https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

Analyzing Project Management Examination (Audit) Practices, Public Sector Project in Perspectives

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Abstract

The main study areas considered in this research are risk content of projects, effectiveness and efficiency of portfolio management units, procurement principles, factors that impede implementation of project audits and strategies to enhance effective project auditing. The research distributed structured questionnaires to the staffs of Ministry of Local Government and had a response rate of 72%, which was sufficient to make conclusive remarks on the total population. The research was conducted with the voluntary participation of supply officers, heads of PMO, directors, project managers, human resources persons, administrative officers and other officers of the Ministry of Local Government. These groups of respondents represented by 57.8% males and 42.2% females have good education backgrounds from certificate/diploma to doctorates. The significance of the high educational levels depicts the level of knowledge possessed by the respondents in contributing to the research topic. The respondents have diverse experience in handling projects ranging from project management, procurement and logistics, monitoring and supervision, project analysis and stewardship. The general information on the respondents was presented in Table 4.1. The first objective of the research was to analyze the risk content of respective projects. To achieve this objective, the researcher sought respondents' understanding of risk and how it is handled in their organization. The definitions given to risks by the respondents include; uncertain events that affects project performance, possibility of loss or project failure, exposure to outcomes of uncertainty, gaps in knowledge that affects project objectives, and threat of damage, injury and loss. The significant factor in the definitions given is the fact that risks affect the objectives and performance of projects. The respondents also highlighted how they identify risks in projects as individuals and as an organization. The research reveals that individuals identify risks by brainstorming and challenging of assumptions, assessing any actions likely to affect project activities, analyzing the sequence of events within business operations, and comparing the projects to other completed and similar projects. The organizations also identify risks by carrying out SWOT analysis and interviews. The SWOT analysis is carried out to determine the organizations' strength, weaknesses, opportunities and threats, a concept that takes into consideration internal and external factors of the organization. The respondents also ranked risk management processes from literature in order of importance. These include risk identification (1st), monitoring and reviewing of risk (2nd), analyzing the risk (3rd), treatment of the risk (4th) and evaluation or ranking of the risk (5th). The second objective of the research was to ascertain whether the project portfolio management units are suitable in terms of managing project activities in the organization. In order to achieve this objective, responses from the respondents were collated on whether their organizations have project management office and the functions of the units in managing projects. More than 70% of the organizations have PMO's who operate as IT PMO and Enterprise PMO's. The IT PMOs' functions in the information technology unit whiles the enterprise PMO's handles all kinds of projects. The third objective was to examine the effectiveness and efficiency of the portfolio management units in the organizations. The respondents were asked to rate the performance of their project management units and majority of the respondents representing (46.7%) said the project management units need improvement. Meanwhile, 30% of the respondents said the portfolio units are sufficient for their purposes. On the contrary, 4.4% of the respondents stated that the portfolio units are non-functional. The research revealed that in order to ensure effective portfolio management, there is the need to gather and upload vendor information, provide portfolio management plan and assess potential changes in the portfolio management process.

Keywords: Project Examination, Project Audit, Public Sector Project, Project Management for Development.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

1.0 INTRODUCTION

According to Snyder (2014) Project management audits are rarely welcome and often contentious, but when done correctly, they offer unparalleled opportunity to learn from mistakes and rescue troubled projects. Every other sensitive management process, success depends on planning, execution and communication. Project auditing is a formal type of "project review", most often designed to evaluate the extent to which project management standards are being followed. Audits are typically performed by a designated audit department, the "Project Management Office", an empowered Steering Committee or an external auditor(Dusterwald, Fries- Palm, Giesing, Peis, & Schwarz, 2013). The audit "entity" must have the designated authority to conduct the audit and make related recommendations. Going beyond practice verification, project audits are also performed as a "check and balance" to evaluate project quality, necessity, value, and to examine the root cause of known project problems and reported failures (Snyder, 2015).

In order to meet these varied uses, audit scope may vary based on type, purpose and timing. Verification audits are pre-planned, with the "subject project" selected according to established criteria. On the other hand, quality assurance and problem response audits are initiated in response to the pressing needs of a troubled project, and in that sense, the project "selects itself"(Heagney, 2011). Whatever the driving force may be, project audits should follow standardized guidelines, to ensure that they are properly planned, executed fairly, and that all announced results and recommendations are given appropriate weight and deserved credibility. The audit is a tool, and like any other tool, proper usage is the key to effective results. The goal of the standardized audit process is to provide pre-defined practices to be adapted and applied as needed to multiple "audit situations" (projects). To realize all of the intended benefits, related practices must incorporate the elements listed above, organized into executable steps and structured into a defined timeline. To succeed, you must have access to sufficient resources, have sufficient time to plan and act, have sufficient management support, and sufficient cooperation from all stakeholders involved (Heldman, K; Baca, C; Jansen, P, 2001)

Above all, effective auditing practices depend upon open and honest communication - to provide the "informational" basis for the audit and to set expectations for what will happen, when and how. When the stage is set correctly, audits bring clarity and structure to the “project management process”, which in the end; can only help the overworked project manager. The goal of the auditor and the project manager should be one and the same - to continuously improve project results and performance. Further, it is important to "keep an open mind". When one or more projects "fail" to pass an audit that is not necessarily the fault of the project manager or the team. Perhaps project management standards are not suitably sized and scaled to project or organizational needs. Perhaps insufficient training or lack of communication of standards is a root cause. Above all, auditing needs to take a global perspective and examine all variables to make the most effective judgments and recommendations (Hill, 2012).

2.0 LITERATURE REVIEW

Project management has been in the existence for many years now and it is not a new management approach, project management has been in practiced in 1960’s (Sisk,2003) and based on this a well recognize institution came out as a result of project management existence which are; Project Management Institute which was founded in 1969, whilst the other relevant institution is the Association for Project Management which was also founded in 1972, and from that time project management has gained a recognition around the globe both in the business world and also in the governmental institutions. Observation from PricewaterhouseCoopers indicates that many institutions are now turning away from business as usual and are rather now adopting to the project-based structures and this is happening due to the positive correlation between the use of project management methodologies and project accomplishment shown by KPMG in its Project Management survey report (KPMG, 2013). This research will help to expose and highlight on what Project Audit is whether it uses the Project management principles.

