

# Management accounting change and the implementation of GFMIS: a Jordanian case study

Nizar Mohammad Alsharari and Mayada Abd El-Aziz Youssef  
*Accounting Department, United Arab Emirates University,  
Abu-Dhabi, United Arab Emirates*

## Abstract

**Purpose** – The purpose of this paper is to explain the processes of management accounting change (MAC) in the Jordanian Customs Organization (JCO) within its social context following public sector reforms. It focuses on the regulative way in which a new accounting system of government financial management information system (GFMIS) was implemented throughout three levels of an institutional framework.

**Design/methodology/approach** – The paper uses an interpretive case study in which the GFMIS was imposed by the government. It draws on a framework that comprises three institutional approaches: old institutional economics; new institutional sociology; and power mobilization.

**Findings** – In the JCO case, the GFMIS contributed effectively to the development of a comprehensive approach to the preparation of the budget while it works to facilitate the estimated process of expenditures and revenues. The study recognizes that the implementation of GFMIS may have emerged primarily as a response to external political and economic pressures. The MAC was carried out in the “from-top-to-bottom” level of institutional analysis, which confirms the “path-dependent” and evolutionary nature of the change. It concludes that the evolutionary MAC in the JCO case study was not only a decorative innovation in management accounting, but was also represented in the working practices. It has produced comprehensive and timely information about strategic planning, chart of accounts and classification of assets, liabilities, and revenues and expenses at all levels of management and programs. The study also confirms that management accounting is not a static phenomenon but one that changes over time to reflect new systems and practices.

**Research limitations/implications** – The need for having an integrated GFMIS in the authors’ case arises from two key dimensions: increasing pressures from the International Monetary Fund to improve fiscal management and reporting, and the government needs to respond to the demand of better information disclosure. GFMIS has provided an integrated solution for public financial management through the automation of the entire life cycle of budget preparation, budget execution, and financial reporting. The system operates across all budget organizations to ensure transparency and accountability in all public resources transactions, including allocation, use, and monitoring. Hence, it has important implications for policy decision makers through linking all budget organizations, for the purposes of supporting the process of decision making in an informed manner. The study has important implications for the ways in which change dynamics can emerge, diffuse, and implement at three levels of institutional analysis. It also explains the interaction between the external origins and internal accounts, which identified that GFMIS is both shaped by, and is shaping, wider socio-economic and political processes.

**Originality/value** – This study fills a gap in the literature, as it explains the processes of MAC associated with the introduction of GFMIS in the JCO within its social context. It recognizes the institutional pressures that affected the emergence and diffusion of GFMIS and how they interacted through three levels of institutional analysis.

**Keywords** Institutional theory, Government financial management information system, Alsharari *et al.* framework, Management accounting change

**Paper type** Research paper

## 1. Introduction

In the past decade, developing countries have been encouraged to reform their public sector and have increasingly embarked on major projects to computerize their government operations. Most popular among these have been projects to computerize government accounting and payment operations by introducing government financial management information systems (GFMISs). Donors and international institutions like the International Monetary Fund (IMF), the World Bank, and USAID have played a critical role in supporting and



shaping developing countries' financial management systems through projects that provide a combination of technical assistance, training, financial resources, and procurement support to partner governments (Li-Hua *et al.*, 2011).

The GFMS is a unified and integrated accounting and information system linking all the governmental organizations to support an informed decision-making process. The system is a back-office system that is not in direct contact with citizens. Public employees use the system for internal transactions and budgeting processes (Altbach and Knight, 2007). The establishment of a GFMS has consequently become an important benchmark for a country's budget reform agenda, often regarded as a precondition for achieving effective management of budgetary resources. Although it is not a panacea, the benefits of a GFMS could be argued to be profound (Manakul, 2007). First, the improved recording and processing of government financial transactions allow prompt and efficient access to reliable financial data. This supports enhanced transparency and accountability of the executive to parliament, the general public, and other external agencies. Second, a GFMS strengthens financial controls, facilitating a full and updated picture of commitments and expenditures on a continuous basis. Once a commitment is made, the system should be able to trace all the stages of the transaction processing from budget releases, commitment, purchase, payment request, reconciliation of bank statements, and accounting of expenditure. This allows a comprehensive picture of budget execution. Third, it provides information to ensure improved efficiency and effectiveness of government financial management. Generally, increased availability of comprehensive financial information on current and past performance assists budgetary control and improved economic forecasting, planning, and budgeting.

Recent literature on GFMS has addressed various aspects of GFMS design, systems development, implementation, sustainability (Adair and Kagitcibasi, 1995; Manakul, 2007), success and failure (Altbach and Knight, 2007) and acceptance (Sawalha and Abu-Shanab, 2015). Diamond and Khemani (2005) concluded that the decision to introduce a GFMS needs to be accompanied by a number of factors, including an agenda for effective change management. They added that unless these are in place, the chances of success are limited. GFMS implementation may lead to significant management accounting and organizational changes within the "governmental field" of public organizations. The problem when it comes to government environments is not an engineering problem, but one of inertia: inertia that is political and bureaucratic at its core.

Reaping the benefits of GFMS demands a commitment to change. This includes a change in technology, processes, and procedures, as well as changes in skills, responsibilities, and behaviors. Changes of this nature and magnitude have to be accepted from within and not simply imposed from the outside (Rodin-Brown, 2008). The examination of accounting change processes in organizations and society has become a significant topic of research in recent years, with multiple theoretical approaches being developed (Caccia and Steccolini, 2006; Moll *et al.*, 2006). However, it is noted that in the literature, there is scant attention paid to studying management accounting change (MAC) associated with the implementation of GFMS, especially in developing countries. This paper focuses on reforms related to MAC in the Jordanian Customs Organization (JCO), which implemented GFMS.

Jordan, as many other developing countries, has faced substantial environmental challenges in the last two decades. These challenges are intensified by the scarcity of natural resources, large budget deficits, soaring levels of debt, structural unemployment, highest tax pressures, low quality of public services, and bureaucratic public management. To deal with such challenges, Jordan developed the National Agenda in 2005. The objective of this agenda has been to stimulate state social, political, and economic development through accelerated private sector-led growth and implementation of sound economic and

fiscal policies. Moreover, this agenda contributed to the expansion and modification of the tax and customs system in order to increase revenues collection and enhance the application of a results-based budgeting (RBB) system. As a consequence of these reforms, the Jordanian public sector, especially the JCO (the research site), has implemented many changes in extra- and intra-organizational systems, including GFMIS, risk management, total quality management, new information technology, and new organizational structure. The JCO, similar to other organizations in the field, has been subject to institutional pressures, as well as political and economic relationships, to adopt these reforms. The GFMIS project was approved by a Cabinet decision in October 2006, and the official start was in March 2008.

In this paper, we examine MAC in the JCO that implemented GFMIS using the Alsharari *et al.* framework (2015). Accordingly, we will focus on the different potential reasons and pressures for introducing the new system, on the change processes, and on the results of change. The Alsharari *et al.* framework (2015) combines both external and internal pressures, such as political, economic, historical, social, and cultural dimensions, in the analysis of organizations and change processes (Greenwood and Hinings, 1996; Ter Bogt, 2008). It can provide a holistic representation of the processes of change by focusing attention on the underlying institutions that encode accounting systems or practices at three levels: the political and economic level, the organizational field level, and the organizational level. Examining the dynamics between institutionalized beliefs and values that may occur between these three levels of institutions will enhance our understanding of MAC in public organizations and provide further information about public sector reform initiatives.

To summarize, the aim of the current study is to explain the processes of MAC associated with the introduction of GFMIS in the JCO within its social context. The main research question is as follows:

*RQ.* How have the processes of MAC been manifested in the JCO by the introduction of the GFMIS?

In relation to this, the following sub-questions are addressed:

- (1) What were the institutional pressures (powers) that affected the emergence and diffusion of GFMIS? How did they interact through the three levels of institutional analysis?
- (2) How have the processes of management accounting practices changed within the JCO?
- (3) How have the dynamics of organizational change and GFMIS affected MAC?

This aim requires us to look beyond merely the outcomes of implementing GFMIS and take into account the complexities of what drives and shapes the cumulative processes of change. This paper is structured in six main sections. The next section presents the literature review. Section 3 focuses on the theoretical framework. Section 4 explains the research methodology. Section 5 displays the case analysis and discussion. Finally, Section 6 presents some concluding remarks.

