

Change Management In Integrated Financial Management Information Systems

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Abstract—This paper aims to report lessons learned from the implementation of a financial management information system (FMIS) in the Albanian public sector. Implementing such a system is a complex task which requires involvement of different government units and faces different legal barriers. During the implementation of this system, all the requirements and need of different users have to be accommodated. In this research, we provide an overview of the factors affecting the implementation of a new financial management information system based on empirical analyses, with specific focus on change management role. As a result of our investigation, no significant problems experienced at both the upper and the middle levels. Based on the processing of the data collected we found out that 84% of the involved users in our study agreed that their requirements have been met and 92% of them were satisfied with the use of overall system and its components. It came out that, in general, users at lower levels declared a high level of resistance against changes. As a conclusion of this research, top management should demonstrate strong leadership and commitment with respect to the implementation of such complex and innovative integrated systems.

Keywords—*Integrated Financial Management Information System; Accountability; Human resources; Change management*

I. INTRODUCTION

Developing countries face problems related to budget mismanagement, for a number of reasons such as corruption, nepotism, mismanagement, profit, etc. Financial

management in these countries is mostly done in-house or with very primitive software, which further complicates the process of managing public finances. This has some consequences such as low control, mismanagement, improper allocation of funds and non-tracking of transactions. But with the implementation of FMIS these problems are minimized and the effectiveness of public financial management increases. The implementation of FMIS occurs in both developing and developed countries.

The implementation of FMIS has occurred in Albania, and in this study, we tried to find out the main challenges and factor affecting the system implementation. It should be noted that the implementation of FMIS mainly brings difficulties to employees' access to the application, their competencies, their motivation, the training they have received and their readiness to become part of the implementation of FMIS. These are some of the difficulties encountered in the human factor and this research tries to shed light and through it to understand what these obstacles and difficulties in order to give the right recommendations to minimize them.

The researchers and practitioners agree when it comes to the change challenges that faces the organisations when introduce new technology initiatives. They refer to how to engage the employees, the ones who are more exposed to these changes, while old daily operations have been rooted in their routine. Often, the employees have this resistance to change due to lack of information on the scope of change, impact on their job position, training implications, difficulties with new technology, etc. Often, they are not involved during preparation phase and consultations.

There is a broad agreement that governments in developing countries have to design and implement FMIS in order to improve the governance by proving adequate, relevant and reliable financial information. All the data stored in this system might be processed in order to take decisions and also to improve the management of resources [1]. Kimwele (2011) stated out some of the important factors that directly have a big impact in the implementation of a FMIS such as: a) staff resistance; b) top management commitment; c) staff capacity; d) system complexity [2].

When it comes to the Albanian, the new system, new functions and new modules were designed with the main focus to better support term budget planning and also improve the management of public investment. The main motivation behind the study proposed in this paper is to enable us to understand based on empirical methods, the critical success factors of AFMIS as an innovative system for the financial sector in Albania.

The remaining part of the paper is organized as follows. Section 2 presents related work on FMIS in different countries similar to Albania. The methodology used to collect, and process data and the conceptual framework are introduced in Section 3 and 4. Section 5 presents the empirical results of the data collected by personal interviews including some main discussions. The main conclusions of this research are presented in section 6.

II. LITERATURE REVIEW

An integrated Financial Management Information System will support the government of a country to integrate budget execution data, offering a bigger and easier financial of public funds. This system will provide information for budget preparation and execution to accounting and reporting. Another important benefit of this system is the improvement in the preparation of financial statements and ability to be used as an audit tool. Based on the literature, none of the existing studies have tackled effects of FMIS on the financial management of the public sector in Albania. Based on the main findings after the quantitative analyses of this research, will highlight importance of success factors in the implementation of a FMIS in the public sector in Albania.

In developing countries, most of the financial control tasks are mainly manual procedures and the provided solutions are often considered as not being adequate and are having negative effects on the functioning of the effective public financial management system. Not having in place, a FMIS, the financial units of governments lack timely and meaningful budget data for planning and auditing. The issue of government fiscals and budget transparency, or the lack of it, is of direct relevance to most of these countries. Considering these reasons, most of these countries are investing in implementing FMIS in their financial units to strengthen their financial systems by improving budget management and control.