Projects are managed by people, and most people are at least a little imperfect. These imperfections can cause them to manage projects poorly. Moreover, project managers are subject to incompatible pressures that can confound or disfigure the way they see their projects. Diverse tools are for that reason used to compensate project managers’ shortcomings. Among these tools are dignified

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

planning and control techniques, contingency allowances, reporting procedures, supervisory relationships, design reviews, and so forth. One more useful tool that is a good deal is the project management audit. (Jackson, R. A. (2018))

A project management audit is fretful with a lot extra than the project's financial records. Rather, it got to do with all the project elements, including objectives, plans, capital, schedules, budgets, events, and so onwards. Even as project management audits is enclosed in the mentioned literature, all this have not been extensively understood, and it is valuable investigating them in some aspect. Most projects are unsuccessful because mistakes crop up in planning and execution and failed not been rectified. The project manager may perhaps not understand their usefulness, possibly this occurs when carefree attitude too busy or laziness crop up and they could not correct them at the beginning stage, or may also decide to keep it and use it as politics. Project management audits can pinch these in the bud. Ideally, audits help other stakeholders, such as the organization's general management on how their projects will stand and what needs to be done at the early stage that will help in protecting their own interest. (Dusterwald, R., Fries- Palm, S., Giesing, F., Peis, M., & Schwarz, U. 2013)

(Heldman, K., Baca, C., & Jansen 2005) Usually audits exercise is mainly being undertaken in other for the sponsors, management and investors or your customers need to know your true status of their projects. If not, they may be offensively surprised afterwards, when the circumstance cannot be restored. Sponsors, management and investors or clients need to be guaranteed that their resources are being used as planned. Also need to be aware that the results will indeed meet their needed objectives, or failing that, pre- informed them of any shortfall that will surface and the needed tools that has to be applied. They need to be acquainted with the reports on the project are complete, objective, and accurate. Project management audits provide these needs. Hence, a lot of projects are composite in their goals, approaches, or relationships. These actually darken the project staff's visualization of the true endpoints of their work which make them lost their view. Experienced auditor who has little or no relationship with the project can investigate it in conduct that no one concerned with the project is likely to do. Just, to find out whether they have been able to meets their sponsors, managements, clients and investors interests. Even without complexities, timely project audits will help reduce the project failure. Projects become unsuccessful due to certain factors.

Several projects are not supposed to have even take effects from the starting point. Well-timed audits will find out such adverse situation a quick early to terminate as an option to a soon failure, whiles cutback resources in the process. Other projects are unsuccessful because most mistakes have overlooked and not being rectified when they occur at the initial stage, even though some staff members are fully aware of those mistakes. Once mistakes are permitted to live, time passes and more steps May perhaps composite the mistakes. Conditions that could not be repaired become a contributing factor to unsuccessful project. Errors live and become composited due to indolence, not have courage, ethical or intellectual dishonesty, together with a lack of methodical and objective examination. Well-timed project management audits are capable of strength without delay in detecting errors for what they are and lead to their correction. (Huibers, S. 2013).

(Jackson, R. A. 2018) Experienced project managers are frequently stretched excessively thin. An audit ensures that all these situations are being noticed and the correct tools are being use in correcting them immediately. A project management audit is an intensive fact-finding exercise which helps in examining the state of a project as well as the quality and quantity of the work and whether the customer's request has been meets; And also, the resources spent and the resources required to complete the work; the appropriateness of the plan for the work done and work to be done; managerial issues; and so forth. Project management audit takes note of the following whiles making their examination.

1. The comprehensive plans-this means that during the planning process the project team will have to put in things that will be relevant and that needs to be address which will help in the development of the project, a comprehensive planning is also known as a strategic planning.

2. Monitoring and control method-for monitoring and controlling of a project is usually done when a system is developed to track whether the project team members are following the strategic plans, mostly the tracking system is used when the project has a measurable goal.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

3. Risks and contingency register-it is always appropriate to plan for possible risks whilst planning a project so that in the course of the project if there should be any occurrences then the risk response or the contingent response strategy could be used in solving the issue.

4. Human resource arrangement-these involves putting together the needs of the project members, also considering the environment at which they will be working; internally or externally has to be considered including the life situation, this will also serve as an establishment guideline for work arrangement for project team members.

5. In-house boundary-in other to be able to managed the project boundaries such as the project stages, project phases and the project milestones then the project plan will have to be well constructed and also with a clear a deliverable so that monitoring and controlling will be easy.

6. Reporting provision-reporting is mainly done by the project management office whereby they are mainly focus on reporting the project portfolio for the senior management which will help them to communicate within projects and about projects, this will keep both parties involved in the project to know the progress of the project as well as to shows the visibility on performance of the investment on the project. The provisions of report will also help in emerging the risk and issues, as whereas drawing management attentions to intervened at where there is need and this will also help them to provide an audit trail for them.

7. Client relations-in other for a project to be successful, a project manager needs a strong relationship with it clients and the only way to build up a strong relationship is to have effective communication, commitment, involvement and assurance. And also, never make promises that you cannot fulfil, the project manager should also learn on how to appreciate its clients. They should learn how to always keep their communication clear to their clients at all times and also to ensure in maintaining a high professional standard.

8. Subcontractor and merchant relations-if the project manager understands the importance of having a good relationship with their subcontractors and the vendors there will always be a good result at the end of every projects.

9. Dealings with third parties-in dealing with the third parties, the project manager will have to ensure that the companies in which they are dealing with are actually reliable and can also be held liable for any actions of third parties this will be based on the indemnity and insurance clauses

10. Accounting, invoicing, and billing-this is done on project by giving an account on a project-by-project basis, which is also a tracking system used in a project financing to

11. Necessary Matters-Bringing in additional matters that is relevant to the development of the project.

Audit focus is to set up the true status of the entire project and not be identified as a witch stalk, it is not mainly focused on extraordinary items except and in anticipation of they appear. Reason and consequence analysis are often included, but are not necessary. Once they are included, their idea is to make out how certain adverse effects can be banned in the future. Objectionable facts are duly being examined and not being left out. On the other hand, the project management audit is designed, with a high human resource capacity, and conducted accurately to unearth and typify any repulsiveness there might be with least defensiveness and acrimony. An audit serves a project exclusively in this regard.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

A project management audit helps the project supervisors in dealing with any unpleasant situations, so in this instance a project management audit is really essential. A project manager and his or her supervisor have an enduring bond that complicates any current probe. Relationships are usually based on honesty, loyalty, trust, and sensitivity to the other's feelings in terms of having a long-term relation. When trust exists, who can envisage that the search will be thorough? When one is sensitive to another's feelings, who can envisage that issues will be described accurately? These are the reasons for having an autonomous audit which has positive return over supervisory examinations. A project management audit also has a return in excess of plan reviews when it got to do with ascertaining the condition of the whole project. The idea of plan reviews is to give surety that the client's terms are being met and will be maintained. The other feature of a project management audit is to examine whether the projects plan is in-depth objectives and accurate; whether the project plan, resources, arrangements, and processes are suitable and working; and whether there are any unseen issues or other sinister factors that intimidate the accomplishment of the project. These are mainly internal issues to the organization that is doing the project, if not most of them, are improbable to be out in a plan review.