## 2. Literature review

GFMIS provides an integrated computerized financial package to enhance the effectiveness and transparency of public resource management by computerizing the budget management and accounting system for a government. The scope and functionality of GFMIS can vary across countries, but sub-systems normally include accounting, budgeting, cash management, debt management, and related core treasury systems.

The introduction of GFMIS in many countries has resulted in immediate positive impacts. For example, in the Republic of Bosnia and Herzegovina (Odhiambo, 2006), it has positive impacts with respect to budget execution, auditing, reporting, and reversing the problem of budget arrears. In the Slovak Republic, the main driving force in the success of the GFMIS was political, although it was underpinned by some clearly defined timeframe and strategy (Karanja and Nganga, 2014). Rakner *et al.* (2004) have indicated that the GFMIS system in Malawi was relatively well designed. This was ascribed to Malawi's good legal and institutional framework for public sector financial management and accountability.

However, the introduction of GFMIS involves more than the "simple" automation of tasks and processes. A 2005 IMF working paper on introducing GFMIS (Diamond and Khemani, 2005) highlights a number of challenges to GFMIS projects in developing countries. These included institutional, political, technical, human resources (HR) requirement, and capacity challenges. In spite of their complexity and implementation challenges, GFMISs have become a core component and driver of public reform in many developing countries. As of January 2015, the World Bank had funded GFMIS projects in 70 countries at a cost of USD3.2 billion (World-Bank-Group, 2015).

According to the bank's own account, however, the implementation of a GFMIS has not always been successful. In his review of financial systems in Anglophone and Francophone African countries, Lienert (2003) reflects on the importance of culture change in the success of GFMIS implementation. He concludes that in the absence of attitudinal changes by all players of the budget process, it is unlikely that significant improvements will occur.

The above studies provide important aspects regarding GFMIS and its components. They also provide results and conclusions of research done on GFMIS in different countries and environments. However, none of the studies have explained the processes of MAC associated with the introduction of the GFMIS within its social context. Even most of the MAC studies available in the literature have been conducted in one of two ways: at the purely intra-organizational level, by adopting the old institutional economics (OIE) theory or at the purely extra-organizational level, by adopting the new institutional sociology (NIS) theory. Few studies in the MAC literature have adopted a hybrid framework that combines OIE, NIS, and power mobilization (Dillard *et al.*, 2004; Yazdifar, 2004; Yazdifar *et al.*, 2008; Ma and Tayles, 2009; Zoubi, 2011; Knight, 2013)[1].

As Yazdifar *et al.* (2008) state, the NIS theory tends to be harmonized with other institutional perspectives that focus on internal organizational factors. When NIS and OIE are combined, they lead to the adoption of a holistic framework (Yazdifar *et al.*, 2008). In this regard, Dillard *et al.* (2004, p. 512) affirm that "Burns and Scapens' ideas could be integrated" into the Dillard *et al.* (2004) framework at the organizational level. They also declare that "the framework provided by Burns and Scapens (2000) might be applied in describing the micro process taking place" (2004, p. 533) within an organization. MA authors use the integration between OIE and NIS theories in order to avoid the flaws in each theory (Ribeiro and Scapens, 2006; Scapens, 2006; Ma and Tayles, 2009).

To further understand change processes in organizations, including the causes of their introduction and their effects, it could be interesting to provide a broad analysis of MAC in the public sector that is based on the multi-level institutional theory (Ter Bogt, 2008). It seems that, thus far, little research (Alsharari *et al.*, 2015; Nor-Aziah and Scapens, 2007; Gomes *et al.*, 2008; Ter Bogt, 2008) has been conducted with respect to the possible contributions of institutionalism to an understanding of gradual MAC at multi-stages. Accordingly, this study adopts a holistic view, drawing on the Alsharari *et al.* (2015) framework, which integrates OIE, NIS, and power mobilization to explain the processes of MAC in the JCO.

### 3. Theoretical framework

The literature often proposes that the most significant explanation for changing the management accounting of public organizations is the need to improve planning and control performance (i.e. to increase economic efficiency and effectiveness). However, other researchers (such as Scott, 1995; Covaleski *et al.*, 1996; Greenwood and Hinings, 1996) affirm that expectations and values, both inside and outside the organizations, as well as rules in society, can play an important role in a decision to introduce MAC. Thus, OIE and NIS provide the opportunity to explain such influences.

Institutional theory highlights the influence that structures in society and the socio-economic and political aspects of an organization's environment – such as the rules, knowledge, power, interests, standards, and habits in a particular group or society – and their change, have in an organization, and vice versa. Unlike functionalist theories, institutional theory extends the range of aspects of an organization and its environment, which have to be considered (such as Oliver, 1991; Scott, 1995; Covaleski *et al.*, 1996; Greenwood and Hinings, 1996; Chenhall, 2003). Considering these advocates, this study adopts the Alsharari *et al.* (2015) framework to elucidate the processes of MAC at the multi-level.

The Alsharari *et al.* framework (2015) draws on NIS, OIE, and power mobilization. Following Dillard *et al.* (2004), it recognizes that the multiple levels of the institutionalization process move in a recursively cascading manner by hierarchically linking the wider institutional influences of the political and economic factors level with the organizational level, through the organizational field level. Therefore, this framework examines the impact of external, as well as internal, factors on management accounting processes within a specific organization.

It explains these wider institutional influences on organizational change by recognizing three levels of institutions. At the societal level, the most general norms and values (e.g. laws, principles, and practices) are established and influenced by the existing distribution of power in the society. This macro set of norms and principles shapes the organizational field-level criteria, which is a function of the societal-level criteria. As a result, the organizational field practices are influenced by the organizational field criteria (i.e. isomorphism pressures), which were previously shaped by the political and economic principles. The framework adopts isomorphism drivers in equivalence with organizational field criteria, which consist of professional groups, industry groups, government, etc., that might be inhabited by individual organizations. The final level is the organization itself (Hopper and Major, 2007).

The Alsharari *et al.* (2015) framework also draws on Burns and Scapens' (2000) framework, which supposes that the institutional realm and the realm of action are linked by rules and routines. Hence, it focuses on "micro institutions" inside the organization. The institutional realm represents the ways of thinking and the underlying assumptions that are taken for granted by the organizational actors before the process of change, while the realm of action comprises the actions that are carried out by the organizational individuals (Jones *et al.*, 2014). Burns and Scapens' (2000) framework explains how the implementation of new rules could affect and be affected by both existing organizational rules and routines, including management accounting practices, in addition to the action of organizational agents. On this interplay between the existing rules and routines and the new rules, where power acts as facilitator or barrier to change, depends the institutionalization of new rules and routines, which will then shape the future action of organizational agents.

The actual process of change at the organizational level starts with the accumulation of institutional contradiction resulting from external environmental pressures, as well as organizational practices and their underlying hypotheses, such as institutional resistance or conflict among organizational members. In the Alsharari *et al.* (2015) framework, the organizational factors are represented by power and politics dimensions that the organizational actors mobilize after the process of change or resistance (action). This factor

was introduced into the framework to show that the organizational factors can play a vital role in the process of MAC, as well as prevent or trigger institutional resistance or contradict institutions that the organizational actors would introduce through the process of change.

Following Hardy (1996), the Alsharari *et al.* (2015) model recognizes that there are four dimensions of institutional power: power over resources, processes, meanings, and systems. The first three dimensions are represented partially by organizational actors, while the latter is more comprehensive, encompassing all organizational actors. These power dimensions may trigger and enable human praxis (e.g. collective action, actor mobilization, and potential change agents) to create the conditions for institutional change to take place because the resistance (as misaligned interests or mental allegiance to the old work) will retard institutional change (Seo and Creed, 2002). This change will be implemented within the organization through a new set of rules and routines, which will be institutionalized (stable). In other words, they will be taken for granted by the majority of the organizational actors (Jones *et al.*, 2014). This is the process of institutionalization, according to the Burns and Scapens framework.