The implementation of a FMIS has proved a real challenge for programme-based budgeting reforms. The advantages of a FMIS could be seen in different aspects. First, these systems provide reliable financial data due to the recording and processing of financial transactions in a dedicated database. Having all these data in a centralised repository, it helps in enhancing transparency and accountability of the internal and external users including the public. For the success of any information system project, user perspective must be considered as the main determinant factor [3].

Second, another benefit of using FMIS is its capability to keep trace of all the different stages of financial transactions of the budget reconciliation process, and accounting of expenditure, making possible for the users a detailed picture of budget execution.

Third, FMIS ensure a better budgetary control giving to the users the ability to improve economic forecasting and planning. When we discuss the

benefits of FMIS, we should take into account its main characteristics: a) management tool - it is used not only by the central institutions but also from the line agencies supporting the management change; b) it contains financial and non-financial data as well - it has to collect, store and process not only financial data which has to be used in decision making but also non-financial information such as performance indicators which can be used by top level managers; c) it is a system - as such it has many components connected to each other to complete different tasks and to provide relevant information to different users based on their needs. It is vital to define 'who does what' to oversee the processes related to collecting, processing and sending data at the network level [4].

The main advantage of FMIS is to contribute to the budget management outcomes and all these contributions has been documented widely by different authors [5][6][7]. A very high budget has been in disposal to 74 countries during the last three decades by the World Bank encouraging these countries to reform their public expenditure management systems. Despite all these encouragement and financial support, these projects have a high failure rate as the IT projects do [8]. Identifying the main critical factors is important in order to ensure that the necessary attention is received during the system implementation [9]. Authors in [10] stated that the main problem with FMIS is the expectations of different users with different roles rather than the process of implementation itself.

One of the main important actions to be taken during the project implementation is to set realistic goals for the quality, time and financial resources. Somers et al. (2001) during their study have identified 22 success factors affecting the implementation of financial systems such as: top management engagement, goals and objectives, data analysis, education on new processes, business process reengineering, change management etc [11].

Based on the literature review, we have classified the success factors in three main categories:

A. *Capacity and Technical Skills*

There are some countries, such as Ethiopia, where the implementation of FMIS has not been satisfactory. The main factor affecting the implementation and delays is the limited involvement and negligence of the main stakeholders such as the ministry of finance and other institutions. Based on these experiences, the main institutions should show strong commitment, effective change management and internal support [12]. Based on these finding, only 21% of FMIS were successfully implemented and from all of these only 6% were sustainable. Di Luozzo, S., Varisco, M., & Schiraldi, M. M. (2020) mention that managers should develop information campaigns within the organization, for allowing employees to comprehend the importance of adopting the new standards [13].

B. Staff-resistance

As these integrated systems are new concepts for the government, usually there is a high staff resistance to implement them. To deal with this main obstacle, effective change management is required. The management deals not only with staff resistance but also it maximizes the success of the project via involvement of the adequate staff. As FMIS changes the way how financial operation are carried out, changing dramatically the workflow of the whole processes, top management should be engaged in creating a strong human and organizational culture for all the employees which are the users of the system, immediately after the project is initiated [14]. If this challenge is not addressed in time, resistance is expected to happen by employees of different categories starting from the executive employees, up to the end users of the system. Communication and participation are the main ways to stimulate support for change among employees [15].

C. Management Commitments

Based on a study conducted by Mwakio (2015), with the main focus to identify the factors that contribute mostly to a failure of implementing AFMIS in developing countries, it is concluded that the senior managers do not delegate responsibilities [16]. Political level engagement is considered the main reason that Tanzania implemented a successful integrated financial system among all these countries. In Taita Taveta county, the study concluded that the financial system implementation has failed due to not involved senior staff [17]. According to Errida, A., & Lotfi, B. (2021) the leadership of the change manager, effective and constant communication during change, engagement of stakeholders, and motivation of employees and change agents are the most relevant factors for change management success [18].

III. CONCEPTUAL FRAMEWORK

Conceptual framework it is used to represent graphically the variables involved in a study helping researchers to clarify the research questions and methods used [19]. In the context of this study, we have defined three independent factors and one dependent variable in order to identify the factors that have influenced in a successful implementation of FIMS in the Albanian Public Sector. The conceptual framework is presented in Figure 1.