Audits too provide projects in a technique that they cannot probably provide for themselves. They serve autonomous confirmation of project status. At the same time as a project manager who is skillful, conscientious, honest, and serious with his or her work may learn how to audit from the auditors at the long run, audits yet decrease uncertainties in the minds of others about project status. Project management audits can be either planned or unplanned, and each has its place.

2.1 Project Audit

As a first step to understand what Project Audit is, it is logical to start with the basics, the definition. Even though there is no extensive literature about the topic, there are many authors who have written about it. It seems that there is no general accepted definition of what Project Audit is, but based on the findings of this research, a practical one is highlighted in this paper. The National Institute for Further Education from Czech Repulic (n.d.), in its Project Audit Methodology paper, defines project audit as: "the process of verification of the extent to which project realisation complied with the rules and principles of project management for the concrete project." In other words, what could be inferred is that Project Audit will assess if the project was delivered on time, on budget and on scope (Ruskin & Estes, 1984); by, as Ross (1976a) states, measuring "the actual achievement versus the planned goals". Of course, project shave different stages during their life cycle like: initiation, planning, executing, monitoring and controlling, and closing (Project Management Institute, n.d.); stages of the project life cycle in which, according to Newmark (1997) and Glenwright&Mattos (2008), project audits should be applied in. Certainly, the scope and purpose of the project audit will have some variations depending on which stage the project is (Lijima, 2008).

As stated before, as there is no specific and accepted definition about project audit, some authors have called it in different ways like project management audit (Bonner, 2011) or project performance audit. For purposes of this paper, the author makes no distinction between project audit and this two, due to the similarities all of them have. They are considered just a different way to refer to the same concept.

2.2 More than a traditional audit

The traditional sense of audit is not suitable for projects, as stated by Lazarezyk (2009); it is seemed to be static and systematic (Marinaccio&Trojanowski, 2012), which contradicts the principles of temporality and uniqueness that characterizes projects (Project Management Institute, n.d.). Project Audit then, is presented as a non-traditional audit which can be tailored to give value to the customer (Marinaccio&Trojanowski, 2012). It is a more comprehensive auditing "technique" which covers technical, financial, and managerial areas; in which the audit scope will vary depending on the sector it is being applied. Governmental institutions for example, would use this audit as urgent solution to troubled projects or projects under suspicion; banks on the other hand would carry an audit more focused on the financial aspect but paying attention also to the other two areas (Duffy & Thomas, 1989; Hossain, 2010).

Project Audit is definitely more than a financial audit and definitely not just a compliance checklist; it is usually not performed as a routine like financial ones, and it is a customized audit with no determined or specific standards which makes it suitable for projects (Ross, 1976a; Ames Enriquez, 2007). It is

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

important though, to recognize that financial audits are more popular (Lazarezyk, 2009) and practiced more often, but mainly because of the regulations different countries have and to which entities and business have to comply with. Nevertheless, financial audit methods are helpful in the sense that from them, the auditor can adapt new ones to perform a project audit (Ross, 1976b). The same author recalls the importance of both, financial and operational methodologies, due only one of them will not be sufficient for the stakeholders interested in the audit. As the German Institute for Internal Auditing (2008) states: "projects are, in general terms, auditable with regard to their effectiveness and efficiency but also with regard to their compliance with statutory, regulatory and corporate guidelines"; statement that emphasize the important of an integration of auditing techniques.

2.3 Planned Audits

Project audit is a way of verifying the extent of which a project has been carried out and to see whether it has meet it agreed proposed project and also to determine whether the project has followed the regulations that a concrete project will have to be like. Composite projects should have planned audits and their timing might follow this schedule: Review of the project plan in draft form. A first audit soon after the project has been organized and is well underway. A second audit when about 20% of the schedule time or money has been spent, whichever comes first. Third and following audits at key turning or decision points as needed to verify that corrective actions identified in prior audits have been taken. Except for rare instances, the project management audit should not be a shock event. By giving proceed notice, the project manager and staff can prepare for the audit and make it productive. Precede note enables everyone participates to be well-informed of the true project condition and minimize procrastination in doing necessary but possibly complex tasks.

2.4 Unplanned Audits

If management team will see that a project is in trouble or heading for trouble or if they are doubtful of its status, in that case a project management audit is appropriate. In this case, they will get a precise appraisal of the project that will either dispel their fears or give them the needed information to precise the state of affairs intelligently. A project management audit is also suitable when there is a change in project managers. If project managers' change suddenly after the project is well underway, then a particular audit gives the external project manager a clear thoughtful of conditions at the time of takeover. Both the outgoing project manager and the external project manager are supposed to be present. These types of audits reduce surprises and allow the external project manager to take well-timed counteractive action. Even though, the third situation that will calls for an unplanned audit, which is also unexpected in advance. When investors have good reason to suspect that some sort of skulduggery is at work and advance notice would impulsive a cover-up or get in the way with taking curative action, then a shock audit is in order.

The basics for a project management auditor include all the following:

1. The auditor ought to not have been in a straight line concerned in the proposal effort, thus from the planning stage project (except during the review and assessment of the draft project plan), or the staffing arrangement decision and actions for the project. The auditor must not be complicated in the ongoing work or in supervising it. The auditor needs to have a free-for-all outlook.

2. The auditor should have much varied experience. This experience should include a number of years in working on projects and in managing projects. The auditor needs to have first-hand experience with the real problems that all projects face and needs to be recognizable with many of the characteristic pitfalls. He does not need very much technical experience in the technical areas that the project is involved with as long as he has a general understanding of the field. He also needs to be able to differentiate between the significant and the trivial.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

3. The auditor should have a reputation of being fair, objective, and thorough, and he should not be measured naive. The auditor must be a good listener and to be able to sketch people out and should give attention to details and not bound to conclusions. The moment project management auditor is appointed; he or she must be given sufficient power to execute the audit in a methodical manner with a least amount of time expenditure. The auditor must have the right to discuss the project with all internal personnel. Outside personnel should be contacted, however, only with the advice or consent from general management.

The auditor must have the power to look at all records, documentation, correspondence and financial records and must be able to observe all actions in process on the project.

A project management audit is not an impulsive affair, even though the need for one might not be documented until a steep occurrence occurs. Whether the audit is planned in advance or strong-willed upon urgently, it all the same must be equipped and performed cautiously if it is to be successful.

