

# THE CHANGING ROLE OF ACCOUNTANTS IN A TRANSITION ECONOMY – EVIDENCE FROM ROMANIA

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*ABSTRACT: Recently a number of interventions have impacted the Romanian accounting system, such as the harmonization with the European Directives, International Financial Reporting Standards (IFRS), and an increased move towards modern information technologies such as Enterprise Resource Planning (ERP) software. In this study we directly explore these influences by applying job offer analysis as a reflection of current and future organizational practices (Bollecker, 2000). We determine the competencies expected from accountants in Romanian businesses and ask whether financial accounting and management accounting are separate specialized positions in Romania, or are they developing into hybrid monist positions? We conclude that the state of the Romanian accounting profession is one of transition with some alignment with recent global trends. However, our inter-temporal analysis also suggests a degree of intransience with management and financial accountants, whilst sharing some common competencies, still maintaining a number of attributes associated with the two-cycle accounting system. Finally, we show that ERP competencies are the more important drivers of the hybridization of accountants in Romania.*

*Keywords: accountants in transition, hybridization of accounting roles, Romanian accounting profession, two-cycle accounting system, enterprise resource planning, job-offer analysis*

*JEL Codes: M40*

## **1. Introduction**

After the fall of communism in December 1989, Romania underwent a number of drastic economic and accounting reforms that more reflected western business principles. For example, the privatization of state-owned companies, a policy of enhanced competitiveness, internationalization, and receptiveness of capital inflows and investment opportunities. According to the World Bank (2007), this has resulted in a fast growing GDP, declining inflation, and improved social indicators. Further, wages in Romania are reported to have recently increased towards wages in other Central and Eastern European Countries (PWC PayWell 2007 Report). There are also some negative indicators with Romania ranked last but one in January 2007 in respect to the statutory minimum wage across the twenty Member States of the European Union, and last in respect to purchasing power parity (Eurostat, 2007). This shows that, as yet, the Romanian economy is still in a transition stage.

Romania's opening towards the West also generated a greater degree of harmonization in business regulations, the introduction of new management techniques and, in particular, an increased reformation in accounting practices and principles. The accounting reforms followed two major steps. In 1993-1994 an accounting system based on the French code law model was first implemented which was then followed by a system of "Anglo-Saxon" inspired reforms beginning in 1999 and culminating in the adoption of International Financial Accounting Standards (IFRS) in 2005 for listed companies for consolidated financial statements. The "conformité et

régularité” specific to the French accounting system was highly valued by Romanian accountants and the information relevance perspective of Anglo-Saxon accounting has induced some controversy. The latter step was even considered by some as a “cultural intrusion” (Delesalle and Delesalle, 2000; Roberts, 2000).

The general question then is what, if any, impact has these changes made to the role of accountants in Romania? Previous research has documented that internationalization is a key driver of role changes for accountants (Burns and Baldvinsdottir, 2005; Granlund and Lukka 1998a); in particular, the globalization of markets, increased competition, advanced information technologies, harmonization of financial accounting legislation, and the influence of transnational companies. However, impediments have also been identified such as the embedded national legislation and different national cultures. Daske *et al.* (2007) categorise firm adopters of international accounting legislation as serious adopters or label adopters. We extend this definition to Romania as a whole. If Romanian firms are serious adopters of international accounting legislation, then the requirements for accounting positions should reflect the inherent changing emphasis towards decision making. We study the changing role of accountants in a transition economy which supplements prior studies that analyze the *process* of IFRS implementation in Romania (for example Ionaşcu *et al.*, 2007), and contributes to the scarcity of research about induced reform of the accounting function. In particular, we incorporate the premise by Haldma and Lääts (2002) that changes in financial accounting from international regulations may contribute to significant ‘improvements’ in management accounting practices.

This leads us to ask the following specific research questions: What are the current expectations for a Romanian accountant in business? Do these expectations match a decision oriented approach? Do the job role requirements of management and financial accountants differ? Has there been any change over time? Can we link those changes (if any) to the recent Romanian adherence to the international requirements for financial accounting reports? To answer these questions we apply job offer analysis in order to obtain an overview of the expectations and roles of accountants.

This article is likely to be of interest to an international audience in both practice and academia for several reasons. First, we pragmatically examine the evolution of the accounting profession to an exogenous shock, a trend that promises to continue on a Global basis. Second, we recognize the problem of organizing the accounting system as either a one function (the so-called *monist system*) or two functions (*dualist system*). This issue will be of interest to both a US and a European audience since their respective accounting systems represent both alternatives. For example, *le système croisé* has been advocated in the French accounting system, whereby financial reporting is effectively decoupled from cost or managerial accounting (Stolowy and Touron, 1998; Elad, 2000). Third, to the best of our knowledge, no article published in international journals examines the international impact on the Romanian accounting profession, one of the two latest members of the European Union. Romania is an interesting country from a case study perspective having, initially, a close relationship with France after adopting similar economic and political characteristics that led to the French accounting system being replicated in Romania (Delesalle and Delesalle, 2000). In turn, this was diluted by the 1999 (political) implications of the World Bank as a substantial funding institution, by the increasing influence of Scottish accountants, and the recent accession of Romania to the European Union. This stimulated the accounting system to move towards Anglo-Saxon based principles. Thus, leaving the Romanian profession with unfamiliar problems, misunderstandings, and a viewpoint that the establishment of just another (management) accounting system was an intrusion and an imposition by others into the internal affairs of their business (Delesalle and Delesalle, 2000; Roberts, 2000). By taking a temporal snapshot and by analyzing the specified job requirements of new accounting appointments, we examine whether the above views have evolved.