Following the process of institutionalization, new organizational institutionalized rules or practices may influence the set of normative practices and criteria at the organizational field level by reinforcing, revising, or eliminating existing practices (Dillard *et al.*, 2004). Changes in organizational field practices and criteria will usually influence the political and economic system criteria. Thus, new political and economic criteria will defy the present coalition of power at the economic and political level. Consequently, the social processes of institutionalization, de-institutionalization, or re-institutionalization could be generated through choosing significant norms, values, and institutions. Hence, such new accounting practices become institutionalized through these social and political processes, and cannot be justified merely through economic rationalities (Dillard *et al.*, 2004; Wickramasinghe and Alawattage, 2007). This process of institutionalization takes place only if the “axes of power” are manifested.

The Alsharari *et al.* (2015) framework represents a convergence around multiple themes suggested by both old and new institutionalism. In particular, it offers an outstanding basis for an account of organizational change as it pays special attention to the link between organizational contexts and organizational actions. We believe that this multi-institutional framework provides a more holistic understanding for MAC; and would be useful in explaining the processes of MAC that are associated with the implementation of GFMIS in the JCO.

#### 4. The research methodology

Since the main objective of this study is to explain the processes of MAC within the JCO, the qualitative research in this area will take the form of an interpretive case study to track different paths of change and their effects over time (Brignall and Modell, 2000). The ontological and epistemological assumptions that underpin the interpretive paradigm are consistent with the assumptions that underlie the theoretical framework that was used to inform the case study. While the relations between the extra- and intra-organizational contexts are not necessarily simple and/or linear, and they are inextricably linked (Hong, 1991; Bhimani, 2001), an explanatory case study (Scapens, 1990) is needed in this study to explain these complex relations and theoretical concepts that are required to interpret the case study findings.

The case study in this research occurred in the JCO, which is a large public organization that was established in 1921. It is a geographically distributed and labor-intensive organization that provides services to the public. The JCO is headed by a general director who reports directly to the finance minister. It has witnessed many developments at the organizational level that were affected by various social, technological, and



economic pressures. This has made the JCO an important part of an interconnected system that works in consistency with the state's public policy to achieve all of the national objectives seeking to promote and support the homeland[2]. Thereby, institutional pressures of both a coercive and a regulative nature have continued to emanate from the government. The government requires the JCO to be socially and politically efficient but at the same time prevents it from behaving in a purely economic manner.

According to the JCO Annual Report in 2011, the JCO provides public services for more than seven million people. Since the establishment of the JCO, a number of customs houses (branches) have been established. This number has increased along with the big increase in trade movement. Currently, the number of major and minor customs houses and directorates amount to 62 (32 houses and 30 directorates). These customs houses can be classified into three main categories: clearance centers, border centers, and post office centers, in addition to two customs laboratories in Amman and Aqaba. The JCO is now among the world's most developed customs organizations in terms of providing high-quality customs services, exceeding stakeholders' expectations.

This study focuses on both the external environment and the internal environment of the JCO, as well as their interactions. By exploring the interface between the macro and micro levels, the complex process of MAC in the JCO can be studied in more detail. However, constraints on data collection and analysis caused a number of limitations. A longitudinal study could not be conducted to observe the historical events unfolding over time. Nevertheless, we were able to reconstruct the historical context of the JCO based on documentary evidence, historical data, and interviews with managers (and others) who worked during the pre-implementation and post-implementation phases of the GFMIS.

In total, 80 semi-structured and unstructured in-depth interviews were undertaken with different employees during the first author's visits to the site in 2011 and 2012. Most of the accountants (except the CFO and managing director) were interviewed. Many of the other interviewees had been present throughout the entire implementation process. These included members of HR, strategic planning, IT, and operations divisions, as well as senior managers at headquarters. In addition, related government officials from different government agencies were interviewed. They were useful in elucidating the regulatory pressures on the JCO and the changes in regulations that have influenced the JCO. Their views and opinions provided evidence of the perceptions and expectations of the government and the regulator of the JCO. The number of interviews was determined in part by pragmatic considerations; for instance, time constraints, and also by the achievement of theoretical saturation (Fleischman and Tyson, 2006). The selection of the particular interviewees was directed by both theory and the research questions. The sampling of interviewees was, therefore, purposeful and not theoretical (Chandler, 1992, 1993; Nor-Aziah and Scapens, 2007). There was a planned focus on the professional groups most likely to be involved in the organizational changes that would take place during the process of implementation, such as IT and strategic planning officers.

The visits were used to gather evidence concerning MAC and the internal and external contexts that affected the existing and new MAPs. As such, a retrospective approach was used, asking interviewees to describe, explain, and reflect upon the events they had experienced in the past. In some situations, relying on their memories was the only practical option; but memories can be partial, and may be shaped by present viewpoints. Hence, wherever possible, multiple data sources were used. The views of the different groups were sought and interviewees were asked similar questions concerning the role of the MAPs and the changes during and since the implementation process.

Furthermore, this study also uses both types of qualitative observations to supplement other methods and increase the research validity. For direct observation, the finance directorate was considered as a unit suitable for observation by the first author due to it

being the largest part of the organization. The observation included the new system and the new accounting practices. Participant observation[3] enabled the first author to share the subjects' experiences by not merely observing what was happening but also feeling it (Gill and Johnson, 2002). It is used, especially in committee meetings and training courses, to discover delicate nuances of meanings, symbolic frames, and to increase the level of immersion.

The evidence from the interviews and observations was further reinforced by documentary evidence. This study used internal and external documents to gain a lot of information about the history and changes in MAPs. Background information on the organization was obtained through its webpage, customs encyclopedia, newspapers, general budget manuals, fiscal reform plans, magazine reports, etc. The internal documents were obtained and reviewed during the fieldwork. They included, among others, the annual reports, the organization prospectus, the planning and budgeting manuals, TQM manuals, risk management manuals, training programs, strategic plans, organizational structure, etc. Informal documents, such as the internal divisional newsletters and brochures, were also obtained and reviewed. The organization also uses modern technology and e-mails as part of its network of communication (i.e. customs encyclopedia). As such, memos and some guidelines were transferred via e-mail and were thus outside the domain of review. The first author had access to some of these communications by customs encyclopedia, which were printed out and put in a file. Besides, he also had continuous access to the internal customs encyclopedia that includes all new emergent issues in the organization.

Six steps of the case study approach have been used in a logical sequence. These steps are as follows: preparation, collecting evidence, assessing evidence, identifying and explaining patterns, theory development, and report writing (Ryan *et al.*, 2002; Scapens, 1990). The interviews were recorded using a digital voice recorder to avoid bias related to politically sensitive issues. These interviews have been transcribed and translated into English, then are entered along with other types of evidence into the Nvivo9 program. Nvivo9 is a helpful design to organize and manage a massive amount of data from multiple sources of evidence (Bazeley, 2007). The triangulation of data is analyzed by depending on the previous six steps and the contextual framework inspired the study.

The process of analysis began at the same time as data collection. Accordingly, interviews were recorded and subsequently transcribed (word-processed) (Bazeley, 2007). The process of analysis commenced with the full transcript of all interviews. These transcripts were entered and coded in QSR Nvivo9 software by reading and rereading data many times with special attention given to the mode of expression (e.g. intonation, pauses, etc.). This was to help recognize the particular issues that resulted from each interview in relation to other evidence. Thus, data reduction took place when common sequences and patterns were spotted and highlighted.

Afterward, similar themes were grouped and classified. Meanwhile, the detection of any differences of perceptions among interviewees that might disconfirm the patterns previously identified was closely managed. In this regard, similar themes or opinions of the interviewees were explained within the normal body of discussion and analysis, while dissimilar themes were discussed by using direct quotation for the interviewee. These procedures were followed to guarantee the plausibility of the analysis and authenticity of the study findings.

## 5. The analysis and discussion

The Jordanian Government introduced GFMIS along with a new chart of accounts (COA) in conformity with the IMF Government Financial Statistics. On the one hand, GFMIS implementation assists the Ministry of Finance's (MOF) efforts to improve internal financial control throughout government. It also enables not only greater control and efficiency, but



also transparency in the use of public resources. Hence, it provides one integrated system to be used by all budget organizations, which can collect all the information needed to present the budget in any format. The data in all budget organizations are processed through the secure governmental network. In doing so, new internal financial control by-laws have been developed with Fiscal Reform Project II (FRP II) assistance; hence, new measures have been created to ensure financial compliance and reduce opportunities for the diversion and misuse of public funds (USAID, 2011b).