2.5 Preparing for an Audit

This is the steps to follow in preparing for a project management auditing:

a. Estimate the schedule and budget for the audit- this is where the project manager will have to understand his member's expertise and job responsibilities on the job, and also to know the project process of you company. At this stage you are required to widen your project management skill so that you will be able to learn other estimated history of the previous project and this will enable you to ask more right questions. For a successful estimate, you will have to apply a work breakdown structure so you can be able to estimate projects with team members and plan to estimate.

b. Select the auditor-in selecting an auditor for the project to be audited, first of you will have to do a thorough evaluation on the auditor in which you are bringing on board. In the evaluation process of an auditor these are some of the few factors that needs to be considered;

   i. Practical concern- where the auditor may have to be interested in the cost of the auditing process, to know the location of the auditor because this can also help you save some cost. Also have to do a pre-assessment of the auditor which will be beneficial to the organization provided the organization will take every report seriously.

   ii. Assessing quality value- know the accreditation of the auditor, also the kind of training and experience that the auditor has, acquired whether the auditor is on a fulltime contract or its subcontractor and also an auditor who can add more value to your organization or in other words a continues improvement.

   iii. Evaluating integrity- consider the reputation of the auditor in the service industry before engaging in him as well as knowing the integrity of the auditor because you will be providing him with all the information about your organization. Ensure that there will not be any conflict of interest, so ensure the auditor that you are engaging is not the consultant for the project other than that you may not be able to do the assessment on the project well.

c. Establish the auditor's reporting level- The project management office will to provide the auditor with guidelines and overall framework to ensure uniformity and standardization so that there will not be inconsistent practices that would leads to inaccurate regulatory report.

d. Format of the audit report- this is where the project manager will have to know the outlines to follow in presenting its report, for example the name of the company has to be stated, the projects topics and also give a brief conclusion and proposed measures, then finally indicate the people that the project will be handover to with their names and positions.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

e. Notify the project manager of the audit- it is appropriate to informed the project manager concerning the audit that will be taking place so that he can also make it known to the other team members who would in one way or the other way put themselves together and also make the necessary resource available for the auditing to be successful.

f. Put together the time and place of the audit-arrange for the time and venue that the auditing will be taken place at and communicate it to the parties involved duly.

g. Tell the project manager what to provide in advance of the audit- the project management office will have to furbish the auditor with the necessary document or materials that will make them to work effectively.

(Hill, A. V. 2012) Selection of the auditor is described in the previous section. The remaining items are discussed here. The auditor should report at a level that is higher than every individual connected with the project. Such individuals include functional group heads and support service heads whose staffs contribute to the project as well as any technical and marketing experts and others assigned to the project who may outrank the project manager. One aim of this condition is to ensure that the auditor is taken seriously. Another aim is to assure that the person getting the report cannot have level pulled on him by a miserable project team member if changes are made as a consequence of the audit.

The auditor and the person to whom the auditor will report require having the same opinion in proceed on the goal and scope of the audit and the sketch of the audit report. Frequently is no good chance to do from scratch a piece of an audit if it should be essential afterward to fill in some unnoticed details. All the in sequence has to be gathered the first time. Thus, the auditor and the audit recipient need to have a general perceptive at the start on the subject of the audit's goal and scope and the report's outline. Once the auditor has been charged with his duty, general management ought to inform the de jure project manager and the de facto project manager, if different, that there will be an audit and tell them the name of the auditor.

The auditor can then arrange the place and time for the audit. Normally, the place should be where the work is being done. The auditor needs access to the work, the personnel who are working on the project, and to their records. If the work is dispersed, the auditor may have to travel from one place to another place. The audit has to planned and scheduled as well. The auditor must always make him or herself available anytime the project manager and other key personnel are not around. The auditor may well then have to just publicize when the audit will take place and not take no for an answer that the project manager be there, organized as mentioned in the next paragraph. The auditor's rank of reporting will be a most vital benefit in enforcing this mandate.

The auditor ought to teach the project manager about the materials to be provided in progress of the audit, it includes the declaration of work, the plan, drawings, bills of material, documentation, instructions, manuals, guidelines, codes and regulations, the contract, purchase orders, subcontracts, invoices, progress reports, and financial reports. This stuff must be provided to the auditor adequately in progress of the audit so that he or she can review them before meeting the project personnel.

In carrying a project management audit, it has to include the following:

i. Acquire information-in other to carry out a successful project management audit is to find out the source of the project materials that has been stated for the project.

ii. Study the information and compare it with other stuff together with the auditor's knowledge to make a decision that will suit it completeness, and correctness.

iii. Give a timeline concerning the state of the project from the comparisons that you have drawn-out.

iv. Gathering the reports and discussing them with the individuals that participate in the auditing.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

2.6 Audit Reporting Structure

After the acquiring of the information from the project office, the auditor will have to write an attendance report that summarizes his or her work, putting a conclusion, and recommendations. The report has to follow the following outlines: an account of the project status, what was observed and heard, the auditor's own opinions, a listing of other opinions found by the auditor, and the auditor's recommendations for corrective action. This report should in general be addressed to the person who in particular made the audit, and a copy of it should be provided to the project manager.

2.7 Realizing Audit Goals through Planned Action

Standard audit method is to give pre-defined practices that have to be modified and practical as desired to multiple "audit situations" (projects). To become conscious all of the planned benefits, connected practices have to integrate the basics listed above, prearranged into executable procedures and planned into a defined timeline. In other not to fail, you have to have access to adequate resources, have enough time to plan and act, have adequate management support, and satisfactory cooperation from all stakeholders involved. Auditing desires to take a comprehensive standpoint and scrutinize all variables to make the most successful judgments and recommendations:

- Assure Quality of Products and Services: Project audit help in checking the project life cycle system by evaluating the deliverables produced throughout a range of phases of the project from the design phase all the way to the execution phase. At the designing phase review, a project audit assesses the totality of the design concepts analysing option designs. It also conducts a complete practical evaluation of the design before buying.

- Assure Quality of Project Management: A project audit encourages that project management is reaching the standards by evaluating whether it follows the institution's policies, processes and procedures. It checks the methodology used to help distinguish the gaps in order to make the needed improvements.

- Identify Business Risk: Project audits help make out business risks that can engross budget, time, scope and quality. The company is just as the customers itself, which has a better chance at the ending of the project. The project audit evaluates the viability of the project in conditions of affordability and income by only if lucidity to the project rank and performance by evaluating the cost, time and resources. Project audit helps to do check-and-balance approach when it comes to going through the budget by reviewing information that includes anticipated and real costs as well as aim of the project closing costs. It helps the institution to carryout findings and provides a viewpoint of the budget. It gives them information about the business risks that helps the institution to decide whether to proceed with the project or not.