Briefly, our results indicate that financial and managerial accounting positions do not form one homogeneous group with respect to required job competencies; but we also identify a hybrid grouping which requires overlapping competencies. Further, over the research period, the size of this group appears to grow. We conclude that the state of the Romanian accounting profession is one of transition with some alignment with recent global trends. However, there is a degree of intransience with management and financial accountants, whilst sharing some common competencies, still maintaining a number of attributes associated with the two-cycle accounting system. We also examine the most important competency. The literature (Bescos, 2002; Caglio, 2003; Scapens and Jazayeri, 2003; Jones and Luther, 2005) reports that ERP, IFRS, environmental and personal competencies are drivers of the hybridization of accounting roles. Our findings are partially consistent with these studies with the probit model showing ERP competencies are more important for the hybrid role of accountants in Romania.

The remainder of the paper is structured as follows. The following section provides a short description of the Romanian business environment and accounting system and continues by describing current international trends. Several research questions evolve from this overview. Sections three and four discuss the research methods and present the results, with contributions and directions for future research presented in the final section.

## **2. Background overview and research questions**

### **2.1 Economic reform**

According to the World Bank Romania is experiencing positive economic changes with GDP growth at 7.7% in 2006 (up from 4.1% in 2005) with declining inflation (4.9% in 2006 from 8.3% in 2005) in conjunction with improving social indicators (World Bank, 2007). However, the economy is still in transition and faces several challenges. The current account deficit has widened to around 10.7% of GDP in 2006 (up from 8.7% in 2005) and it is forecasted to reach over 12% in 2008/9 driven by a growing trade deficit. Also, according to the World Bank's latest 'EU8+2 Regular Economic Report', the economic outlook for the EU8+2 in 2008 and 2009 is generally positive but subject to substantial downside risk for economic growth and upside risk for inflation. Romania also ranked last but one in January 2007 in respect to the statutory minimum wage across the twenty Member States of the European Union and one candidate country, and last in respect with purchasing power parity (Eurostat, 2007). Also, Romania had the lowest GDP per inhabitant expressed in terms of purchasing power standards in the EU27's 271 NUTS-2 regions (24% of the EU27 average in the region of Nord-Est) (Eurostat, 2008). Wage inflation is also a growing problem. The average net wage in Romania increased by 37% in 2007 (Deutsche Welle, 2008), and wages in Romania are reported to have recently rapidly increased towards wages in other Central and Eastern European Countries (PricewaterhouseCoopers PayWell 2007 Report). Finally, although Romania significantly accelerated the implementation of structural and institutional reforms after 2000 to enable EU-integration, several structural reforms however still need to be completed or further developed despite successful completion of the accession process in January 2007 (World Bank, 2007). On the face of it, these structural changes call for careful management by both macro and micro managers.

### **2.2 Accounting reforms**

The accounting reforms in Romania generated considerable debate in the national and international literatures (Feleagă, 1992; Delesalle and Delesalle, 2000; Bunea, 2006; Ionaşcu *et al.*, 2007). Ionaşcu *et al.* (2007) recently outlined detailed explanations underlying the culture and postulates of the Romanian accounting system process. According to them:

"From its very beginning, the process of accounting regulation was a public one, deriving from a legislative process where the Ministry of Finance is the main actor." (p.174).

There were two main stages. The first stage was based on French code law accounting with the second stage an Anglo-Saxon-IFRS-oriented one. These changes and the entire evolution were not without their critics (see Roberts, 2000; Bunea, 2006; Ionașcu *et al.*, 2007), with the main objections aimed at the second phase which was referred to as a “cultural or economical intrusion” by Delesalle and Delesalle (2000) or as “[...] another case of cultural intrusion?” by Roberts (2000). One of the pragmatic problems was the changed conceptual basis. In this regard, Bunea (2006) reports a number of problems that occurred after January 1<sup>st</sup> 2006 (when the declared purpose of the national regulator was to establish a national strategy for IFRS application), that prevented any real improvement of the quality of financial reporting.<sup>1</sup> Among these were: the lack of financial resources to implement IFRS, difficulties perceived by the Romanian accounting profession in exerting professional judgment as required by IFRS, Romanian accountants being used to apply only taxation treatments, and the poor awareness of Romanian managers with regard to applying valuation concepts.<sup>2</sup>

Moreover, one of the significant differences between the French and the Anglo-Saxon accounting systems is the relationship between financial and management accounting. In most European continental countries there is a clear separation between financial and management accounting, with the accounting process being generally organized into two separate cycles (the so-called *two-cycle accounting system*, or *dualist accounting system*) (Joseph *et al.*, 1996; Caglio, 2003; Jones and Luther, 2005). One is concerned with meeting the statutory requirements (financial accounting) and the other is concerned with supporting decision making by management (management accounting). Similar to continental European countries, Romania has a two-cycle accounting system (Feleagă, 1996), driven by the French influence during the first step of the accounting reform and to the use of information produced by financial accounting mostly by the State. Traditionally, Romanian financial accounting is more closely related to tax objectives than to managerial issues.<sup>3</sup> In Anglo-Saxon countries there is a more integrated approach. For example, a survey conducted in the UK by Joseph *et al.* (1996), concluded that companies, in general, integrated their financial accounting and management accounting systems.

### ***2.3 Impacting the accountant in business***

Previous research identified an increasing role of “transnational practices” due to the globalization process (Jones and Luther, 2005), a phenomenon of convergence driven by harmonization of accounting legislation (Granlund and Lukka, 1998a; Byrne and Pierce, 2007) and a hybridization within the accounting profession as a result of Enterprise Resource Planning (ERP) software implementation (Caglio, 2003). Moreover:

“...integration is increasingly needed in the business environment. This need emerges from the efficiency and synergy requirements necessary in a complex and turbulent environment.

