type of recorded format which can be multiplied; collecting a 4% contribution from the equivalent value of the advertising minutes sold by the public or private television channels; collecting a 3% contribution from the price of the advertising minutes sold from their own programme space by cable television companies; collecting a 3% contribution from the revenues obtained from film exploitation, in cinemas or in other areas designated for public viewing; collecting a 1% contribution from the monthly income obtained by economic agents for the digital broadcast of television programmes; collecting a 50% contribution from the income obtained from the privatization of cinemas; collecting the associated interest of the availabilities of the Cinema Fund from the State Treasury (Pricop, 2011, pp. 123-125).

The direct credit

The purpose of granting direct credit is to stimulate the development of cultural quality films by helping the producers involved in making such films, despite a lower profit rate (<http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>, p. 3).

The direct credit is granted for all types of films: fiction, documentary, animation, feature or short. It is also granted for the film project development of all types: fiction, documentary, animation, but only feature films. The direct credit granted for development cannot be larger than the 3% quantum of the medium value of the direct credit granted for a film made during the previous year. The projects which

benefit from development credit must necessarily enter the selection contests for the film production in maximum one year after the clinching of the direct credit contract for development (Pricop, 2011, p. 126).

There are two categories of potential beneficiaries of the state support as direct credit: the Romanian legal persons registered in the Registry of Cinematography and the foreign legal persons from other states of the European Economic Area⁵ which own branches or subsidiaries in Romania, registered in the Registry of Cinematography (the registration must take place at the latest before clinching the contract for receiving the state support won in the competition) and obeying the Romanian tax system (<http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>, pp. 3-4).

In order to be eligible, the beneficiaries must meet certain conditions, depending on their way of participation, in a Romanian film production or in the co-production of a film with Romanian participation.

The production companies of Romanian films must: to own a shared capital of minimum 20,000 RON or present a bank guaranty letter issued in the favour of NCC; to own contribution of minimum 6% of the total budget of the film, in cash, services or kind, and, in the case the project is selected, the producer must show documents to prove that he owns the other necessary funds; to keep the costs for the film producing company fee in the maximal quota of 10% of the total budget of the film, 10% for unexpected costs, 5% for the director fee, 4% for the screenwriter fee, 4% for the musical composer fee; to prove that it doesn't have any debts to the state budget or local budgets, the budgets of social state insurances and the Cinema Fund, except for the rates due to the NCC (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, p. 7).

The co-production companies of films involving Romanian participation must: to own a shared capital of minimum 4,000 EUROS or present a bank guaranty letter issued in the favour of NCC; to own financial participation of minimum 10% in the case of multilateral co-productions (with at least three producers), respectively minimum 20% in the case of bilateral co-productions; to have joint property rights over the negative and

⁵ As of 1 July 2013 the contracting parties to the EEA are 27 of 28 EU states (Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom) and 3 of 4 EFTA states (Iceland, Liechtenstein and Norway). Croatia, the 28th and newest EU member, is currently negotiating their membership in the EEA.

film exploitation rights on the Romanian territory; to ensure technical and artistic participation to the film production, proportionally with the investment input; to take the obligation of mentioning in the main titles and in the advertising materials that the film was made with NCC support (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, pp. 7-8).

The applying project selection is carried out by boards (constituted by members nominated by the unions and associations in the film industry) together with the administrative board of NCC (<http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>, p. 3).

The direct credit is granted in the following manner: 50% of the total amount, at the beginning of the preparation period; 20% at half filming period; 20% at the end of the filming period; 10% when the standard copy is submitted (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, p. 6).

In order to benefit from the direct credit, a film must qualify as Romanian or involving Romanian participation. A minimum of 65 out of 100 points qualifies a film as being Romanian. A minimum of 35 out of 100 points qualifies a film as involving Romanian participation (<http://www.cncinema.abt.ro/Files/Documents/fls-1128.pdf>).