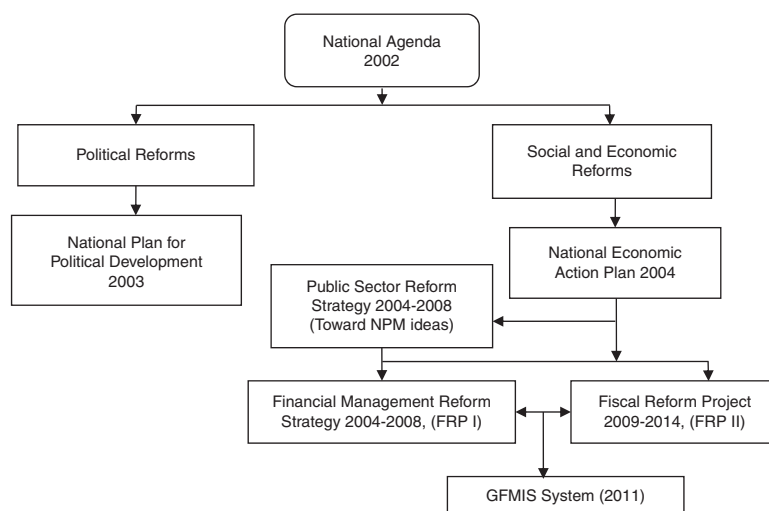
On the other hand, the new COA sets uniform and consistent accounting norms and facilitates the use of RBB to identify expenditures for specific programs, activities, and projects. The new COA thus has six levels of classification built into the GFMIS to facilitate the budget preparation and process. This budget cycle in GFMIS tackles all the procedures related to general budget preparation, planning, and execution from the Budget Preparation Circular to approving the General Budget Law, issuing the special and general orders, and performing financial transfers and allowances (USAID, 2012a). The following figure summarizes the implementation process of the GFMIS system, which moved gradually from a national agenda to the implementation of GFMIS.

### *5.1 Emergence phase at political and economic levels*

Jordan's economy was affected by the global recession, and growth slowed in 2009. As a result, policies of economic revival have struggled, together with enthusiastic domestic obligations by the government to understand the mass problems and be responsive to its citizen's urgent needs. Jordan's economic organizations have worked with the USAID-funded FRP II to support recovered macro-fiscal management as a key solution to these intricate challenges (USAID, 2012b). During the last few years, the Jordanian government represented by the MOF has undergone many changes, prompted by several reform initiatives. One of the "pillars" of these initiatives was represented by the change in the accounting system. However, public accounting has traditionally been on a cash-and-obligation basis, and focused on compliance with the budget. The changes are generally inspired by "Managerialism" principles, and a fundamental aspect of these reforms is represented by innovations in financial and accounting systems (Hood, 1995; Guthrie *et al.*, 1999). Accounting systems are considered to play a vital and constitutive role in public sector reforms, influencing the perceptions of organizational actors and contributing to the diffusion of a culture of change and institutionalization in the public realm (Meyer, 1998). These systems can shape organizational actors' reality, spreading notions such as value for money, technology, accountability, efficiency and effectiveness, turning them into newly shared meanings and values. Simultaneously, existing accounting institutions and organizational inertia may constrain the process of change, negatively influencing the path of development of new MAPs and systems (Caccia and Steccolini, 2006) (Figure 1).

As an integral part of the government's endeavors to reform public financial management (PFM) in Jordan, the MOF has adopted a comprehensive strategy of FRP II for the period 2009-2014 as one of the major cornerstones for reforming the public sector and completing the first part of the fiscal reforms project. Thus, FRP I was complemented by FRP II, which started in early 2009 when USAID and Development Alternatives Inc. (DAI) signed the implementation task contract of the project as the lead company of the joint venture. DAI was thus held responsible for the management and implementation of FRP II. The project has spanned four years, with one optional year, which terminates in 2014 (Intracom, 2012). FRP II involves the following six components: tax revenue mobilization, PFM, MOF capacity and structure, JCO administration and trade facilitation, results-oriented government, and GFMIS.

FRP II comprises many reform initiatives, among which the key initiative that deals with all PFM reform programs aimed at helping Jordan's fiscal policy to achieve its objectives, maintaining fiscal stability and avoiding financial crises through more efficient allocation of



Source: Authors

**Figure 1.**  
Summary of the  
implementation  
process of GFMIS  
in JCO

available financial resources in accordance with national priorities. Underlying these reforms is the need and intent to integrate existing stand-alone PFM systems under one integrated GFMIS to assist the government to more effectively plan and manage the state's financial resources. So far, FRP II has focused its efforts on making budgeting and the reporting of public finances more effective by assisting the General Budget Organization (GBO) to match budget preparation and execution according to global best practice, and by supporting the MOF to implement GFMIS for the reporting and standardized implementation of all financial transactions (USAID, 2010). The particular objectives of the GFMIS project in supporting the PFM role are to improve the following (see Intracom, 2012):

- (1) Transparency and conformity with international best practices in budget execution;
- (2) Accuracy, timeliness and relevance of fiscal reporting at each level of government;
- (3) Budget execution, by ensuring that payments are made in accordance with the budget law and within expenditure limits and cash constraints;
- (4) Timeliness and accuracy of banking and reporting the revenue collections;
- (5) Accessibility of information about financial management and budget execution to the legislature for decision-making purposes; and
- (6) Fiscal sustainability through a more efficient and effective management of cash.

The MOF signed a contract in 2005 with the American consulting company BearingPoint, Inc., in order to evaluate the PFM functions in Jordan by studying and analyzing all reports and recommendations provided by interested international parties, leading to the development of strategies for the necessary reforms (GFMIS, 2012). BearingPoint had introduced several recommendations, one of which was to adopt the GFMIS project in order to change stand-alone PFM systems used in the MOF and related organizations into an integrated GFMIS. The principal aim of GFMIS is to simplify the operating procedures of the financial and accounting functions in these organizations and to provide effective tools for control, planning, and decision-making processes (GFMIS, 2012).

The MOF sought to introduce a modern, computer-based GFMIS, together with the necessary system integration to ensure full internal integration of the provided accounting system, and complete interoperability with the remaining existing accounting systems. The GFMIS is being used to track government financial operations and the related financial reporting, enhancing transparency and strengthening fiscal discipline in the

Jordanian government. However, the management believed that it could be further implemented through a modern, comprehensive system that matches instantaneous requirements for decision making; it was also capable of being enhanced to accommodate future developments in the realm of the PFM (see Intracom, 2012). Bearing in mind the above, the implementation project of GFMIS was awarded to INTRACOM S.A. following a negotiation phase about certain financial and technical requirements.

In early 2008, the MOF signed a contract with INTRACOM (hereafter consultants), who started the implementation process of GFMIS in the same year. A change in accounting systems can lead to a change in the organizational structure. Hence, a new directorate was established to manage the project within the organizational structure of the MOF, which reports directly about the implementation stages to the MOF and Cabinet (GFMIS, 2012).

The consultants have provided an integrated solution, including the development of software applications, the installation of infrastructure and networks, training, support, and maintenance, by using services and products from ORACLE, IBM, and many other languages (see Intracom, 2012). The implementation process included the supply, installation, integration, training, technical support, and implementation services of a commercially available and integrated software solution and hardware platform for the GFMIS (Intracom, 2012). The recently concluded new bylaw on internal financial control led to improved control over budget execution and strengthened financial supervision. In this regard, the Audit Bureau has also introduced "performance auditing" to complement its traditional financial audits, which helped to narrow the gap between RBB and government performance. However, after a few years, the MOF implemented its new GFMIS, which automates many phases of budget planning, execution, process, accounting, treasury operations, and reporting. All of these helped to achieve better control over public finances and more efficient and effective deployment of public resources (USAID, 2011a).

### *5.2 Diffusion phase at the organizational field level*

The GFMIS system was implemented and disseminated as a first stage at the following pilot sites, considered as pioneering sites: MOF; GBO; Ministry of Planning and International Cooperation; Ministry of Education; Ministry of Health; and the Aqaba Regional Finance Center. Afterward, it was diffused to 48 other ministries and public organizations, and 15 regional finance centers as the second stage of implementation within the Jordanian context.

One of these public organizations was JCO. The project plan was jointly prepared by consultants and the MOF in the form of contract terms and was signed by the top management of the MOF in late 2008. Thereafter, both decided to use the accounting basis, (cash or combined cash-accrual) underpinning the GFMIS design. This was decided in a workshop that discussed the best options for GFMIS implementation. At the end of the workshop, the participants decided to use the cash basis of accounting built into GFMIS.