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<sup>1</sup> Until then, between 2001 and 2005, small and medium enterprises (SMEs) applied an accounting system based on the 4<sup>th</sup> European Directive. Large enterprises had to apply OMFP 94/2001, where they were supposed to apply IFRS even in individual company accounts, and also present financial statements in accordance with the 4<sup>th</sup> European Directive. For 2007, only listed companies applied IFRS and only for consolidated financial statements. In 2008, the companies that apply IFRS are mostly insurance companies, public interest and other national companies. While various official statements refer to this national strategy as already agreed-upon, it has yet to be made public.

<sup>2</sup> Managers conceived this requirement as simply a shift of presentation of financial statements rather than the implementation of accounting policies in accordance with a reflection of ‘economic reality’ of their enterprises.

<sup>3</sup> Talking about “accounting” in Romania usually means “financial accounting” and “cost calculations for financial statement purposes”. This is due to a number of factors, including: the perpetual role of the accounting system to serve the State for tax purposes, the continuous reform of financial accounting, and the perceived role of management accounting in companies, which is to calculate costs for inventory measurement. In having this perception, businesses are also influenced by academia, that mistakenly used the term “management accounting” for what really was “cost calculation”; as such, companies do not understand the full potential of management accounting and limit themselves to the mandatory purpose of cost calculation. With regard to the role of management accountants in Romania, to the best of our knowledge no study has yet been conducted.

In other words, integration is needed to facilitate co-ordination, which is again related to the building of competitive advantages.” (Granlund and Malmi, 2002, p.305).

The role of accountants in business is analyzed in the previous literature as a close relationship with the competencies<sup>4</sup> required from such professionals (see Bescos, 2002; Bollecker, 2000; Boritz and Carnaghan, 2003; Fornerino *et al.*, 2003; Palmer *et al.*, 2004; Harrington, 2005). For example, Byrne and Pierce (2007) consider the characteristics associated with the roles of management accountants are linked to their competencies (such as business knowledge, interpersonal skills, IT skills, personal qualities) and to their activity (information provider, decision supporter, ad-hoc analysis, administration, use of techniques). Competencies are usually fundamentally related to a specific job and to the required tasks to be performed, and the issue of competence and its assessment has become a major topic within the profession (IFAC, 1998).

Drawing on previous literature (Lair-Sale, 2001; Bescos, 2002; Palmer *et al.*, 2004, Blanthorne *et al.*, 2005), we consider that an employer expects from an accountant three types of competencies:

- (1) Technical competencies – theoretical and applied competencies in accounting-related subjects (taxation, financial accounting, financial analysis, costs, budgeting, performance measurement and IFRS)
- (2) Environment related competencies - understanding the economic, business and firm environments, the strategy and management orientation, the environment where the job is exercised, such as its international dimension, business sector knowledge, resources management and availability, and
- (3) Personal and behavioral competencies – such as communication and leadership.

Associations of accounting professionals have also analyzed the evolution of the accounting profession using a competency based approach. IFAC (2002) identifies some directions of evolution through interviews conducted with professionals with regard to managing the information flow, supporting strategic changes, and developing and sustaining the organization’s vision. ICAA (2004) identifies three types of contribution that future accounting should have: (i) compliance (through audit, communication, forecasting, IFRS), (ii) strategic and commercial (business plans, managing costs), and (iii) people related (manage relationships, leadership, provide support). Citing Kapler, IFAC (2004) stresses the importance of transforming *accountants* into *consultants*, less of a pure numbers person and more of management advisor contributing ideas internally and externally. This approach is more closely associated with the environment related and personal and behavioral competencies of an Anglo-Saxon ideal of a management accountant.

Prior research documents an ongoing process of hybridization between financial and management accounting in a number of countries (Caglio, 2003; Scapens and Jazayeri, 2003). In this regard, the international harmonization process implies embracing an Anglo-American model (IFRS) and adopting an American type of management (or management accounting) style (Jones and Luther, 2005).<sup>5</sup> Moreover, this is further supported by technical innovations such as ERP systems which embody a global standardized accounting model. ERPs are “...integrated software packages that control all personnel, material, monetary and information flows of a company” (Granlund and Malmi, 2002 p.303), and “...integrate all corporate information in one central

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<sup>4</sup> IFAC (1998: 1) defines competence as being “...the ability to perform the tasks and the roles expected of a professional accountant to the standard expected by employers and the general public.”

<sup>5</sup> This approach also has industry support. In a recent interview by the CIMA (2007), two professionals (Douglas Flint, Group Finance Director, HSBC Holdings plc, and Priyan Fernando, Executive Vice President and Chief Operating Officer, American Express Business Travel) shared their insights on the changing needs of the accounting function over the next ten years. They underlined the need for accounting professionals to become part of the global economy, to expand their roles in driving change throughout the organization, in performance measurement for creating value for shareholders, influence strategy and superior execution, to develop not only technical skills needed for financial reporting but mostly strong business management and leadership skills.

database” (Dechow and Mouritsen, 2005 p.692).<sup>6</sup> For any given information system to work effectively it has to be tailored to the local requirements. But ERP systems are reported to be difficult to modify. For example, Granlund and Malmi (2002) argue there is a unidirectional relationship between ERP systems and management accounting practices, in which management accounting practices are typically changed to fit the new technology, not vice versa. Consequently, one could assume that ERP systems may enforce a global standardized accounting model to which organizations must adapt.

Empirical studies generally support the above contentions. Burns and Baldvinsdottir (2005) in a field study reported that SAP<sup>7</sup> centralized the accounting function and decentralized control to many people in the company who became “hybrid accountants”. Scapens and Jazayeri (2003) reported that there were changes in the role of management accountants after ERPs’ implementation; line managers gaining accounting knowledge, there was more forward looking information, and a wider role for the management accountants. Caglio (2003) in a case study of an Italian company determined stronger integration and inter-functional collaboration, and a more prominent role for the accounting department in the management of the new IT system. Also, the same author finds out that

“...[with] the introduction of ERP systems within organizations, the boundaries between management accounting and financial accounting may undergo considerable changes. The lines between them blur and hybridization between the traditional professional profiles of the financial accountant and of the management accountant becomes possible.” (idem: 143).