Table 5.

Criteria for evaluating qualification of a film as Romanian or involving Romanian participation

Criterion		Score
Romanian authors	Director	15
	Writer	7
	Composer	3
Romanian producer		15
Romanian language		10
Romanian actors	Leading actor	10
	Supportive actor	5
Romanian artistic and technical team	Director of photography	4
	Scenographer	1
	Costume designer	1
	Sound engineer	2
	Make-up artist	1
	Editor	2
	Other technicians	2
	Day laborers	2

Criterion		Score
Equipment, locations and post-production in Romania	Locations (at list half of them in Romania)	4
	Equipment	4
	Sound post-productions	5
	Editing and lab	7

Source: <http://www.cncinema.abt.ro/Files/Documents/fls-1128.pdf>

The projects then go through the stage of cultural test evaluation. The aim of the cultural test is to evaluate the main elements which provide value to the production: the quality of the script is analysed (accounting for 50% of the final score), the director quality (accounting for 25% of the final score) and the producer quality (accounting for 25% of the final score) (<http://www.cncinema.abt.ro/Files/Documents/fls-1126.pdf>, pp. 3-4).

The script quality analysis is carried out based on a set of criteria, depending on the type of the production: fiction film, animation film, documentary film. The assessment of the scripts' cultural value is carried out by awarding a score from 1 to 10 for every criterion. The score for each script results from calculating the arithmetic mean of the scores awarded for every criterion by each board member. For the scripts of fiction, feature films and short films, the highest mean and the lowest mean will not be taken into consideration for determining the final script score (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, p. 9).

Table 6.

Criteria for evaluating script quality

Fiction film	Animation film	Documentary film
Originality of the subject	Originality of the subject	Originality and novelty degree of the subject
Dramaturgical perspective and dialogue quality	Sketches, drawings and character description	Originality of processing
Interest and impact potential on the audience	Interest and impact potential on the audience	Interest and impact potential on the audience
International representation potential	International representation potential	International representation potential

Source: author's research results based on <http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>

The quality analysis of the film director is carried out in two stages. In the first one, the quality of the director is analysed based on the best film made in his career. The score is calculated based on a set of criteria. Each criterion is awarded a score which is multiplied with its importance coefficient, thus obtaining the final score for the respective criterion. The final scores for each criterion are added up, thus obtaining the total score for the best film made by the director. 40% is then taken out of this score, thus obtaining the final score for the director quality analysis regarding the best film in his career. In the second stage the director quality is analysed based on one of his last two films, at his choice. The score is calculated with exactly the same set of criteria as in the case of the best film in the director's career. The calculus is almost identical. Each criterion is given a score which is multiplied by its importance coefficient, thus obtaining the final score for the respective criterion. The final scores for each criterion are added up and the total score is obtained. 60% is taken out of this score, thus obtaining the final score for the director quality analysis regarding the film chosen by him out of the last two made in his career. There is the possibility, for instance, in the situation of a director who has only made one or two feature films, that the film analysed in the two stages to be the same film. The scores for the two stages are added up, thus obtaining the total score for the quality of the director. The total percentage of the director quality in the final score of the project is 25% (<http://www.cncinema.abt.ro/Files/Documents/fls-1129.pdf>).

Table 7.*Criteria for evaluating director quality*

Criterion	Score	Importance coefficient	Maximum score	Final score
Film audience numbers in Romania				10
▪ Over 50,000	10	1	10	10
▪ 45,000 – 50,000	9	1	-	-
▪ 40,000 – 45,000	8	1	-	-
▪ 35,000 – 40,000	7	1	-	-
▪ 30,000 – 35,000	6	1	-	-
▪ 25,000 – 30,000	5	1	-	-
▪ 20,000 – 25,000	4	1	-	-
▪ 15,000 – 20,000	3	1	-	-
▪ 10,000 – 15,000	2	1	-	-
▪ 5,000 – 10,000	1	1	-	-