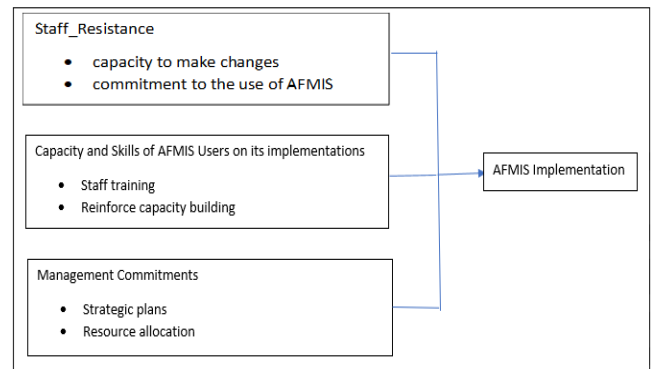


Figure 1 Conceptual Framework(based on the model developed by [18])

Based on the objectives of this study, we have identified the variables. The questionnaire was divided into three main categories which were staff resistance, capacity and skills of AFMIS users during the system implementation and the commitment of the managerial staff. are the researchers being in line with research specific objectives. As a dependent variable we decided to use the effective implementation of AFMIS.

IV. METHODS OF DATA COLLECTION

Here, we present methods used to collect data from the users of the system on the deployment of FMIS in Albania. These methods are as follow:

A. Fieldwork

We conducted several visits to directly observe and discuss with top management team in the MOFE (Ministry of Finance and Economy) administrators, employees in charge with implementing AFMIS, and employees who uses this system driving a better fiscal management, make the best use of financial resources, and the improved management of

resources in order to understand the nature of tasks and the context in which they perform their duties. Also, during our contacts, the top-level managers were interviewed to discuss their thoughts and gain a deeper understanding on business needs and better balance them with potential solutions for public funds mechanisms and procedures inside MOF and if this implementation. In the data collection process, we assured confidentiality to enhance participation in this survey. The data collected were anonymized. The approach used during the field work it was the drop and pick later approach in order to ensure adequate time for the respondents to fill in the questionnaires.

B. Questionnaire

A web-based questionnaire to examine participants' understanding of the benefits and obstacles faced during the implementation of the AFMIS system.

The questionnaire targeted employees at the MOFE who worked on the development of AFMIS, and the ones involved in the implementation of the

system. The sample approach used in this study was convenience sample [20], a non-probabilistic approach where individuals are selected from a target population that is readily, easily available and willing to participate in the survey. The selected sample consisted of 40 respondents who answered to the AFMIS questionnaires for fiscal management. The respondent's distribution was based on their position on the different directorates in the MOF. Based on some demographic analyses related to the participants in the survey, it came out that 60% of all respondents (24 individuals) were working in the Department of Budget, while 40% (16 individuals) were working in the Department of Treasury and Business Processing. A detailed questionnaire was designed according to the requirements of the existing study. All the questions were used to measure a) staff resistance; b) capacity and skills of AFMIS Users on its implementation; and c) the changes in the management of AFMIS. During the design of the questionnaire, we used a five-point Likert scale, with scales from 1 to 5 (strongly disagree to strongly agree).

C. Data Processing

First the data entry was done using Microsoft Excel and after the data are recording and codified, IBM SPSS was used to carried out quantitative techniques. Descriptive statistics and Factor Analyses were used. To test the acceptance of the proposed model, we measured the consistency by means of reliability test.

V. RESEARCH FINDINGS AND DISCUSSION

A. Reliability and validity of AFMIS questionnaire

The categories of validity are construct, internal and external validity. As we have collected data in this research, we have measured the construct validity which refers to data collection procedure. The persons interviewed in this research were the staff of MOF in charge with implementation and usage of the AFMIS. The scale reliability was performed on the whole 24-item with the 3 domains. The results obtained for this test as presented in Table 1, revealed a Cronbach's alpha = .877, concluding that there is very good consistency between the individual items in the questionnaire used to collect data in the fieldwork.