In summary, there are a number of institutional, technical and global incentives that induce a movement towards hybridization of accounting tasks. These changes are especially associated with IFRS or ERP implementation. Hence, we develop research questions as follows: What are the competencies expected from accountants in business in Romania? Are financial accounting and management accounting separate specialized positions in Romania, or are they developing into hybrid accounting positions? What is the impact of the organizational and accounting changes on the Romanian accountant in business?

### **3. Method**

To gain a general understanding of the expectations from accountants in business in Romania, we analyze job-offer announcements per Bollecker (2000) and Järvenpää (2007). Data were collected by monitoring job advertisements on the most popular and representative job advertisements national websites. Advertisements that detailed accountant’s activities were selected randomly. To gain an appreciation of the evolution of accounting roles, we perform analysis over two different periods of time, February 2007 and July 2008 – the collection of data covering up to 4 weeks in each of the two periods. In each case, more than 1,000 announcements classified in the “finance” or “accounting” domains were identified. The announcements were analyzed with respect to the title, main responsibilities and general description of the job, thus, allowing them to be categorized as either financial or management accounting positions. A total of 100 useable advertisements were identified in the final 2007 sample, with a further group of 100 job offers in 2008 to achieve comparability. To be included, the advertisements must make either direct or indirect reference to the required competencies. The samples were created so that an even split (50:50) occurred between financial and management accounting positions. As previously

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<sup>6</sup> Characteristics of ERPs such as integration, standardization, routinization and centralization, support several major advantages: enhanced decision support, improved quality of information, possibility to centralize the coordination of data processing, and the possibility of real-time reporting (Granlund and Lukka, 1998b; Scapens and Jazayeri, 2003), as well as continuous auditing in the current insecure and dynamic organization context and responding to the quest for more rapid information due to increased globalization and competitiveness.

<sup>7</sup> SAP is a trademark of SAP AG and is effectively an ERP system.

mentioned, in Romania there is a clear separation between financial accounting and management accounting, similar to other continental European countries. Accordingly, we classified jobs related to financial accounting those having titles such as financial accountant, chief accountant, and financial manager, and as jobs related to management accounting those having titles such as management accountant, cost accountant or controller in line with the taxonomy used in France.<sup>8</sup>

In total a set of 10 competencies were identified, divided into two groups: six “core” accounting competencies – taxation, financial reporting, financial analysis, budgeting, costing, and performance measurement; and four supplementary competencies – IFRS, ERP, interpersonal and environment-related. Each of the job-offer announcements was assessed across each of the competencies on a three-point Likert scale (1 = not important at all, 2 = somehow important, 3 = extremely important). If the announcement did not make any reference to the specific competency, a value of 1 was assigned; if any reference was made to the competency, a value of 2 was assigned; and if the competency was specifically required and reference such as “mandatory”, “compulsory” or equivalent was made, a value of 3 was assigned.<sup>9</sup>

Four main steps were taken in order to answer the research questions: *first*, verifying, through descriptive statistics, the extent to which a clear separation of job positions into 2 main clusters consistent with the financial accounting – management accounting taxonomy of positions, exists; *second*, classifying job advertisements into more homogeneous groups, through cluster analysis based on the 6 core accounting competencies; *third*, assessing the ability of the supplementary competencies to significantly affect the likelihood of observing a job offer in a particular cluster – and particularly, focusing on whether these competencies are related to the hybridization process in the accounting profession; and *fourth*, data in the two periods of time were compared in order to assess the evolution over time.

#### 4. Results

Recent studies on the effect of globalization focus on accounting implementation issues in transition economies (see for example, Farcane and Megan, 2006; Mاتیș *et al.*, 2006; Olimid and Calu, 2006) but no attention has been given to the change in competencies demanded from accounting professionals. Given the two-cycle system of accounting in Romania, one concerned with complying with statutory requirements and the other concerned with management costing, we might expect to find a complete specialization within the accounting profession. In this case, a financial accountant would possess technical competencies such as taxation, financial accounting to meet national regulations, with limited financial analysis; whilst a management accountant would possess other technical competencies such as costing, budgeting and some performance measurement duties. This conjecture is supported by findings in Germany, another country representative of a two-cycle accounting system (see Jones and Luther, 2005).

Descriptive statistics show commonalities. For example, financial accounting positions (see Table 1, Panel A) show that not only are the anticipated expected competencies required, such as taxation, financial reporting (national regulations) and financial analysis, but also budgeting, performance measurement and even costing. Taxation and reporting competencies are required to a high extent consistent with expectations. Such competencies have historically been associated with fiscal, regulatory and bank finance reporting. In Romania the State is probably still the prime demander, but there now appears to an emerging demand for financial measurement and analysis. The fact that financial analysis competencies are required of such professionals to a similar extent as taxation competencies (e.g in 2007, mean = 2.58 versus mean = 2.3), suggests that Romanian

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<sup>8</sup> A description is available on-line at <http://www.lerucher.com/dossiers/1002/info1.asp>. To the best of our knowledge, a similar taxonomy is not available for Romania.