The consultants also submitted their suggestions regarding the COA to be implemented in the GFMIS. As a result, and according to the complicated process of RBB systems and stand-alone PFM systems used in different organizations, the GFMIS now helps to computerize the whole life cycle of budget preparation, classifications, budget execution, and financial reporting. In doing so, an integrated GFMIS has contributed among all public organizations to ensure transparency and accountability in the resources allocation, use, and monitoring of Jordan's public resources. In this way, the GFMIS has linked all public organizations to support the decision-making process and prompt control of the trade balance. The GFMIS has enabled the government to implement budget preparation and execution processes systematically and interrelated across all public organizations (both expenditure and collection agencies) (USAID, 2012c).

The GFMIS has improved governance and fiscal management by providing real-time financial information that managers can use to manage programs and capital projects

effectively, formulate budgets, and allocate resources. Nowadays, GFMIS is being applied in most public organizations, including the JCO. These organizations are managing a sizable share of government financial transactions, including most expenditures and large portions of other financial transactions. In 2011, the entire central RBB was prepared in accordance with the GFMIS; this was the first time the budget had been prepared using an integrated automated system (USAID, 2012b). Thus, the GFMIS enabled each program to be split into sub-programs through the COA in the form of programmatic classification.

The final level of this classification is the activity and project level. The programmatic classification is developed to enable the reporting of the budget execution to be processed in terms of program format (GFMIS, 2012). Accordingly, GFMIS represents a significant achievement in PFM by controlling the expenditures and revenues, and by ensuring that allocations, transactions, and appropriations are all aligned; non-appropriated expenditures cannot happen without proper authorization and notification; inter-organization financial transfers are controlled; proper accounts are charged, thus preventing misuse of trust accounts; and expenditure commitments are accurately controlled. In so doing, GFMIS reduces accounting errors and opportunities for corruption, and helps the government to achieve macro-fiscal objectives (USAID, 2012b).

### *5.3 The implementation of the GFMIS system at the organizational level*

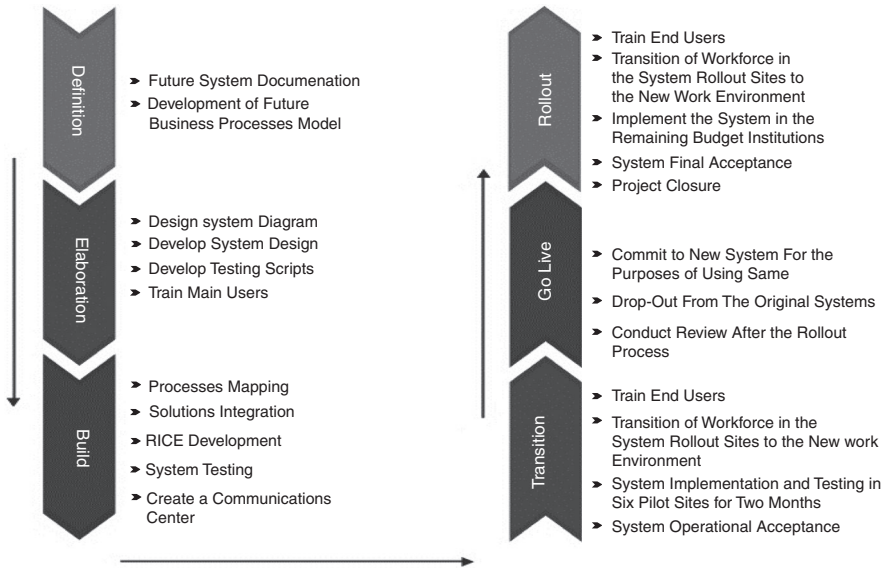
The implementation of the GFMIS system often obliges organizations to re-engineer their business processes and/or organizational structures. As discussed in previous sections, the JCO implemented the Jordan Customs Financial System (JCFS) in order to adapt the organizational settings with new GFMIS. GFMIS develops public management accounting to enter a new era of universal uniformity in the sense of the wider context of PFM in which it operates. The GFMIS was initially implemented by the MOF in 2009, which subsequently imposed this system on all public organizations, including the JCO. The head of budget component in GFMIS stated that:

[...] the aims of implementing GFMIS were as follows: to develop one integrated accounting system to be used by all budget organizations under one network (server) controlled and managed by MOF; to implement RBB processes and procedures automatically in the whole government; integration with the central bank, customs accounting system, income tax and sales, and E-government; and to unify all public accounting procedures.

The successful implementation of the GFMIS was underpinned by supportive change management, modern organizational culture, and intensive training, as clarified in Figure 2.

The GFMIS is a comprehensive, integrated system including these sub-systems: budget management system, revenue management, procurement management, payables and receivables management, cash management, and general ledger (USAID, 2012b). According to the complicated process of the RBB system, along with various stand-alone accounting systems used in different organizations, the GFMIS helped to automate the whole life cycle of budget preparation, classifications, budget execution, and financial reporting. In doing so, an integrated GFMIS has contributed across public organizations to ensure transparency and accountability in resource allocation and proper usage and monitoring of state public resources. It also helped link all public organizations under one e-network to support the decision-making process and prompt control of trade balance by implementing budget processes systematically and electronically. In this regard, the operations head of the GFMIS Project in the JCO affirmed that:

Existing accounting systems are stand-alone and not linked because they have defective and old programming language, and are not compatible with GFMIS requirements. The accountant cannot give accurate information to the programmer, and the programmer does not know the accounting information system. The defect does not exist in the inputs or outputs; rather, it exists in the



**Figure 2.**  
Change management  
of GFMIS system

Source: GFMIS Project, Jordan

programming of the system. However, the GFMIS is developed with a unified chart of accounts (COA) for all public organizations, which was used previously in 2008 through the preparation of the budget in accordance with RBB system. Notably, the COA originally existed before RBB system as a requirement of IMF, and it was used under the name of a unified accounting system. Since COA has nine classifications,[4] it was translated and reflected in RBB accounts and, through GFMIS; it enables us to move easily in the decision-making process and strategic planning. It also includes a section for programs, subprograms, activities and projects. As in economic classification, the RBB through GFMIS provides funding details at the project level for capital expenditures. The allocation of funding by the (sub) program can connect funding with the target results.

Before the implementation of the GFMIS in the JCO, there were continual negotiations between GFMIS project staff and JCO staff about the implementation process of GFMIS. Prior to this, the project management team was provided with the required training courses within USAID-FRP II to implement the system and its adaptability with JCFS and RBB processes inside the JCO. The implementation process was supported by JCO leadership (starting with a formal decision), sometimes having power over resources and meanings. This was clear from the director general's dialogue in the workshop that was prepared to discuss the implementation process of the GFMIS in the JCO. Employees from the JCO finance cadre and project team were invited to the training sessions. It seems that the GFMIS was successfully coordinated and implemented in the JCO. The interviewees of the GFMIS project team within the focus group described the implementation process of the GFMIS in the JCO as follows:

JCO successfully implemented GFMIS in early 2012; it was considered one of the exceptional organizations in the application of the system due to the support of top management and the desire for change by all employees. This success refers to their perspectives that the system standards and procedures are considered comprehensive standards that can serve the financial and accounting actions, and assist in linking with JCFS. JCO has dispensed with the old financial system that was in force and relied on GFMIS along with JCFS and their outputs. Perhaps the excellence of JCO and the success of the application stemmed from the existing qualified and skilled employees who have shown a positive attitude and full cooperation with the change.

As a part of the GFMIS, the cycle of the budget management system handles all the procedures related to general budget preparation, planning, and execution, starting from the Budget Preparation Circular up to the approval of the General Budget Law, issuing the special and general order, and performing financial transfers or allowances[5]. As discussed by a number of interviewees in the GBO and the GFMIS project team:

The responsibility of budget analysts in GBO for this cycle is to follow up the execution and evaluation of the Organic Budget Law, and the budgets for the public organizations. Besides, they should follow up all processes to evaluate and manage capital projects by implementing the RBB system. The responsibility of JCO is to prepare and submit its budget electronically through GFMIS in accordance with RBB and Organic Budget Law.