- Enhance Project Performance: Auditing the various phases in the project life cycle will the organization to enhance on the performance its project team. It also helps in managing the available resource and budget that has been allocated towards the project. And assist in pointing out priorities, corrective measures and preventative actions that will lead to a successful project out.

2.8 Project Audit Vs. Project Reviews

According to Ross (1976) project audit is the way of examining the level of suspicion concerning the project. And the (APM BOK) defines project review as an activity that takes place during the project life cycle to check the project management accomplishment plan. The project auditor has to integrate more with the objectives of the project that they are working on according to Hubers (2013). It has already been defined what project audit is, but it is not surprise to see some confusion between project audit and project review. Ross (1976b) distinguishes the difference between them; he refers to project review as an "inquiry" about status, quality and any other issue of the current state of the project at a particular time;

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

on the other hand, project audit is seen as a more "detailed examination" usually requested when there is some level of suspicion about a matter concerning the project.

The APM Body of Knowledge (APM BOK) also defines project review as an activity that "takes place throughout the project life cycle to check the likely or actual achievement of the objectives specified in the project management plan"; which confirms Ross (1976b) differentiation of the two concepts. It is true that project reviews do validate the work done in the project towards the planned one (Busby, 1999; Carrillo, Harding, &Choudhary, 2011); but project audit will always be required to complement and more importantly, to keep transparency in the operations (Glenwright Jr &Mattos, 2008). Transparency will bring confidence to the stakeholders and on the final outcome of the project. Nevertheless, both: project audits and reviews, are important for projects in the avoidance of the common pitfalls to happen; both suggest improvements in all stages of the project life cycle including: scope, time, quality, people, communication, risk, requirements, processes, customer satisfaction, and many more (Yetman, 2006).

2.9 Challenges of Project Audit

Projects, especially in the construction sector, are becoming more complex with shorter deadlines and limited resources; this has presented a challenge for auditing to be a crucial tool to ensure effective and efficient management (Glenwright Jr &Mattos, 2008). Probably one of the challenges faced by auditing is that private companies prefer consultancy firms and not auditors, as what they need at the beginning of a project is advice (Duffy & Thomas, 1989). This is why project auditors, as stated before, need to evolve and be able to start thinking as project managers too and not solely as auditors. According to Ross (1976a) there's a thin line between audit and consultancy; but it is allowed for the auditor to provide "expert opinion" even though this technical opinion is more asked to consultants. Selim et al. (2009), on their study of consulting practice in auditing, revealed that the involvement of audit in consulting is perceived as a generator of positive benefits to the auditors themselves; to the image of the audit department in the organization; and to the performance of the audit itself.

The expansion of the profession scope should be a tendency to cope with the expansion in stakeholder's expectations on audits (Jackson, 2013; Ernest & Young, 2014). Another challenge of project audit and actually of audit in general, is to gain respect and not be seen as intruders who delay normal operations (Nalewaik, 2006). There is usual lack of cooperation from people being audited (Iatco, Ignat, Ungureanu, &Athes, 2014), and even in the case where the audit is stipulated in the contract, this does not guarantee that the audit is well welcome (Chashell, Aldhizer III, & Eichmann, 1999). In a project environment, auditing needs to get support from the Project Management Office (PMO), which is a challenge when previous audits have not made any significant improvement or result in the projector projects; acceptance of the work of the auditors and the implementation of its recommendations is a goal of the audit team (Marinaccio & Trojanowski, 2012). Nevertheless, the project team should also facilitate the work of the audit team through effective project management, which is "fundamental to delivering value" to the audit (Bayhi, 2014).

This notes, that auditing is more than performing an assessment, relationship with team members and stakeholders is important for the success of it as Marinaccio & Trojanowski (2012) emphasize. In the long run, delays with the provision of information will result in higher audit costs (Nalewaik, 2006). Nalewaik (2006) also says that if audit generates positive change or results; then for later ones, people who should provide information will be more willing to help and welcome the audit team. Lindow& Race (2002) states "when audit teams integrate into other functions throughout the business and go beyond traditional methods, they have the ability to add value by offering better, more proactive audit services." At the end of the day, auditing is a service that can be replaced or suppressed if the customer – board of director, sponsor, or other – is not satisfied with the work; place that can be occupied by consultants. Construction projects are the most complex project with a limited resource that has a short duration for completion and this has given the auditors a challenge in ensuring managing the effectiveness and efficient way and that is why is very necessary that the project auditors will also start thinking as a project manager. Probably the biggest challenge of the field is the lack of recognition it has, and the lack of description of it in a uniform and commonly accepted manner; in practice and theory, there does not exist a concrete approach to combine project management and audit (German Institute for Internal Auditing, 2008).

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

2.10 Monitoring and Evaluation (M&E)

Monitoring and evaluation (M&E) are an essential component of any intervention, project, or program. This mini-course covers the basics of program monitoring and evaluation in the context of population, health, and nutrition programs. It also defines common terms and discusses why M&E is essential for program management. Monitoring of a program or intervention involves the collection of routine data that measure progress toward achieving program objectives. It is used to track changes in program performance over time. Its purpose is to permit stakeholders to make informed decisions regarding the effectiveness of programs and the efficient use of resources. Evaluation measures how well the program activities have met expected objectives and/or the extent to which changes in outcomes can be attributed to the program or intervention. The difference in the outcome of interest between having or not having the program or intervention is known as its "impact," and measuring this difference and is commonly referred to as "impact evaluation."

Every project or intervention should have a monitoring and evaluation (M&E) plan. This is the fundamental document that details a program's objectives, the interventions developed to achieve these objectives and describes the procedures that will be implemented to determine whether or not the objectives are met. It shows how the expected results of a program relate to its goals and objectives, describes the data needed and how these data will be collected and analyzed, how this information will be used, the resources that will be needed, and how the program will be accountable to stakeholders. M&E plans should be created during the design phase of a program and can be organized in a variety of ways. Typically, they include:

- the underlying assumptions on which the achievement of program goals depend;
- the anticipated relationships between activities, outputs, and outcomes;
- well-defined conceptual measures and definitions, along with baseline values;
- the monitoring schedule;
- a list of data sources to be used;
- cost estimates for the M&E activities;
- a list of the partnerships and collaborations that will help achieve the desired results; and
- a plan for the dissemination and utilization of the information gained.