<sup>9</sup> The 200 selected advertisements were analyzed by two of the research team together, thus reducing the risk of inconsistencies in analyzing data.

financial accounting positions require more than merely reporting financial information to third parties, that is data must be analyzed and interpreted before being sent to end-users. This is consistent with the high demand for environment-related competencies (e.g. in 2007, 50% of the advertisements) and people-related competencies (e.g. in 2007, 64% of the advertisements) for such positions (see AICPA, 1999). Therefore, financial accounting positions should inform users and “translate” their analyses to interested parties. For management accounting positions demand is not only for expected competencies such as budgeting and costing, but also for financial reporting (60% of cases in 2007) and financial analysis (92% of cases in 2007). Results are consistent with other studies that suggest a complete specialization is difficult to find (Granlund and Malmi, 2002; Caglio, 2003; Jones and Luther, 2005) and consistent with an evolving sense of accounting hybridization. The hybridization process has been associated with globalization of accounting practices through the harmonization of financial accounting at the international level and through ERP systems implementation (Granlund and Lukka, 1998b; Granlund and Malmi, 2002; Jones and Luther, 2005).

Table 2 reports some basic descriptive statistics across the four supplementary competencies. Environment related and personal competencies are required to a high extent from both financial and management accounting positions, consistent with studies demonstrating that such competencies are increasingly required for accountants in business (Granlund and Malmi, 2002; Lair-Sale, 2001; Caglio, 2003; Scapens and Jazayeri, 2003; Palmer *et al.* 2004; Blanthorne *et al.* 2005; Burns and Baldvinsdottir, 2005); and contributing to the transformation of accountants into business consultants. For example, some of the job advertisements in our sample, both for financial and management accountants, specifically require the need for the respective accountant to be a “consultant”, “first partner to the manager”, “business partner” or to provide “analysis and support for other departments”.

With respect to the degree of homogeneity within the two categories (financial accounting and management accounting positions), we found a significant within-class variance (3.262 and 3.394 for financial accounting positions and 2.583 and 3.934 for management accounting positions, in 2007 and 2008, respectively), as well as relatively high values of the coefficient of variation (2.099 and 2.362 for financial accounting positions and 1.742 and 2.545 for management accounting positions, in 2007 and 2008, respectively). Accordingly, these results lead us to conclude that there is a need to identify a third “hybrid” type. This classification was achieved using cluster analysis of the six “core” accounting competencies. Specifically, cluster analysis was performed using the k-means method with Wilks’ lambda as clustering criterion.<sup>10</sup> If cluster analysis is successful, it should produce homogenous groups. As a result of clustering procedures in the 2007 (2008) sample, 28 (30) advertisements were categorized in Cluster 1; 37 (44) in cluster 2; and 35 (26) in Cluster 3. Out of the 37 (44) advertisements classified as ‘hybrid’ accounting positions in 2007 (2008), 22 (21) come from financial accounting positions, and 15 (23) come from management accounting positions.

To validate the results of the cluster analysis, we performed discriminant analysis and the results show that the variables played significant roles in correctly classifying 98% (100%) of the jobs into their respective groups in the 2007 (2008) sample. More specifically, in 2007 96.4%, 97.3% and 100% of jobs were correctly classified into clusters 1, 2 and 3. Thus, the cluster solution was regarded as valid. The mean scores of variables within each cluster are presented in Table 3, with *F*-tests for each clustering variable. In all cases, the means across the three clusters are found to be statistically different from each other.

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<sup>10</sup> In the cluster analysis we have not used IFRS, ERP, personal and environment-related competencies as these competencies are preserved for later analysis; as shown in previous research (Moores and Yuen, 2001, p.363), performance of significance tests on variables used to create the clusters is meaningless since it will always reveal significant differences.

After establishing the theoretical validity of the cluster analysis, the next step was to label the clusters. This was done by analyzing the job-offers chosen as central objects and the class centroids. To illustrate, consider the 2007 sample. A short description of the central object of the first class (observation number 10) follows:

*The chief accountant maintains the relationship with the fiscal authorities, is responsible for all tax calculation and related payments according to the legislation enforce, is responsible for the preparation and registration of the legal periodical statements including yearly reports and half year reports to the authorities and prepare the monthly reports for the management.*

As one may notice from Table 3, the competencies in taxation and financial accounting are the most important in this class, followed by competencies in financial analysis. Very rarely, are competencies in budgeting and performance measurement requested. The accountant in business in this class is responsible for tax calculations and legal statements; thus, we may label this group “financial accounting” signifying a more regulatory historical driven demand.

The central object of the second class is observation number 7 described as:

*The financial manager acts as the first partner of the General Manager concerning the financial strategy and decisions and serves as the financial liaison with internal departments and with external partners; he/she coordinates the annual budgeting process, prepares or supervises management reports concerning the financial activity and performance, provides reports focused on performance and highlights fruitful areas for management action, cost analysis and control reports, interprets data and presents it to interested parties; assures the company’s compliance with Romanian legislation in financial-related fields.*

For this class, the most requested technical competencies are financial analysis, performance measurement, financial accounting and budgeting. This accountant in business performs hybrid activities of both financial and management accounting and, accordingly, we label this group as the “hybrid accounting” demand.

The central object of the third class is described in observation number 60; as follows:

*The controller must have a good understanding of the costing process and modeling of expenses allocation per products; he/she is responsible for preparing gross margin analysis and managerial reports; coordinates the planning process, ensures effective performance management of the plants through analysis of actual results and key performance indicators.*

The major tasks of such accountants are related to budgeting, costing and performance measurement. This accountant performs activities especially in the field of management accounting and we label this group “management accounting”.

Similar classifications occur for the 2008 sample. Accordingly, for the 2007 (2008) sample of the 100 advertisements analyzed, 37 (44) are for hybrid accounting positions, 28 (30) are for financial accounting positions and 35 (26) are for management accounting positions. We interpret these results as indicating a process of continuing hybridization between financial and management accounting positions in business and a move away from strict management functions and the drivers of this process are now analyzed.

As previously mentioned, prior research indicates that IFRS implementation and ERP usage are factors related to the hybridization process. Accordingly, we investigate the demand for these particular competencies for each group of accountants in business as previously highlighted. To gain an initial impression, Table 4 presents the means of the supplementary competencies for each of the three classifications.