TABLE 1- RELIABILITY STATISTICS

Cronbach's Alpha	Nr of Items
,877	24

TABLE 2- RELIABILITY STATISTICS FOR EACH DOMAIN

Domain	Cronbach's Alpha*	N of Items
Staff Resistance	0,702	7
Staff Capacity and Skills of AFMIS Users	0,762	11
Management Commitment of AFMIS	0,853	6

Table 2 demonstrates the Cronbach's alpha for each domain in the AFMIS questionnaire. According to Bowling [21] an alpha of 0.6 or higher is considered as a sign of acceptable internal consistency. An acceptable internal consistency was shown by Cronbach's alpha between .702 and .853 for all the three domains.

B. Demographic data

In this section we provide some basic statistics related to the respondents. The background information presented in Table 2, specifies gender and age groups of respondents. The final sample consisted of 40 participants, 14 male (35% of the sample) and 26 females (65% of the sample). This implies that MOF's employees are dominated by females. 18% of participants were in the age range of 20-30years old, while employees of 51-60 years accounted for 10.3 % of the sample. As observed in the Table 1, the overwhelming majority of them (65%) was female. Based on the data collected, 90% of respondents had more than 5 years of experience. On the other hand, 10% of the respondents declared between 1 and 5 years of experience, indicating that most of the respondents have long years of experience in financial sector and are capable to perform their duty in well experienced way.

C. Descriptive statistics for questionnaires related staff resistance

The first questions of the questionnaire consider the respondent's point of view related to the aspect of resistance of the public sectors employees regarding the implementation of AFMIS. These set of questions tried to measure the extent to which respondents agreed or disagreement with the seventh questions included int the first section. Table 3 illustrates

TABLE 3- DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

N=40		
Variables	Categories	Percentage
Gender	Male	35
	Female	65
Age group	20-30	10
	31-40	45
	41-50	30
	51-60	15

the descriptive statistics of these questions. From the table 3, we conclude that all respondents either

strongly agreed or agreed with a mean of above 3.07 on the seven questions related to the staff resistance, which is, showing the capacity of the organization to change on one side but also to survive while changing on the other side, as shown by a mean of 3.71; the ministry instituted strategies to minimize resistance to changes as shown by a mean of 3.18; the ministry has devised convenient mechanism in order to deal with one of the main challenges, overcoming resistance to change as well as the structure of the organization as shown by a mean of 3.11.

TABLE 4. DESCRIPTIVE STATISTICS OF QUESTIONARIES' RESPONSE RELATED STAFF RESISTANCE

List of questions	N	Minimum	Maximum	Mean	St. Deviation
The organisation has the capacity to make changes, manage changes and survive while changing	40	2	5	3,71	,763
The organisation has instituted strategies to minimize resistance to change	40	2	4	3,18	,723
The organisation has formulated guidelines for successful AFMIS implementation	40	2	5	3,07	1,035
The organisation develops change management strategies immediately an AFMIS project if conceived	40	1	4	3,14	,891
The organisation's stakeholders who benefitted from previous methods perceive change as a threat to their jobs, hence resist it	40	1	5	3,21	,957
The organisation has devised convenient methods of overcoming change resistance	40	2	4	3,11	,567
The organisation has strategic plan that identifies political, administrative & capacity constraints	40	1	5	3,21	,957

D. Results - capacity and skills of users

The second section of the questionnaire contains questions related to the capacity and skills of AFMIS users on its implementation, to establish the extent to which respondents agreed or disagreed with the fact that their capacities has influenced the project implementation. The respondents indicate degree of disagreement (mean= 2.49; std dev = 0.698) that Ministry of Finance has improved the wage structure

to compete with the private sector to attract and retain skilled staff. In addition to this, the respondents also disagreed (mean below ≈ 2.28 ; std dev > 0.714) regarding the ensure of continuity of key employees that had a key role in the implementation and development of AFMIS. As the standard deviation is low, it implied that there all the respondents agreed. Related to the training of the staff and specially to the IT team, the respondent agreed that MOI has taken necessary steps to develop expertise and capacities of the employees. All these findings are in line with the study conducted by authors in [21] who drawn the conclusion that the human resources play a vital role in shaping a good financial management system for any organization.