FILM PRODUCTION FINANCING IN ROMANIA (THE NATIONAL CINEMA CENTRE)

Criterion	Score	Importance coefficient	Maximum score	Final score
Film participation in international festivals				10
A. International prizes				7
▪ A category festivals, Oscar, EFA ⁶	10	0.40	4	4
▪ Other I.F.F.P.A. ⁷ festivals	8	0.20	1.60	1.60
▪ Other festivals favoured by NCC	7	0.20	1.40	1.40
B. International selections				3
▪ A category festivals, Oscar, EFA	10	0.15	1.50	1.50
▪ Other I.F.F.P.A. festivals	8	0.10	0.80	0.80
▪ Other festivals favoured by NCC	7	0.10	0.70	0.70
Commercial success of the film				5
A. Distribution in cinema halls				3
▪ In at least two foreign countries	10	0.30	3	3
▪ In one foreign country	5	0.30	-	-
B. National or international televisions which have purchased the film				2
▪ At least ten televisions	10	0.20	2	2
▪ Nine televisions	9	0.20	-	-
▪ Eight televisions	8	0.20	-	-
▪ Seven televisions	7	0.20	-	-
▪ Six televisions	6	0.20	-	-
▪ Five televisions	5	0.20	-	-
▪ Four televisions	4	0.20	-	-
▪ Three televisions	3	0.20	-	-
▪ Two televisions	2	0.20	-	-
▪ One television	1	0.20	-	-
Total score for director quality				25
A. Total score - best film in the career		0.40	25	10
B. Total score - film at choice out of the last two		0.60	25	15

Source: author's research results based on
<http://www.cncinema.abt.ro/Files/Documents/fls-1129.pdf>

In the situation of debut feature films, the director quality is evaluated based on a short film or a student film made by him, at his choice. The score is calculated based on a set of criteria. Each criterion is awarded a score. The score is multiplied by the importance coefficient of the criterion, thus obtaining the final score for the respective criterion.

⁶ European Festivals Association

⁷ The International Federation of Film Producers Associations

The final scores for all the criteria are added up, thus obtaining the total score for the debutant director quality. The total percentage of the debutant director quality in the final score is 25% (<http://www.cncinema.abt.ro/Files/Documents/fls-1129.pdf>).

Table 8.*Criteria for evaluating debutant director quality*

Criterion	Score	Importance coefficient	Maximum score	Final score
Participation in international festivals with a short/student film				15
A. International prizes				10
▪ A category festivals, Oscar, EFA	10	0.50	5	5
▪ Other I.F.F.P.A. festivals	10	0.30	3	3
▪ Other festivals favoured by NCC	10	0.20	2	2
B. International selections				5
▪ A category festivals, Oscar, EFA	5	0.50	2.5	2.5
▪ Other I.F.F.P.A. festivals	5	0.30	1.5	1.5
▪ Other festivals favoured by NCC	5	0.20	1	1
Commercial success of the film				10
B. National or international televisions which have purchased the film				10
▪ At least ten televisions	10	1	10	10
▪ Nine televisions	9	1	-	-
▪ Eight televisions	8	1	-	-
▪ Seven televisions	7	1	-	-
▪ Six televisions	6	1	-	-
▪ Five televisions	5	1	-	-
▪ Four televisions	4	1	-	-
▪ Three televisions	3	1	-	-
▪ Two televisions	2	1	-	-
▪ One television	1	1	-	-
Total score debutant director quality				25

Source: author's research results based on <http://www.cncinema.abt.ro/Files/Documents/fls-1129.pdf>