The IFRS framework still represents a challenge for Romanian accountants, in a continuous reform process of the financial accounting system. While we expect that future demands for such a competency will grow higher due to internationalization, we do not see this happening between our 2007 and 2008 samples. Although in Romania this particular skill is not in high demand on large scale as yet, the relationships in which Romanian enterprises are involved will likely generate this trend. For example, even though US GAAP was never imposed in Romania, 16% of the 50 financial accounting job-offers in the 2007 sample require such competencies. Also, mastering IT

skills is generally a must for the positions we analyzed; for example, PC operating competencies are required in 90% of all cases in 2007. Of all IT competencies, we specifically focused on the ERP-related ones. Results presented in Table 4 show the association between competencies in IAS/IFRS, ERP usage, personal-related competencies and environment-related competencies, and hybrid accounting positions. Based on our sample, these types of competencies are mostly required from hybrid accountants. Using Kruskal-Wallis tests, we found that data in the three clusters for 2007 are significantly different for ERP, personal-related and environment-related competencies at the 1% level and significantly different for IAS/IFRS at the 5% level. However, the counterpart tests in the 2008 sample show a significant difference only for IAS/IFRS (at the 1% level).

But are these competencies related to the hybridization process of the accounting profession? Table 5 reports the outcome of running probit model regressions designed to explore the supplementary competencies which might impact the probability of observing a particular advertisement belonging to a designated “cluster”, that is belonging to either a financial accounting position, a management accounting position or an hybrid accounting position. As was previously the case, four supplementary competencies are investigated: IFRS, ERP, PERS and ENV. IFRS is an ordered categorical variable taking the values 1, 2 or 3 indicating that the IFRS competency was deemed to be not important; moderately important or extremely important, respectively. ERP, PERS and ENV are similarly devised ordered categorical variables for enterprise resource planning, interpersonal and environment-related competencies, respectively. D08 is a dummy variable that takes the value of one if the job advertisement occurred in 2008, and a value of zero otherwise. Interaction terms are included to measure the incremental effect in the 2008 job ads for each supplementary competency over the base coefficient which measures the 2007 job ad impact.<sup>11</sup>

The first column of probit model estimates reported in Table 5 relate to the case of financial accounting jobs. First, we see that the environmental competency has a base case negative impact on the probability of seeing a job ad in this cluster (at the 5% level) – that is, 2007 ads deemed to have a greater importance in the environmental dimension, are less likely to belong to the financial accounting area. Second, it is notable that the 2008 ads countervail this negative environmental role – the associated interaction term is significantly positive (also at the 5% level), thus leading to a neutral effect in the 2008 ads. Third, while IFRS appears to have an insignificant impact on the likelihood of seeing a job ad for financial accountants in our sample, taking the combined effect of the base case and incremental coefficients actually suggests a positive role in our sample of 2008 ads (unreported p-value of 0.0585). This suggests that while the transition economy of Romania might have been lagging behind in this highly desirable competency for financial accountants in 2007, it has achieved some degree of relevance in 2008. Fourth, we see that neither the PERS nor ERP competencies (base case 2007 or in the incremental effects), are significant explanators of the probability of seeing a financial accounting job ad (at conventional levels).

The second column of probit model estimates reported in Table 5 relate to the case of management accounting jobs. Several salient features are worthy of mention. First, we observe that IFRS has a general negative impact on the probability of seeing a management accounting job ad – that is, job ads deemed to have a greater importance attached to international accounting standards, are less likely to belong to the management accounting area (at the 1% level of statistical significance). This result is intuitively appealing given that IFRS is of minimal practical importance to the likely role of a management accountant. Second, enterprise resource planning has a base case negative impact on the probability that the job ad is targeting a management accountant (at the 5% level of significance). This finding is surprising as one would expect that management accountants should have full knowledge of ERP. The insignificance of the ERP interaction term suggests that this negative effect extends into the 2008 ads. Third, all other variables show insignificant

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<sup>11</sup> In the case of the management accountant probit regression, a separate interaction term for IFRS was not possible since IFRS takes a value of ‘1’ in every instance of the MA sample in 2008 – thereby, leading to a perfect prediction of the binary response that is indistinguishable from the intercept.

coefficient estimates with the exception of the interpersonal competency which has a marginally positive impact (at the 10% level).

The final column of probit model estimates reported in Table 5 relate to the case of hybrid financial/management accounting jobs. First, existence of the ERP competency has a positive impact on the probability of a hybrid financial/management accounting job ad in 2007 (at the 5% level of significance) and the insignificance of the ERP interaction term suggests that this effect is also relevant in 2008. Collectively, this pair of ERP-related findings is reassuring as expertise/understanding of enterprise resource planning seems critically important to an accountant being asked to take on a broad-based hybrid role in an organisation. Second, all other variables show insignificant coefficient estimates suggesting that IFRS, interpersonal skills and environmental competency do not have any role to play in influencing the likelihood of seeing a job ad for the hybrid type of accountant in our Romanian sample.<sup>12</sup>

The only competency significantly related to the hybridization process is ERP. This finding is consistent with Caglio (2003) who documents a shift of financial accounting positions towards hybrid ones after ERP implementation and partially consistent with Jones and Luther (2005) and Granlund and Lukka (1998b) who associate IFRS and ERP with hybridization when studying management accountants' roles. For example, Caglio (2003: 142) shows that "...one of the positions that benefited most from the introduction of ERP has been the so-called 'chief accountant'. In the past, this particular professional was only in charge of the financial accounting activities, of accounts payable, of treasury management and of tax duties. Nowadays, the activities and responsibilities pertaining to this position are related to the areas of management accounting, reporting, consolidated balance, inventory management". Jones and Luther (2005: 178) find through interviews that "... the introduction of IFRS offered an opportunity to [...] consider the possibilities of creating a unified or integrated accounting system covering both financial and management dimensions", with one of the interviewee's saying that "...instead of being a separate department they [N.A. controllers] may be now also a department which supports the external reporting, delivering the data" (idem).