The evaluation plan provides the specific research design and methodological approaches to be used to identify whether changes in outcomes can be attributed to the program. For instance, if a program wants to test whether quality of patient care can be improved by training providers, the evaluation plan would identify a research design that could be used to measure the impact of such an intervention. One way this could be investigated would be through a quasi-experimental design in which providers in one facility are given a pre-test, followed by the training and a post-test. For comparison purposes, a similar group of providers from another facility would be given the same pre-test and post-test, without the intervening training. Then the test results would be compared to determine the impact of the training. How the information gathered will be stored, disseminated and used should be defined at the planning stage of the project and described in the M&E plan.

This will help ensure that findings from M&E efforts are not wasted because they are not shared. The various users of this information should be clearly defined, and the reports should be written with specific audiences in mind. Dissemination channels can include written reports, press releases and stories in the mass media, and speaking events. The capacities needed to implement the efforts described in the M&E plan should be included in the document. A mechanism for reviewing and updating the M&E plan should also be included. This is because changes in the program can and will affect the original plans for both monitoring and evaluation. M&E plans should serve the information needs of the intended users in practical ways. These users can range from those assessing national program performance at the highest central levels to those allocating resources at the district or local level. M&E plans should convey technically accurate information and should be realistic, prudent, diplomatic and frugal.

2.11 Monitoring & Evaluation Framework

Frameworks are key elements of M&E plans that depict the components of a project and the sequence of steps needed to achieve the desired outcomes. They help increase understanding of the

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

program's goals and objectives, define the relationships between factors key to implementation, and delineate the internal and external elements that could affect its success. They are crucial for understanding and analyzing how a program is supposed to work. The activities described in M&E plans should be conducted legally, ethically, and with regard to those involved in and affected by them. A conceptual framework, sometimes called a "research framework," is useful for identifying and illustrating the factors and relationships that influence the outcome of a program or intervention. Conceptual frameworks are typically shown as diagrams illustrating causal linkages between the key components of a program and the outcomes of interest.

For instance, in this example (shown above), the program, in addition to other donors, is supplying health services, in order to increase service utilization, with the ultimate outcome of improved health. By identifying the variables that factor into program performance and depicting the ways that they interact, the results that can reasonably be expected from program activities are outlined. Clarifying this process permits program designers to develop valid measures for evaluating the success of the outcomes and also guides the identification of appropriate indicators.

2.12 Monitoring & Evaluation Indicators

An indicator is a *variable* that *measures one aspect* of a program or project that is directly related to the program's objectives. Let's take a moment to go over each piece of this definition. An indicator is a *variable* whose value changes from the baseline level at the time the program began to a new value after the program and its activities have made their impact felt. At that point, the variable, or indicator, is calculated again. Secondly, an indicator is a *measurement*. It measures the value of the change in meaningful units that can be compared to past and future units. This is usually expressed as a percentage or a number. Finally, an indicator focuses on a *single aspect* of a program or project. This aspect may be an input, an output or an overarching objective, but it should be narrowly defined in a way that captures this one aspect as precisely as possible. A reasonable guideline recommends one or two indicators per result, at least one indicator for each activity, but no more than 10-15 indicators per area of significant program focus.

Indicators can be either be quantitative or qualitative. Quantitative indicators are numeric and are presented numbers or percentages. Qualitative indicators are descriptive observations and can be used to supplement the numbers and percentages provided by quantitative indicators. They complement quantitative indicators by adding a richness of information about the context in which the program has been operating. Examples include "availability of a clear, strategic organizational mission statement" and "existence of a multi-year procurement plan for each product offered."Indicators provide M&E information crucial for decision-making at every level and stage of program implementation. Indicators of program inputs measure the specific resources that go into carrying out a project or program (for example, *amount of funds allocated to the health sector annually*).

Indicators of outputs measure the immediate results obtained by the program (for example, *number of multivitamins distributed* or *number of staff trained*). Indicators of outcomes measure whether the outcome changed in the desired direction and whether this change signifies program "success" (for example, *contraceptive prevalence rate* or *percentage of children 12-23 months who received DTP3 immunization by 12 months of age*). An important part of what comprises an indicator is the metric, the precise calculation or formula on which the indicator is based. Calculation of the metric establishes the indicator's objective value at a point in time. Even if the factor itself is subjective or qualitative, like the attitudes of a target population, the indicator metric calculates its value at a given time objectively. For example, an indicator might measure the percentage of urban facilities that score 85-100% on a quality-of-care checklist. Note that because this indicator calls for a percentage, a fraction is required to calculate it. Possible metrics for this indicator are: numerator, or top number of the fraction: number of urban facilities scoring 85-100% on a *quality of* quantitative and qualitative indicators.

2.13 Clarifying Indicators

In many cases, indicators need to be accompanied by clarifications of the terms used. For instance, let's look at the indicator: *number of antenatal care (ANC) providers trained.* If such an indicator were used by a program, definitions would need to be included. For example, *providers* would need to be

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

defined, perhaps as *any clinician providing direct clinical services to clients seeking ANC at a public health facility*. For the purposes of this indicator then, *providers* would not include clinicians working in private facilities. *Trained* would also need to be defined, perhaps as *those staff who attended every day of a five-day training course and passed the final exam with a score of at least 85%*. Another indicator for this program could be percentage of facilities with a provider trained in ANC.

In this example, because the indicator is a proportion or fraction, a numerator and a denominator are needed to calculate it. The numerator would be the number of public facilities with a provider who attended the full five days of the ANC training and scored at least 85% on the final exam. Note that the numerator must still specify that the facilities are public and that the providers must have attended all five days and passed the exam in order to be counted. This information need not be included in the indicator itself as long as it is in the definitions that accompany it. The denominator would be the total number of public facilities offering ANC services. This requires that this number be obtainable. If it is not known and it is not possible to gather such information, this percentage cannot be calculated. In this example, it is also necessary to know at which facility each trained provider works. This information could be obtained at the time of the training. If it is not, all facilities would have to be asked if they have any providers who attended the training.

2.14 Project Failure

Projects fail, and despite the different reasons why failure occurs, this fact has made project stakeholders to demand higher controls and request frequent audits. Failed projects like the Scottish Parliament Building (Schottish Parliamentary Corporate Building, 2004), the International Space Station from the National Aeronautics and Space Administration (National Aeronautics and Space Administration, 2000), the World's most famous project failure, the Sydney Opera House (Sydney Opera House, n.d.); and many others have raised the necessity of accountability for the resources, not only economic, spent on projects(Duffy & Thomas, 1989); necessity that shows the importance of project audit in today's private and public environments as one of the solutions for "troubled projects" (Williams, 2014). All these cases are examples of budget over-run and missed deadlines (National Audit Office, 2011), which highlights the project audit should start with the contract (Lazarezyk, 2009), where all the parameters and requirements are stipulated. This statement is confirmed by (Nalewaik, 2006) which says that contracts should have a clause for the right to audit at any given time during the project life cycle. Unfortunately, project audits do not usually involve auditing the contract; despite the big benefits it would bring to the project and the organisation (Chashell, Aldhizer III, & Eichmann, 1999).