The quality analysis of the film producer is also carried out in two stages. In the first one, the quality of the producer is analysed by the best film made in his career. The score is calculated based on a set of criteria. Each criterion is awarded a score which is multiplied with its importance coefficient, thus obtaining the final score for the respective

criterion. The final scores for each criterion are added up, thus obtaining the total score for the best film made by the producer. 40% is then taken out of this score, thus obtaining the final score for the producer quality analysis regarding the best film in his career. In the second stage the producer quality is analysed based on one of his last two films, at his choice. The score is calculated on exactly the same set of criteria as in the case of the best film in the producer`s career. The calculus is almost identical. Each criterion is given a score which is multiplied by its importance coefficient, thus obtaining the final score for the respective criterion. The final scores for each criterion are added up and the total score is obtained. 60% is taken out of this score, thus obtaining the final score for the producer quality regarding the film chosen by him out of the last two made in his career. The scores for the two stages are added up, thus obtaining the total score for the quality of the producer. The total percentage of the producer quality in the final score of the project is 25% (<http://www.cncinema.abt.ro/Files/Documents/fls-1130.pdf>).

Table 9.

Criteria for evaluating producer quality

Criterion	Score	Importance coefficient	Maximum score	Final score
Film audience numbers in Romania				5
▪ Over 50,000	10	0.5	5	5
▪ 45,000 – 50,000	9	0.5	-	-
▪ 40,000 – 45,000	8	0.5	-	-
▪ 35,000 – 40,000	7	0.5	-	-
▪ 30,000 – 35,000	6	0.5	-	-
▪ 25,000 – 30,000	5	0.5	-	-
▪ 20,000 – 25,000	4	0.5	-	-
▪ 15,000 – 20,000	3	0.5	-	-
▪ 10,000 – 15,000	2	0.5	-	-
▪ 5,000 – 10,000	1	0.5	-	-
Film participation in international festivals				7
A. International prizes				5.25
▪ A category festivals, Oscar, EFA	10	0.30	3	3
▪ Other F.I.P.P.F. festivals	8	0.15	1.20	1.20
▪ Other festivals favoured by NCC	7	0.15	1.05	1.05

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Criterion	Score	Importance coefficient	Maximum score	Final score
B. International selections				1.75
▪ A category festivals, Oscar, EFA	10	0.10	1	1
▪ Other F.I.P.P.F. festivals	8	0.05	0.40	0.40
▪ Other festivals favoured by NCC	7	0.05	0.35	0.35
Commercial success of the film				5
A. Distribution in cinema halls				2
▪ In at least two foreign countries	10	0.20	2	2
▪ In one foreign country	5	0.20	-	-
B. National or international televisions which have purchased the film				3
▪ At least ten televisions	10	0.30	3	3
▪ Nine televisions	9	0.30	-	-
▪ Eight televisions	8	0.30	-	-
▪ Seven televisions	7	0.30	-	-
▪ Six televisions	6	0.30	-	-
▪ Five televisions	5	0.30	-	-
▪ Four televisions	4	0.30	-	-
▪ Three televisions	3	0.30	-	-
▪ Two televisions	2	0.30	-	-
▪ One television	1	0.30	-	-
Pay back of the previous direct credits				1
▪ Over 50%	10	0.10	1	1
▪ 45%- 50%	9	0.10	-	-
▪ 40% - 45%	8	0.10	-	-
▪ 35% - 40%	7	0.10	-	-
▪ 30% - 35%	6	0.10	-	-
▪ 25% - 30%	5	0.10	-	-
▪ 20% - 25%	4	0.10	-	-
▪ 15% - 20%	3	0.10	-	-
▪ 10%- 15%	2	0.10	-	-
▪ 5% - 10%	1	0.10	-	-
Financial contribution to the project at the moment of submitting the project				7
▪ 70% of the budget	10	0.70	7	7
▪ 65%-70% of the budget	9	0.70	-	-
▪ 60%-65% of the budget	8	0.70	-	-
▪ 55%-60% of the budget	7	0.70	-	-
▪ 50%-55% of the budget	6	0.70	-	-