The ultimate goal of GFMIS is to improve the budget cycle by reinforcing the effectiveness of governmental performance and providing a quality service to the citizens. The budget department head explained the impact of GFMIS on the budgetary practices as follows:

GFMIS contributed effectively to the development of a comprehensive approach to the preparation of the budget, while it works to facilitate the estimated process of expenditures and revenues in the JCO. This made it easy to prepare the JCO budget for the upcoming years based on actual spending data for the previous three years that are derived from a historical database in the system. In addition, the system supports the decentralization in preparing the budget and activates the relation between JCO budget and its strategic plan. This leads to the actual implementation of Managing for results approach (MFR), and supports methodology of RBB based on linking the spending with the accomplishment, especially in the management of capital projects. The budget preparation process is now faster and more precise than before when the budget was done with Excel tables, which requires a lot of time and effort. There is no confusion in the work, especially when calculating the budget at the end of the year, as the system works to reduce the deviations in the budget estimates and at the level of each of its items; it unifies systematization and automatic preparation of draft budgets used in all public organizations. The system helped also to organize daily work by determining the powers and competencies for budget department head and staff. It is based on the principle of clarity of roles and distribution of tasks and responsibilities equally and logically. Furthermore, it has created clear channels of communication between supervisors and subordinates, which shapes a network of security when issuing financial documents.

The head of COA in the GFMIS Project further added that:

GFMIS can thus easily provide relevant information on how the annual Budget Law and its execution can support the strategic priorities of the government. The common language to achieve MFR was the Chart of Account (COA). The COA is composed of different classification segments<sup>6</sup> that accumulate and report information in a systematic manner. The information classified by the COA is used for budgeting purposes, strategic planning, financial management and accounting control.

The entire central RBB thus was prepared electronically for the first time through the GFMIS in 2011 using an integrated automated system (USAID, 2012b). The implementation of the GFMIS, as well as RBB, has changed the culture of PFM, with more emphasis on the MFR approach. This approach developed transparency and accountability for the purposes of resource allocation and the efficiency of their use. It is also useful for developing communication between the public management and citizens.

## 6. Conclusions

This study explains the processes of MAC associated with the introduction of GFMIS in the JCO within its social context. It sheds light on various institutional pressures stemming from political and economic challenges that were faced by the Jordanian Government. These challenges were intensified by the scarcity of natural resources, large budget deficits, soaring levels of debt, structural unemployment, high tax pressures, poor quality of public services, and bureaucratic public management. As a result, Jordan launched the National Agenda in 2005, which



represented a remarkable milestone in efforts to build a modern Jordan and address these challenges facing the country. The Jordanian Government has implemented many political and economic reforms that stemmed from the National Agenda. The public sector reforms redefined the state's role in the economy and re-oriented the economy from a planned, collectivist type to a more free-market economy. The reforms and related changes in the Jordanian public sector were substantively underway in 2008, especially after the implementation of the FRP strategy in two stages, focusing on the MFR approach.

GFMIS has provided an integrated solution for the PFM through the automation of the entire life cycle of budget preparation, budget execution, and financial reporting. The system operates across all budget organizations to ensure transparency and accountability in all public resources transactions, including allocation, use, and monitoring. Hence, it has important implications for policy decision makers through linking all budget organizations, for the purpose of supporting the process of decision making in an informed manner. The need for having an integrated GFMIS in our case arises from two key dimensions: first, increasing pressures from the IMF to improve fiscal management and reporting. Second, the government needs to respond to the demand of better information disclosure. GFMIS has helped the Jordanian Government to achieve integration between fiscal and public policies for the purposes of serving the national economy. Accordingly, and in order to enhance all public funds mechanisms and improve the level of services provided to the different budget organizations, the MOF, in cooperation with different international agencies, especially USAID, prepared the different designs, conducted many studies and strategy analyses, and studied the implementation of such a system in the Government of Jordan as a whole.

The implementation of GFMIS may have emerged primarily as a response to external pressures. This environmental determinism may have resulted from an active national administrative policy and constraints from historically developed administrative cultures (Olsen, 1992). The reform initiatives and programs are not characterized by a simple adjustment to existing administrative doctrines. They are evidently filtered, interpreted, and modified through the combination of two more nationally based processes (Olsen, 1992). The diffusion process implied three isomorphic elements (i.e. it created pressure for similar reforms and structural changes in many governmental aspects, especially the ways of thinking and doing) (DiMaggio and Powell, 1991; Christensen and Lægheid, 2007).

The study also concludes there was a radical change of management accounting systems in the JCO, which was carried out by the "from-top-to-bottom" method, on the initiative of the MOF and under the auspices of the IMF and USAID. This was not only a decorative innovation in management accounting but was also represented in the working practices of JCO financial management. The new GFMIS system was produced and reproduced based on a reconsideration and re-enactment of theoretical and methodological bases and procedures. As a result, the accounting changes were managed by modifying the laws and regulations; generally, the JCO accounting legislation and regulations conform to government instructions and regulations (see Tikk and Almann, 2011).

The accounting change, along with the GFMIS, has resulted in integrated, emergent, and qualitatively new practices at an organizational level. It has produced comprehensive and timely information about strategic planning, COA, and classification of assets, liabilities (including debts), revenues, and expenses at all levels of management or programs. The preparation of all statements and budgets by public organizations must be consistent with unified accounting principles (Tikk and Almann, 2011). MAC rarely occurs in a vacuum. The findings are in accord with Hopwood (1983) and Scapens (1994) and their followers that management accounting is not a static phenomenon but one that changes over time to reflect new forms and practices; and that MAC is part of organizational change, so MA rules and routines are thus part of organizational rules and routines. The findings also confirm that a change in organizational culture, which is closely related to the

organizational values (internal institutions), has an essential effect on MAC, while it also plays a central role in the desire to initiate such changes and in the acceptance of such changes by the organizational members.

Similarly, the GFMIS created a new culture in the JCO that was considered a solid platform to introduce new accounting systems. It has also enhanced the trust between IT staff and management accountants, in addition to their own confidence in accepting the change. All of these factors interacted to shape new accounting practices and routines.

The relationship between accounting practices (routines) and systems (rules) is recursive. While accounting routines were written and developed in the form of accounting rules to avoid a loss of knowledge and to facilitate the training of new staff (e.g. JCFS), accounting rules led to the emergence of new accounting routines, in equivalence with new systems (e.g. budget manual and COA) (Burns and Scapens, 2000). The mobilization of power has a major influence on the process of accounting change in the JCO. The use of resources and meaning power, in terms of using the MOF's status and support, succeeded in mobilizing the accountants' meanings and obliging them to accept the change.

Initially, many employees in the JCO showed great concern about the nature and effects of the new rules associated with the new systems and methods implemented under the directive of the government, represented by the MOF. However, the way in which they were implemented and eventually became institutionalized was shaped by the existing norms and institutions' "system's power" within the JCO. This was realized by accepting and applying the new rules and the emerging routines from daily working activities.

Through this process, MAC was itself reformed and new accounting routines manifested, which further embedded the existing institutions and norms (Siti-Nabiha and Scapens, 2005). Thus, the change in the JCO did not take place in isolation. Institutional theories (NIS and OIE) shed light on the discursive interaction between the JCO and its institutional environment (Wickramasinghe and Alawattage, 2007). These insights have important implications for institutional research on MAC and public sector reforms, in responding to recent calls to bridge the gap between the extra- and intra-organizational levels of analysis (Modell, 2003; Dillard *et al.*, 2004). As correctly narrated by Burns and Scapens (2000), this goes beyond conceptualization of MAC as part of organizational change that was mainly created by pressures for change in organizational routines over time.

The study contributes to the management accounting literature by explaining the processes of MAC associated with the implementation of GFMIS in the public sector. The JCO case study has shown that it can act as a basis for conducting further case studies focused on the interface of macro and micro levels of institutional change. Using Alsharari *et al.*'s framework (2015) in the case analysis was useful. It extends the institutional theory to offer a fuller explanation of institutionalization processes by integrating three institutional approaches: NIS, OIE, and power mobilization. Future research might undertake comparative case studies of two or more organizations, especially those in the same institutional environment and operating under the same circumstances. This comparison would provide a deep understanding of their responses to the same new institutional pressures.

## Notes

1. These studies were conducted in the private sector, whereas this study will be conducted in the public sector.
2. The Jordanian Customs Organization's functions are expanding to effectively support the national economy, promote investments, facilitate trade exchange, combat smuggling, and protect the environment and local society from hazardous materials, and to monitor passengers and goods movement and means of transport passing through the kingdom by adopting the best advanced technology. Source: JCO Annual Report (2011).