## 5. Conclusions

The primary purpose of our study was to explore the influences of economic and accounting reforms on the Romanian accountant in business, in the context of various challenges faced by the accounting profession worldwide and in particular in a transition economy. Previous research has documented a process of hybridization in the accounting profession between financial and management accounting in various countries, both within integrated and within two-cycle accounting systems (Joseph *et al.*, 1996; Granlund and Lukka, 1998b; Caglio, 2003; Jones and Luther, 2005). This motivated us to explore the Romanian accounting profession and assess the propensity towards either specialization or hybridization of actual positions between these two domains of expertise. We analyzed a sample of advertisements for accounting jobs, and broadly confirmed previous findings concerning a hybridization process between financial accounting and management accounting positions. In our Romania setting, ERP competencies seem to be associated or drivers of the so-called 'hybrid' positions.<sup>13</sup>

This study contributes to current research in several ways. First, it brings a new perspective in the research conducted on the Romanian accounting profession by documenting a process of hybridization between financial and management accounting positions. Romanian companies have

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<sup>12</sup> The apparent negative significance of ENV in 2008 is deceptive – while incrementally significant, it is not significant overall as the p-value for the sum of the two estimated coefficients is 0.1372.

<sup>13</sup> Several potential limitations of our study need to be acknowledged. The relatively small sample of job advertisements raises a possible concern regarding representativeness. Also, not all companies use web-posted job advertisements and such announcements may differ from actual practice (Bolles, 2000).

historically used a two-cycle accounting system, but with strong influence from the Romanian State<sup>14</sup> and, thus, is not necessarily strongly oriented towards decision making. A major conclusion of our study is that in many companies the accountant in business is required to supplement compliance services with a managerial and decision making emphasis. However, a cautionary note is that similar to other transition economies, management accounting in Romania is still in an initial stage of development; but based on our research we can conclude that competencies in this domain of expertise are becoming more important in many organizations.

Second, we found that the process of hybridization is associated with ERP usage, a finding that is somewhat consistent with previous research conducted in other countries (Caglio, 2003; Jones and Luther, 2005). For example,

“... the introduction of ERP systems within organizations, the boundaries between management accounting and financial accounting may undergo considerable changes. The lines between them blur and hybridization between the traditional professional profiles of the financial accountant and of the management accountant becomes possible. This implies, for these ‘hybrid’ positions, the construction of a broader vision of the firm as a whole, as well as of an understanding of all process and events from a double perspective [...] Doing so, they are able to become the custodians of the whole organization’s information resources, with stronger commitment and participation in operational management” (Caglio, 2003, p.143).

Third, we also identified in Romania similar intertemporal manifestations as identified in other countries. The accountant is transforming more and more into a consultant or business analyst, a transformation accompanied by a special emphasis on personal and environment-related competencies. This has particular implications in the field of accounting education. Companies are increasingly requiring a wider range of diverse technical competencies, not only related to accounting reporting but increasingly also related to other disciplines. Consequently, a narrow accounting formation and an emphasis on specific financial accounting issues are not fully appropriate solutions for companies’ expectations. That is, personal-related and broad business competencies need to be developed throughout the process of academic education.

A final contribution of this study is that it documents a process of hybridization within the Romanian accounting profession that could provide a base for future research. Future attention may be directed to studying the extent to which linkages between this process and the capital sources of the company and the prior training of management or other organizational factors. We found evidence that hybridization is associated with ERP usage, but supplementary research is needed to document if the hybridization is the consequence of ERP implementation or if it is related to other common factors. Also, issues related to the *extent* to which an integrated accounting system should be developed within the Romanian business culture could be investigated. Additionally, do hybrid positions appear only in large firms as a consequence of foreign investors or managers? We commend these and other related questions to future research.

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<sup>14</sup> As at September 24, 2008, the Bucharest Stock Exchange lists only 100 companies, of which only one company is in the international tier, 21 companies are in tier I, and 45 companies are in tier II. The only company listed in the international tier is an international bank that recently acquired the largest Romanian bank. In order to list in the first tier, companies must have: (a) a minimum 25% of outstanding shares available for public trading; (b) shares held by at least 2,000 different shareholders; (c) issued capital exceeding 8 million euro; (d) recorded a profit for the last 2 years; and, (e) a business plan for the coming two calendar years. Condition (a) must be maintained also for companies in tier 2 and 3, with issued capital exceeding, respectively, 2 and 1 million euros.

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Table no 1

**Some descriptive statistics across key accounting competencies**

	Taxation		Fin reporting		Fin analysis		Budgeting		Costing		Perf measurement	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Panel A. Positions classified as financial accounting												
Frequency of minimum	12	18	4	2	1	14	25	29	36	40	22	30
Percentage of cases requiring the competence*	76%	64%	92%	96%	98%	72%	50%	58%	28%	20%	56%	40%
Frequency of maximum	27	29	46	48	30	19	17	16	5	7	23	4
Median	3.000	3.000	3.000	3.000	3.000	2.000	1.500	1.000	1.000	1.000	2.000	1.000
Mean	2.300	2.220	2.920	2.960	2.580	2.100	1.840	1.740	1.380	1.340	2.020	1.480
Panel B. Positions classified as management accounting												
Frequency of minimum	42	45	20	26	4	28	6	7	6	27	2	4
Percentage of cases requiring the competence*	16%	10%	60%	48%	92%	44%	88%	86%	88%	46%	96%	92%
Frequency of maximum	8	5	18	19	29	16	40	42	32	19	38	31
Median	1.000	1.000	2.000	1.000	3.000	1.000	3.000	3.000	3.000	1.000	3.000	3.000
Mean	1.160	1.200	1.960	1.860	2.500	1.760	2.680	2.700	2.520	1.840	2.720	2.540

\* This percentage has been computed as the number of job-offer announcements requiring the competence (assessed as either a 2 or 3 on the Likert scale), relative to the total number of announcements.