Criterion	Score	Importance coefficient	Maximum score	Final score
▪ 45%-50% of the budget	5	0.70	-	-
▪ 40%-45% of the budget	4	0.70	-	-
▪ 35%-40% of the budget	3	0.70	-	-
▪ Sub 35% of the budget	2	0.70	-	-
Total score producer quality				25
A. Total score - best film in his career		0.40	25	10
B. Total score - film at choice out of the last two		0.60	25	15

Source: author's research results based on
<http://www.cncinema.abt.ro/Files/Documents/fls-1130.pdf>

The ranking of the projects in descending order of the scores comes next, and then the direct credit granting according to the hierarchy, until the exhaustion of the sums allocated for the respective contest session (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, p. 10).

The organisation of the selection contests for granting the direct credit is done twice a year, in an open and transparent competitive system. The selection sessions are announced by publication in the mass media and by display on the site and at the NCC headquarters, at least 30 days before the deadline for the submission of the application files. The selection of the featured and short fiction film is carried out by a board formed by five members. The documentary and animation film selection is carried out by boards formed by three members. The selection board members are designated for each contest session. On the public announcement day of the contest, NCC communicates the total value of the budget for the respective contest session, allocating a minimum of 15% from this budget for the debut fiction feature films, a minimum of 5% for the fiction short films, a minimum of 10% for the documentary films and a minimum of 10% for the animation films (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, pp. 11-12).

The direct credit reimbursement to NCC is done from the first incomes brought by the film. The reimbursement percentage from the incomes is equal to the crediting percentage granted by the NCC in the film budget. The credit reimbursement duration is ten years (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, p. 14). In the case of reimbursement which is not complete, the producer loses the film in favour of the NCC, which also overtakes the task of film capitalisation, until complete credit retrieving (Pricop, 2011, p. 124).

The automatic non-reimbursable financial support

This support is granted to: producers and directors of a Romanian film or film involving Romanian participation which records public success, having a number of paying audience larger than the reference threshold, which means the average number of paying audience for a Romanian film or co-production with Romanian participation; producers and directors for the distinct artistic quality of a Romanian film or film made with Romanian participation, selected or prize-winning at the Oscar, the European Film Academy, A category international festivals I.F.F.P.A. accredited; the distributors of Romanian films or co-productions with Romanian participation; cultural managers, in order to encourage the functioning of cinema theatres, the organisation and participation in internal and international film festivals, supporting the culture and cinematographic education programmes, editing specialised publications (Pricop 2011, pp. 126-128).

Indirect financial support

The purpose of indirect financial support granting is to encourage the co-producers and financers to financially participate in the production, with NCC paying back a part of the paid tax (tax rebate) or granting them discounts for taxes and dues (tax breaks), such as toll discounts for imports (Pricop 2011, pp. 128-129).

The potential beneficiaries of the indirect financial support are Romanian legal persons registered in the Registry of Cinematography, which participate in making a cinematographic film as producers, and foreign legal persons from the member states of the European Economic Area registered in the Registry of Cinematography, which have a branch/subsidiary in Romania and participate in the making of a cinematographic film as co-producers or financers. Producers and co-producers who meet the following requirements are eligible: they hold a shared capital of minimum 20,000 RON, respectively 4,000 EUROS; they don't have any debts at the state budget or local budgets, the budgets of social state insurances and the Cinema Fund, except for the rates due to the NCC; they can prove that they are taxpayers on the territory of Romania (<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, pp. 15-16).

The indirect financial support is not granted for the making of the following types of cinematographic productions: projects which spread defamation of the country and nation, the law order or the constitutional

principles, which instigate to wars or discrimination on nationalist, racist, ethnical, religious or sexual orientation criteria; projects which contain, in images or language, pornographic or obscene elements; projects which harm the dignity, honour, private life of a person; projects which directly or indirectly instigate to violence; projects with an electoral, political or religious propaganda character
(<http://www.cncinema.abt.ro/Files/Documents/fls-1127.pdf>, p. 16).