3. The researcher's identity has to be disclosed when he gathers the data from its sources. The reason for this is that the researcher is known by the participants. Furthermore, the researcher cannot take part in activities in the organization being studied because he does not want to affect the participants' behavior (Ryan *et al.*, 2002). The first author had been working as customs auditor in the JCO that was selected as a case study. Also, the researcher has maintained good relationships with some managers, accountants, and employees.
4. These nine classifications are economic, funding, organizational, general ledger, programs, functional, geographical, budget type, and one as a reserve.
5. Allowance or "virement" is the process of transferring appropriated funds from one line item to another during the budget year (USAID, 2012a, p. 44).
6. Each segment of the COA is managed by a set of codes (groups) that gives information on the responsible agency, purpose, economic object, and so forth. Each group or each code within a group of the segment has a unique description so that anyone recording transactions or reviewing reports will consistently understand the transactions included in each code.

### References

- Adair, J.G. and Kagitcibasi, C. (1995), "Development of psychology in developing countries: factors facilitating and impeding its progress", *International Journal of Psychology*, Vol. 30 No. 6, pp. 633-641.
- Alsharari, N.M., Dixon, R. and Youssef, M.A. (2015), "Management accounting change: critical review and a new contextual framework", *Journal of Accounting & Organizational Change*, Vol. 11 No. 4, pp. 476-502.
- Altbach, P.G. and Knight, J. (2007), "The internationalization of higher education: motivations and realities", *Journal of Studies in International Education*, Vol. 11 Nos 3-4, pp. 290-305.
- Bazeley, P. (2007), *Qualitative Data Analysis with NVivo*, Sage Publications Ltd., London.
- Bhimani, A. (2001), *Management Accounting Manual*, Croner CCH Group Ltd., London.
- Brignall, S. and Modell, S. (2000), "An institutional perspective on performance measurement and management in the new public sector", *Management Accounting Research*, Vol. 11 No. 3, pp. 281-306.
- Burns, J. and Scapens, R.W. (2000), "Conceptualizing management accounting change: an institutional framework", *Management Accounting Research*, Vol. 11 No. 1, pp. 3-25.
- Caccia, L. and Steccolini, I. (2006), "Accounting change in Italian local governments: what's beyond managerial fashion?", *Critical Perspectives on Accounting*, Vol. 17 Nos 2-3, pp. 154-174.
- Chandler, A.D. (1992), "Organizational capabilities and the economic history of the industrial enterprise", *The Journal of Economic Perspectives*, Vol. 6 No. 3, pp. 79-100.
- Chandler, A.D. (1993), *Strategy and Structure*, MIT Press, London.
- Chenhall, R.H. (2003), "Management control systems design within its organizational context: findings from contingency-based research and directions for the future", *Accounting, Organizations and Society*, Vol. 28 Nos 2-3, pp. 127-168.
- Christensen, T. and Lægreid, P. (2007), *Transcending New Public Management: The Transformation of Public Sector Reforms*, Ashgate Pub. Co., London.
- Covaleski, M.A., Dirsmith, M.W. and Samuel, S. (1996), "Managerial accounting research: the contributions of organizational and sociological theories", *Journal of Management Accounting Research*, Vol. 8 No. 1, pp. 1-36.
- Diamond, J. and Khemani, P. (2005), "Introducing financial management information systems in developing countries", working paper, International Monetary Fund, pp. 1-33, available at: [www.imf.org/external/pubs/ft/wp/2005/wp05196.pdf](http://www.imf.org/external/pubs/ft/wp/2005/wp05196.pdf)
- Dillard, J.F., Rigsby, J.T. and Goodman, C. (2004), "The making and remaking of organization context: duality and the institutionalization process", *Accounting, Auditing & Accountability Journal*, Vol. 17 No. 4, pp. 506-542.

- DiMaggio, P.J. and Powell, W.W. (1991), *The New Institutionalism in Organizational Analysis*, University of Chicago Press, Chicago, IL.
- Fleischman, R. and Tyson, T. (2006), "The history of management accounting in the US", in Chapman, C.S., Hopwood, A.G. and Shields, M.D. (Eds), *Handbooks of Management Accounting Research*, Elsevier Ltd., London, Vol. 2, pp. 1071-1089.
- GFMIS (2012), "Government financial management information system", Ministry of Finance, Amman, available at: [www.gfmis.gov.jo/en/about-us/history](http://www.gfmis.gov.jo/en/about-us/history) (accessed May 23, 2012).
- Gill, J. and Johnson, P. (2002), *Research Methods for Managers*, Sage Publications Ltd., London.
- Gomes, D., Carnegie, G.D. and Rodrigues, L.L. (2008), "Accounting change in central government: the adoption of double entry bookkeeping at the Portuguese Royal Treasury (1761)", *Accounting, Auditing & Accountability Journal*, Vol. 21 No. 8, pp. 1144-1184.
- Greenwood, R. and Hinings, C.R. (1996), "Understanding radical organizational change: bringing together the old and the new institutionalism", *The Academy of Management Review*, Vol. 21 No. 4, pp. 1022-1054.
- Guthrie, J., Olson, O. and Humphrey, C. (1999), "Debating developments in new public financial management: the limits of global theorising and some new ways forward", *Financial Accountability & Management*, Vol. 15 No. 34, pp. 209-228.
- Hardy, C. (1996), "Understanding power: bringing about strategic change", *British Journal of Management*, Vol. 7 No. 1, pp. 3-16.
- Hong, H.K. (1991), "Management accounting in the public sector", *International Journal of Public Sector Management*, Vol. 4 No. 3, pp. 5-17.
- Hood, C. (1995), "Contemporary public management: a new global paradigm?", *Public Policy and Administration*, Vol. 10 No. 2, pp. 104-117.
- Hopper, T. and Major, M. (2007), "Extending institutional analysis through theoretical triangulation: regulation and activity-based costing in Portuguese telecommunications", *European Accounting Review*, Vol. 16 No. 1, pp. 59-97.
- Hopwood, A.G. (1983), "On trying to study accounting in the contexts in which it operates", *Accounting, Organizations and Society*, Vol. 8 Nos 2-3, pp. 287-305.
- Intracom (2012), "Government of financials management information system (GFMIS)", available at: [www.intracom.jo/GFMIS.html](http://www.intracom.jo/GFMIS.html) (accessed May 25, 2012).
- JCO Annual Report (2011), "Annual report: Jordan customs", Amman.
- Jones, S., Harvey, M., Lefoe, G. and Ryland, K. (2014), "Synthesising theory and practice distributed leadership in higher education", *Educational Management Administration & Leadership*, Vol. 42 No. 5, pp. 603-619.
- Karanja, J.G. and Nganga, E.N. (2014), "Factors influencing implementation of integrated financial management information system in Kenya Government Ministries", *Research Journal of Finance and Accounting*, Vol. 5 No. 7, pp. 10-17.
- Knight, J. (2013), "The changing landscape of higher education internationalisation – for better or worse?", *Perspectives: Policy and Practice in Higher Education*, Vol. 17 No. 3, pp. 84-90.
- Lienert, I. (2003), "A comparison between two public expenditure management systems in Africa", Working Paper No. 3/2, IMF, Washington, DC, p. 31.
- Li-Hua, R., Li-Hua, R., Wilson, J., Aouad, G. and Li, X. (2011), "Strategic aspects of innovation and internationalization in higher education: the Salford PMI2 experience", *Journal of Chinese Entrepreneurship*, Vol. 3 No. 1, pp. 8-23.
- Ma, Y. and Tayles, M. (2009), "On the emergence of strategic management accounting: an institutional perspective", *Accounting and Business Research*, Vol. 39 No. 5, pp. 473-495.
- Manakul, W. (2007), "English in engineering education for Japanese graduate students", *Australasian Journal of Engineering Education*, Vol. 13 No. 2, pp. 53-63.
- Meyer, J.F. (1998), in Guthrie, J., Humphrey, C. and Olson, O. (Eds), *Global Warning: Debating International Developments in New Public Financial Management*, Cappelen Akademisk Forlag, Oslo, pp. 7-13.