Table no 2

**Some descriptive statistics across supplementary competencies**

	IAS/IFRS		ERP		Interpersonal		Environment-related	
	2007	2008	2007	2008	2007	2008	2007	2008
Panel A. Positions classified as financial accounting								
Frequency of minimum	26	34	21	37	18	16	25	42
Percentage of cases requiring the competence*	48%	32%	58%	26%	64%	68%	50%	16%
Frequency of maximum	19	13	17	9	23	23	13	6
Median	1.000	1.000	2.000	1.000	2.000	2.000	1.500	1.000
Mean	1.860	1.580	1.920	1.440	2.100	2.140	1.760	1.280
Panel B. Positions classified as management accounting								
Frequency of minimum	35	44	26	34	13	24	13	44
Percentage of cases requiring the competence*	30%	12%	48%	32%	74%	52%	74%	12%
Frequency of maximum	15	6	17	9	21	20	6	3
Median	1.000	1.000	1.000	1.000	2.000	2.000	2.000	1.000
Mean	1.600	1.240	1.820	1.500	2.160	1.920	1.860	1.180

\* This percentage has been computed as the number of job-offer announcements requiring the competence (assessed as either a 2 or 3 on the Likert scale), relative to the total number of announcements.

Table no. 3

**Discriminant analysis – means of key accounting competencies by class**

	Mean score by cluster			Univariate test of equality of means across clusters	
	Financial accounting	Management accounting	Hybrid	F-statistic	p-value
<b>Panel A. 2007 sample</b>					
Taxation	2.893	1.000	1.541	176.795***	< 0.0001
Financial reporting	3.000	1.429	2.973	279.969***	< 0.0001
Financial analysis	2.286	2.314	2.946	18.689***	< 0.0001
Budgeting	1.143	2.571	2.811	75.890***	< 0.0001
Costing	1.000	2.514	2.135	44.503***	< 0.0001
Performance measurement	1.286	2.600	2.973	101.303***	< 0.0001
Number of cases	28	35	37		
<b>Panel B. 2008 sample</b>					
Taxation	2.567	1.000	1.545	33.691***	< 0.0001
Financial reporting	3.000	1.000	2.841	579.259***	< 0.0001
Financial analysis	1.633	1.038	2.659	75.960***	< 0.0001
Budgeting	1.167	2.731	2.636	55.790***	< 0.0001
Costing	1.233	1.923	1.636	4.749**	0.011
Performance measurement	1.133	2.808	2.136	68.139***	< 0.0001
Number of cases	30	26	44		

Table no. 4

**Means of supplementary competencies by class**

	Mean score by cluster			Univariate test of equality of means across clusters	
	Financial accounting	Management accounting	Hybrid	F-statistic	p-value
<b>Panel A. 2007 sample</b>					
IAS/IFRS	1.714	1.400	2.054	4.670**	0.012
ERP	1.500	1.629	2.378	11.721***	< 0.001
Interpersonal	1.643	2.171	2.459	8.307***	< 0.001
Environmental	1.321	1.857	2.135	12.118***	< 0.001
Number of cases	28	35	37		
<b>Panel B. 2008 sample</b>					
IAS/IFRS	1.633	1.000	1.500	5.393***	0.006
ERP	1.467	1.423	1.500	0.078	0.926
Interpersonal	2.033	1.962	2.068	0.109	0.897
Environmental	1.333	1.269	1.136	1.035	0.359
Number of cases	30	26	44		

Table no. 5

**Probit regression models for each cluster on supplementary competencies**

Probit model regressions are run in which the dependent variable is based on the following indicator variables: DFA (DMA) [DHyb] takes a value of 1 if the job advertisement is assigned to the financial accounting (management accounting) [hybrid] cluster. IFRS is an ordered categorical variable taking the values 1, 2 or 3 indicating that the IFRS competency was deemed to be not important; moderately important or extremely important, respectively. ERP, PERS and ENV are similarly devised ordered categorical variables for enterprise resource planning, interpersonal and environment-related competencies, respectively. D08 is a dummy variable that takes the value of one if the job advertisement occurred in 2008, and a value of zero otherwise. The z-statistic for each coefficient, based on QML (Huber/White) standard errors and covariance, is shown in parentheses below the associated estimate. \*\*\* (\*\*) [\*] estimated coefficient is significant at the 1% (5%) [10%] level.

Variable	Dependent Variable		
	DFA	DMA	DHyb
C	0.7583 (1.59)	0.0741 (0.18)	-2.2045*** (-5.35)
D08	-1.7798*** (-2.71)	-0.0862 (-0.15)	2.0112*** (3.31)
IFRS	0.2296 (1.29)	-0.5348*** (-4.05)	0.1939 (1.21)
D08*IFRS	0.0880 (0.36)	-	-0.0441 (-0.19)
ERP	-0.1138 (-0.62)	-0.4351** (-2.09)	0.4964** (2.46)
D08*ERP	-0.0144 (-0.06)	0.3920 (1.43)	-0.4075 (-1.53)
PERS	-0.2212 (-1.01)	0.4149* (1.72)	-0.0913 (-0.37)
D08*PERS	0.1568 (0.59)	-0.4664 (-1.63)	0.1689 (0.59)
ENV	-0.6502** (-1.99)	0.1741 (0.62)	0.3992 (1.41)
D08*ENV	0.9335** (2.35)	-0.0032 (-0.01)	-0.7747** (-2.04)
McFadden R-squared	0.106	0.111	0.106