The indirect financial support is granted to films which already benefit from the direct credit or films on-demand⁸, which have the quality of being a cultural product. In the case of the films which benefit from the direct credit, the quality of cultural product is already determined. In the case of on-demand films, the quality of cultural product is determined objectively and in a transparent way, based on a set of criteria, collecting a minimum of 20 cumulative points, out of which a minimum of 10 points for the A1, A2 and A3 criteria, being compulsory
(<http://www.cncinema.abt.ro/Files/Documents/fls-1134.pdf>).

Table 10.

Criteria for determining cultural product quality

Criterion	Score	Maximum Score	Final score
A. Cultural content			24
A1. Film considered as taking place in Romania			5
▪ In proportion of at least 70%	5	5	5
▪ In proportion of at least 60%	4	-	-
▪ In proportion of at least 50%	3	-	-
▪ In proportion of at least 20%	2	-	-
A2. The main characters are Romanian citizens/residents			5
▪ One out of three is from Romania	2	-	-
▪ Two out of three are from Romania	3	-	-
▪ All of them are from Romania	5	5	5
A3. Film which is based on a Romanian topic			6
▪ It presents a Romanian topic	6	6	6
A4. The universal/European cultural contribution of the film			4
▪ It is based on a universal topic	1	1	1
▪ The filming locations are European	1	1	1
▪ The main characters are global/European	1	1	1

⁸ Films on demand are custom-made films produced by companies as executive producers.

Criterion	Score	Maximum Score	Final score
▪ An actor nominated in an important festival is participating	1	1	1
A.5. The original dialogue of the film is in Romanian/the language of a Romanian minority			4
▪ In proportion of 60%	4	4	4
▪ In proportion of 50%	3	-	-
▪ In proportion of 30%	2	-	-
B. The cultural contribution of the film for Romania			6
▪ Significant contribution to the cultural heritage	3	3	3
▪ Significant contribution to cultural diversity	2	2	2
▪ Contribution through the narrative and creative approach	1	1	1
C. Practitioners (nationality/residence in the EEA member states)			8
Producer - co-producer	1	1	1
Director	1	1	1
Screenwriter	1	1	1
Composer	1	1	1
Lead actors	1	1	1
Majority of the cast	1	1	1
Department directors (photography, sound, etc.)	1	1	1
Majority of the team	1	1	1
D. Cultural hubs (studio/filming locations, post-production studio, etc.)			4
Over 40% of the expenses are made in Romania	4	4	4
Less than 40% of the expenses are made in Romania	0	-	-
Total score cultural product quality			42

Source: author's research results based on
<http://www.cncinema.abt.ro/Files/Documents/fls-1134.pdf>

3. Conclusions

The purpose of this article was to create an information tool for all the film production companies interested in accessing funds from the National Cinema Centre in Romania.

The Romanian film represents both a widely-spread cultural commodity and a cultural service. The major differences regarding the audience numbers and the recorded revenues between the American film and the Romanian film in the last years risk threatening the cultural identity of the cinema of Romania. Although the Romanian film has recently

achieved great success, it still benefits from a limited audience. The remarkable success obtained in international festivals proves the necessity of financing the production of Romanian films, inclusively by the state granting financial support through the National Cinema Centre, for the companies which invest in the film production. The state support scheme has the aims of supporting the development of film industry, culture and cinematographic education in Romania and encouraging the private initiative in the field of creating, financing, producing and distributing Romanian films or co-productions with Romanian participation.

The state support has two components, the direct support and the indirect support. As its turn, the direct support has two forms, the first refers to interest-free reimbursable financial loans granted for the film production and the development of film projects (direct credit), the second refers to non-reimbursable financial grants offered for the audience success of the film, its distinct artistic quality, its promoting and distribution (automatic non-reimbursable financial support). The indirect support refers to granting fiscal facilities for the film production and distribution (indirect financial support).

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