- Modell, S. (2003), "Goals versus institutions: the development of performance measurement in the Swedish university sector", *Management Accounting Research*, Vol. 14 No. 4, pp. 333-359.
- Moll, J., Burns, J. and Major, M. (2006), "Institutional theory", in Hoque, Z. (Ed.), *Methodological Issues in Accounting Research: Theories, Methods and Issues*, Spiramus, London, pp. 183-206.
- Nor-Aziah, A.K. and Scapens, R.W. (2007), "Corporatisation and accounting change: the role of accounting and accountants in a Malaysian public utility", *Management Accounting Research*, Vol. 18 No. 2, pp. 209-247.
- Odhiambo, J. (2006), "Advancing the quality of higher education through internationalization, Strathmore University", available at: [www.cie.asu.edu](http://www.cie.asu.edu)
- Oliver, C. (1991), "Strategic responses to institutional processes", *Academy of Management Review*, Vol. 16 No. 1, pp. 145-179.
- Olsen, J.P. (1992), "Analyzing institutional dynamics", *Staatwissenschaften und Staatspraxis*, Vol. 3 No. 2, pp. 247-271.
- Rakner, L., Mukubvu, L., Ngwira, N., Smiddy, K. and Schneider, A. (2004), "The budget as theatre – the formal and informal institutional makings of the budget process in Malawi", final report, Michelsen Institute, Mimeo, Bergen.
- Ribeiro, J.A. and Scapens, R.W. (2006), "Institutional theories in management accounting change: contributions, issues and paths for development", *Qualitative Research in Accounting & Management*, Vol. 3 No. 2, pp. 94-111.
- Rodin-Brown, E. (2008), *Integrated Financial Management Information Systems: A Practical Guide*, The Louis Berger Group Inc, and Development Alternatives Inc., USAID, available at: [http://pdf.usaid.gov/pdf\\_docs/PNADK595.pdf](http://pdf.usaid.gov/pdf_docs/PNADK595.pdf)
- Ryan, B., Scapens, R.W. and Theobald, M. (2002), "Research method and methodology in finance and accounting", Thompson, London.
- Sawalha, D. and Abu-Shanab, E. (2015), "Financial information systems in governments: is it accepted by public employees?", *International Arab Journal of e-Technology*, Vol. 4 No. 2, pp. 57-66.
- Scapens, R.W. (1990), "Researching management accounting practice: the role of case study methods", *The British Accounting Review*, Vol. 22 No. 3, pp. 259-281.
- Scapens, R.W. (1994), "Never mind the gap: towards an institutional perspective on management accounting practice", *Management Accounting Research*, Vol. 5 Nos 3-4, pp. 301-321.
- Scapens, R.W. (2006), "Understanding management accounting practices: a personal journey", *The British Accounting Review*, Vol. 38 No. 1, pp. 1-30.
- Scott, W.R. (1995), *Institutions and Organizations*, Sage, Thousand Oaks, CA.
- Seo, M.G. and Creed, W.E.D. (2002), "Institutional contradictions, praxis, and institutional change: a dialectical perspective", *Academy of Management Review*, Vol. 27 No. 2, pp. 222-247.
- Siti-Nabiha, A. and Scapens, R.W. (2005), "Stability and change: an institutionalist study of management accounting change", *Accounting, Auditing & Accountability Journal*, Vol. 18 No. 1, pp. 44-73.
- Ter Bogt, H.J. (2008), "Management accounting change and new public management in local government: a reassessment of ambitions and results – an institutionalist approach to accounting change in the Dutch public sector", *Financial Accountability & Management*, Vol. 24 No. 3, pp. 209-241.
- Tikk, J. and Almann, A. (2011), "Developments in public sector financial management in Estonia", *Business and Economic Horizons*, Vol. 5 No. 2, pp. 47-56.
- USAID (2010), "Jordan Fiscal Reform II: Quarterly Report November 2009-January 2010", Jordan Economic Growth Office, Amman.
- USAID (2011a), "Public expenditure perspective", Fiscal Reform Project II, Amman.
- USAID (2011b), "Year one results report", Fiscal Reform Project II, June, Amman.
- USAID (2012a), "Jordan Budget Manual: a guide to policy, process, and analytic techniques", Jordan Economic Growth Office, FRP II, Amman.
- USAID (2012b), "Jordan makes key improvements in fiscal management", available at: [www.usaid.gov](http://www.usaid.gov) (accessed May 26, 2012).

- USAID (2012c), "Government financial management information system", available at: [www.frp2.org/english/ComponentsCounterparts/GovernmentFinancialManagementInformationSystem.aspx](http://www.frp2.org/english/ComponentsCounterparts/GovernmentFinancialManagementInformationSystem.aspx) (accessed May 27, 2012).
- Wickramasinghe, D. and Alawattage, C. (2007), *Management Accounting Change: Approaches and Perspectives*, Routledge, London.
- World-Bank-Group (2015), "Managing change in PFM system reforms: a guide for practitioners", available at: [http://siteresources.worldbank.org/PUBLICSECTORANDGOVERNANCE/Resources/285741-1303321730709/FMIS\\_Managing\\_Change\\_May2015\\_v1.1.pdf](http://siteresources.worldbank.org/PUBLICSECTORANDGOVERNANCE/Resources/285741-1303321730709/FMIS_Managing_Change_May2015_v1.1.pdf) (accessed May 30, 2012).
- Yazdifar, H. (2004), "Insight into the dynamics of management accounting systems implementation in group (dependent) organizations: an institutional perspective", PhD thesis (unpublished), Manchester Business School, Manchester.
- Yazdifar, H., Zaman, M., Tsamenyi, M. and Askarany, D. (2008), "Management accounting change in a subsidiary organisation", *Critical Perspectives on Accounting*, Vol. 19 No. 3, pp. 404-430.
- Zoubi, A. (2011), "The processes of management accounting change in Libyan privatised companies: an institutional perspective", (unpublished thesis), Durham Business School, Durham University, Durham.

### Further reading

- Bachnik, J. (2003), *Roadblocks on the Information Highway: The IT Revolution in Japanese Education*, Lexington Books, Los Angeles, CA.
- Deca, L., Egron-Polak, E. and Fiț, C.R. (2015), "Internationalisation of higher education in Romanian national and institutional contexts", *Higher Education Reforms in Romania*, Springer, pp. 127-147, available at: [https://link.springer.com/chapter/10.1007/978-3-319-08054-3\\_7/fulltext.html](https://link.springer.com/chapter/10.1007/978-3-319-08054-3_7/fulltext.html)
- Ngok, K. and Guo, W. (2008), "The quest for world class universities in China: critical reflections", *Policy Futures in Education*, Vol. 6 No. 5, pp. 545-557.

### About the authors

Dr Nizar Mohammad Alsharari is an Assistant Professor at the Accounting Department in UAE University, UAE. He has earned his PhD from Durham University, UK in 2013. He has taught different accounting courses with the main focus on management accounting at both graduate and undergraduate levels in different universities. His current research includes organizational and accounting changes and related philosophical and methodological assumptions.

Dr Mayada Abd El-Aziz Youssef is an Associate Professor at the United Arab Emirates University, UAE and Helwan University, Egypt. She has earned her PhD from the Manchester Business School, Manchester University in 2005. Mayada held various academic positions for many years at Business Schools in the UK, Egypt and UAE. She joined College of Business & Economics, UAEU in 2008. Mayada's research interest focuses on management accounting change, B-to-B electronic commerce, organizational change, institutional theories, power issues in organizations, management control systems, and management accounting techniques. She is the author of two book chapters in two books published by IGI Global (USA). She has published in reputable international journals such as *Qualitative Research in Accounting & Management*, *Journal of Accounting & Organizational Change*, *International Journal of Accounting and Finance*, *Journal of Islamic Accounting and Business Research*, and *Journal of Economic & Administrative Sciences*. Mayada is on the editorial board of *Journal of Accounting & Marketing* (USA) and an ad hoc reviewer for many international journals and conferences in the accounting field. Dr Mayada Abd El-Aziz Youssef is the corresponding author and can be contacted at: [mayada\\_youssef@uaeu.ac.ae](mailto:mayada_youssef@uaeu.ac.ae)

For instructions on how to order reprints of this article, please visit our website:

[www.emeraldgroupublishing.com/licensing/reprints.htm](http://www.emeraldgroupublishing.com/licensing/reprints.htm)

Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)



Reproduced with permission of copyright owner. Further reproduction prohibited without permission.