Until now it has made evident that Project Audit could be a factor that boosts project success (Marinaccio&Trojanowski, 2012; Chittoor, 2012), but the reasons why this is considered so, have not been demonstrated yet. According to Nalewaik (2006) and Ruskin & Estes (1984), project audit is an "essential project controls tool"; which can be applied during the project lifecycle to prevent the project from failure by promoting corrective actions in time. Even though the adoption of new types of audits in non-financial matters has become more popular lately; unfortunately, these new approaches in auditing are being used more as a fire-fighting than as prevention or controlling tool (Ross, 1976a). "The sooner the internal auditor engages with a project, the better" (Bi, 2009); and the success on performing this type of audit on a regular basis, almost to the same frequency financial audits are performed, is a key factor on project success (Ross, 1976a). Ross (1976b) also adds that, the same as a gate review, this type of audit can let the stakeholders interested in the audit to decide whether to continue with the project or not; due it acts as a "competent status report – written and oral – stated in terms management can understand"

Lessons learned is another important benefit of project audit and probably the most documented one; benefit which is not commonly gotten from financial audits (Ross, 1976a). Unfortunately, according to Duffy & Thomas (1989) and Neale (1991); post-project audits, in which lessons learned are mostly obtained, are not so commonly practiced. Probably, because of the misbelieve that once the customer accepts the project and money is collected from it, then the project is over. The truth is that post-project audits can improve decision-making and planning, they can serve as a justification for project early closure, and other improvements in the management of projects (Neale, 1991).

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

The importance of audit focusing in project management is due it links all the areas concerning a project (Bi, 2009); but it is important to discern that project audit is not intended to be applied only to project-based organizations. The operations in this type of organisations are based mainly in projects, but companies with BAU structures also have projects that can be audited; not as the main part of their businesses but as a sporadically event. For example: implementation project for change technology, development projects for new products and services, headquarters relocations, or other small projects from the company related to an improvement or change into the organisation (Lijima, 2008; Marinaccio&Trojanowski, 2012). In both scenarios, project-based and BAUs, the benefits associated with project audit are applicable. It has been discussed here about project audit and its project management focus, but it is also important that for the success of the audit and the project, the project audit is treated as a project itself too (Sinason, 2002).

2.15 The Project Auditor

As there are health care standard auditors, government contract auditors, and quality auditors (Lazarezyk, 2009), there is also a niche for project auditors; which, to cope with the demands of this fast-pace world, need to step up from regular auditors and acquire more skills and aptitudes. This statement is also supported by Lindow& Race (2002) and Huibers (2013), who add that the project auditor should integrate more with the objectives of the project or business they are working in; engaging into a more proactive role. Even though Marinaccio&Trojanowski (2012) and Stanleigh (2012) state that there is no need for auditors to possess technical knowledge in projects, they do believe that it is more important to "understand the processes used to manage projects successfully". According to them, there is always the option to request extra help from a specialized project auditor. Newmark (1997) adds that not only those auditors who understand the project management processes, but those who "tailor their audit work" to the project framework, are the ones that play an important role in the organisation's improvement process.

Opposite to Marianaccio&Trojanowski (2012), Lazarezyk (2009) believes that "an accountant alone is not qualified to address the issues of scope, methods, quality" that needs to be addressed in project audits. According to him, the problem relies that most audits are done by accountants who follow accepted auditing standards; standards that are mostly directed to financial objectives which makes issues like project methods or project quality aside. The auditor must have technical background and experience to be able to perform project audits (Lloyd, 1982; Nalewaik, 2006). Auditors can get specialized training and help the audit succeed in specialized environments (Chashell, Aldhizer III, & Eichmann, 1999); but those who pair their audit skills with project management tend to provide more value in their work (Bi, 2009; Booth, 2014).

The internal auditor can provide relevant value to the project by the early engagement and its role could vary from a consultancy-like to the performance of a formal audit (Bi, 2009). According to Duffy & Thomas (1989), the project auditor should also play a role of consultant and sometimes even the role as project manager; not functionally speaking but in his mind-set when giving recommendations to the client (Nalewaik, 2006). By doing this, the auditor will not be just a simple auditor performing a checklist (Lindow& Race, 2002). The interest thing for project auditors is that, as they are dealing with projects, they can and probably must adapt and create new ways, processes and procedures according to the project environment, focus, nature or conditions (Ross, 1976a).

2.16 The Project Audit Team

Even though not all authors support Lazarezyk (2009) statement, that "accounting expertise alone will be insufficient in addressing scope risks"; they do agree on the importance of staffing properly the audit team, which should be formed by people with business profiles as well as technical ones (Sinason, 2002; Lazarezyk, 2009; Bi, 2009; Ernest & Young, 2012; Marinaccio&Trojanowski, 2012). In some companies, project managers are even part of the auditing team; which will avoid embarrassment for the project manager due it will be part of the solution (Chashell, Aldhizer III, & Eichmann, 1999); even though it is notrecommended that people involved in the project participate in the audit team (Yetman, 2006). The main point is that for those audits where no technical auditors have participated in, there is the risk of lack of credibility due the report of the auditor can miss some technical aspects or even worse, can contain wrong

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

technical facts (Ross, 1976a). Supporting the idea of a mixed project team; Sinason (2002) and Braun (2014) state that there is a paradigm in relation to the belief that someone who is really good at the technical part can be good at a managerial position.

There is even the case where some auditors are promoted to audit project manager, which opens a new branch in the job field. The challenge here is that this promotion will imply that the auditor leaves partly its technical background and embraces the managerial focus too by doing more than reporting problems but to start solving them. Finally, in terms of team composition, Ross (1976a) states that in financial audits the team mostly have the same capabilities and background; on the other hand, in technical ones, there are, a wide variety of specialists and not in audit specifically. In this last one "the audit process and conclusion become even more of a team effort than in the normal auditing situation" (Ross, 1976a).