TABLE 5. DESCRIPTIVE STATISTICS OF QUESTIONARIES' RESPONSE RELATED TO USER SKILLS

List of questions	N	Min	Max	Mean	St. Deviation
The organisation ensures continuity of key personnel involved in system's development & implementation	40	2	5	3,57	1,034
Skilled personnel are incentivised to join the organisation	40	2	5	3,25	,928
The organisation takes great care when outsourcing technical assistance from external consultations	40	2	5	3,64	,870
The organisation has taken necessary measures to develop requisite skills and capacity of the central IT department	40	2	4	3,25	,701
The organisation conducts capacity building through trainings	40	2	4	3,21	,787
The organisation engages external consultants with extensive experience in public sector financial management	40	2	5	3,54	,962
The organisation has aligned education system with IT to meet demand of ICT personnel	40	2	4	3,29	,600
The organisation has personnel with requisite knowledge & expertise for effective system implementation, operation & maintenance	40	3	4	3,61	,497
The organisation has taken necessary measures to reinforce capacity in AFMIS project team	40	1	4	3,15	1,027
The organisation has reviewed salary structure to compete at par with private sector to deter trained personnel exit	40	2	4	2,49	,698
The organisation ensures continuity of key personnel involved in system's development and implementation	40	2	4	2,28	,714

6. CONCLUSIONS AND RECOMMENDATIONS

E. Results- management commitment

Based on the results presented in the table 4, it is shown that the respondents agreed that management is not taking adequate communication (mean 2,46); the management involvement and support is not as it has to be (mean 2,21); the respondents disagree that the top management is committed with AFMIS implementation (mean of 2.21). Related to the goal and objectives of AFMIS, they agreed that these are communicated to the staff (mean 3,46). As explained in [12], lack of managerial commitment and missing their support is one of the main obstacles affecting the implementation of a financial management system within an organization.

F. Correlation analysis

In order to test the relationship between the depend variable and the independent ones, a correlation analyses were carried out. In Table 7 we present the results of Pearson correlations

between the three factors namely, staff resistance, managerial commitment, and user skills with

TABLE 6- DESCRIPTIVE STATISTICS OF QUESTIONARIES' RESPONSE RELATED TO MANAGEMENT COMMITMENT

List of questions	N	Min	Max	Mean	St. Deviation
Adequate communication from management	40	1	4	2,46	,922
Management involvement and support of AFMIS	40	2	4	2,21	,787
Top management commitment	40	1	4	2,21	,787
Country strategic plans outline long term plans to support AFMIS	40	2	4	2,11	,685
AFMIS implementation gradual and consultative	40	1	5	3,25	,967
Goals and objectives of AFMIS communicated	40	2	5	3,46	,637

the implementation of AFMIS. The results obtained, indicated that all the three factors are critical success factors in the implementation of AFMIS in Albania government.

The Pearson correlation analysis (Table 7) found a strong positive correlation between AFMIS implementation and staff resistance ($r=.813$, $p<.001$), a strong positive relationship of AFMIS and user skills ($r=.724$, $p<.001$) and also a strong positive relationship with the third factor, change management ($r=.829$, $p<.001$).

This research sought to bring light to the most prominent factors that influence the implementation of the financial management system in Albania. We classified these factors into three main categories, staff resistance, management commitment and users' skills and capacities. Based on the statistical results obtained by analysing the collected data, we conclude that all these three factors are all critical success factor affecting the implementation of AFMIS.

TABLE 7-PEARSON CORRELATION

Variables	AFMIS implementation
Staff Resistance	.813** Sig. (1-tailed) .001
Capacity and Skills of AFMIS Users	.724** Sig. (1-tailed) .001
Management Commitment of AFMIS	.829** Sig. (1-tailed) .001

Based on the respondent's data, we conclude that the human resources play a vital role in shaping a good financial management system for Albania. Also, the findings of the study are in line with conclusion drawn by authors in [21] who highlights the crucial role of the human resources skills and capacities on implementation of AFMIS.

Respondents stated the lack of managerial commitment and missing their support might hamper the success of the exercise. Authors in [12], indicate that the effectiveness of a financial system is undermined if top management commitment is not adequate.

Management commitment is a key in order to support the changes in technology, processes and procedures and in addition to employees' abilities and skills, roles and behaviours [22]. The implementing bodies, additionally the top management should communicate their strong interest and commitment to the AFMIS including preparation of long-term plans.

On the basis of this study, we can summarize the following recommendations: a full top management commitment is required in order to assure an effective and smoothly implementation of AFMIS; skills advancement trainings should be planned and a successful change management should bring together all parties.

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