3.0 RESEARCH METHODOLOGY

The processes used in conducting the study, the research approach, the sampling technique and the sample size, data collection and data analysis procedures that the researcher used to achieve the objectives of this study. The general aims of this study require learning more about projects audited with regards to their effectiveness and efficiency and compliance with statutory and corporate guidelines and how it affects operational performance in the organizations. So quantitative and qualitative approach based on observations and records available of an existing literature is preferred in other to meet research objectives. Qualitative study is used to uncover the trends in thought and opinions and dive deeper into the problem (Corbin & Strauss, 2008), (Mugenda&Mugenda, 2013). On the other hand, Quantitative research also shows the objective measurements and statistical mathematical or a numerical analysis of data collected through polls, questionnaires (Peters, 2013). The study used these two methods to analyzed data.

These include any empirical research done by the author. It is a systematic literature review based on publicly available literature, researches, and facts related to the topic in discussion. This review involved looking information on auditing, project management, and project audit; this last one did not show the expected number of results. Even though there is a strong correlation between programme management and project management, programme audit has been excluded from the coverage of this paper. As the new concept of project management started to be exploited in the 60's, academic papers before this date have not been considered relevant for this investigation. Three search engines were used, one from Google Scholar, one from The University of Manchester, and the last one from Universidad Espíritu Santo. These last two, allowed access to EBSCO host which made available many academic articles from popular databases like Elsevier, Springer, Source Direct and Business Source Complete from which most of the sources for this paper come from; databases that contained a high level of academic papers related to auditing and specially on project management. To supplement the previously mentioned articles, web pages from PMI and APM were used, and also other web pages related to project management and auditing.

All the collected information was gathered thematically along this paper to better establish interconnections and dependencies between auditing and project management; and for a better understanding of the relation between these two. This paper first, attempts to define what Project Audit is and to describe its main features. Later, a comparison between project audits, financial audits and technical reviews is made. The relevance of project audit, what a project auditor is and the project auditor's role is also covered later in the following section. A perspective to the current and future challenges of the topic in discussion is exposed and finally conclusions and recommendations are developed.

3.1 Research Design

The study described in the research was based fundamentally on both qualitative data obtained from primary and secondary sources to meet the objective of the study. During data gathering the choice and design of the method was based on ongoing analysis. It was constantly modified and these give room to the researcher to drop unproductive areas from the original plan. The primary source of data was derived from questionnaire to develop and distributed the sample of the population for analysis. The focus was on various workers who are directly involved in projects management, procurement management

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

i.e. Architects, Engineers, Quantity surveyors, Project Finance Manager, Municipal Chief Executives, Procurement managers and Project Managers. The nature of this research is exploratory and open ended however, small number of people will be interviewed in depth and or relatively small number of focus groups will be contacted for the study. According to the available statistics, the total populations of those directly involved in these organizations are estimated to be approximately two hundred and forty (240).

3.2 Ethical Considerations

The respondents were informed of the aim of the research before information was collected from them therefore in compliance to the standards of voluntary and informed consent. The researcher required permission from heads the various units from the local government ministry. Integrity and confidentiality were very much upheld all through the study.

3.3 Research Methods

Semi- structured questionnaire was constructed with the guide of the literatures that was reviewed. The questionnaire was focused on asking the respondents about; the different rules and regulations they follow in developing a supplier relationship, the step in which they develop and implement the relationship, the barriers and difficulties they experience throughout implementation of the strategy and the impacts of the relationship with their suppliers. The data was recorded and updated simultaneously as responses are received; this was due to insufficient time allotted to the project. The results were organized in the Statistical Social Package for Scientist spreadsheet with the code sheet that has been developed to measure the attitudes from the data of the survey results. The data was organized into separate rows and columns with the assigned attitudinal score. The responses of each question were assigned with numerical values for the data analysis.

3.3.1 Samples

Purposive sampling was used for the research to cover specific people within the population for the study. The advantage of this type of sampling is the fact that there are several different types of sampling (homogenous sampling, expert sampling, critical sampling) methods. Another benefit of this type of sampling method is its ability to gather large amount of information by using a range of different techniques and this variety give the researcher a better cross section of the information. Patton (1990) asserts that there are no specific rules when determining the sample size in qualitative research. Qualitative sample size therefore may best be determined by the time allotted, resources available and study objectives; In 1990, Morse suggested a sample size between thirty to fifty (30-50) could suffice the number to determine a good report, however, Creswell (2013) varied it to between twenty to thirty (20-30) to be sufficient to establish a true reflection of research.

Vilfredo Pereto (as cited in Richard Koch 1998) asserts that 80/20 principle indicates that the minority of results outputs or rewards. This therefore means that the eighty percent of an achievement is as a result of twenty percent of inputs. In other words, four fifth of an input (greater proportion) in every endeavour is largely irrelevant. Therefore, regardless of the research of the positions of Creswell, Patton, and Morse, the researcher uses the twenty percent as the estimated proportion for the determination of the sample size.

3.3.2 Results

The sample of the research was calculated using the Cochran, 1963 formula with 95% confidence level, with Vilfredo Pereto (Pereto, 1920) analysis of 20% as estimated population proportion and five percent (5%) was used as a precision or error level. The calculation formula of William G. Cochran is presented as follows:

$$n = \frac{Z^2 \gamma * P (1-P) N}{Z^2 \gamma * P (1-P) + N (e^2)}$$

Where:

n = sample size

N= Total Population size

ɣ= confidence level of the test

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

P= estimated population of proportion
Z= abscissa of the curve (1.96)
e = allowable error/ precision.

Substitute number in formula.

Sample size= 1.96^2 x 0.2 x (1- 0.2) 240
1.96^2 * 0.2 (1- 0.2) + 240(e^2)
Sample size= 121.44
Approximately = 125.

After the calculation, the researcher arrived at 121.44 but decided to round it up to use 125 in order to attain a reliable data.

3.3.3 Questionnaires

Questionnaires analysis is the process of bringing order, structure and meaning to the mass of information collected (Mugenda&Mugenda, 2003). Given that the study was conducted using a mixed method approach (defined under "research design"), analysis was done using Statistical Package for Social Sciences (SPSS) and coding/theming. SPSS was used, allowing the researcher to present the information in form of tables and figures.

3.3.4 Interviews

The study used a regression model to predict the extent to which the identified independent variables affect the dependent variable of interviews conducted. In this case SPSS version 18 was used in regression analysis and computation of coefficients.

4.0 DATA ANALYSIS

This thesis "project auditing, effectiveness, efficiency and compliance with statutory and corporate guidelines" sought to analyze risk content of projects, ascertain the effectiveness and efficiency of portfolio management units. The chapter covers the results obtained from respondents, which the researcher analyzed with SPSS and presented using descriptive statistics in form of charts, frequency tables, mean and standard deviations.

4.1 Response rate

The researcher submitted 125 questionnaires to the Ministry of Local Government, which also distributed them to their various subsectors. The researcher followed up on the questionnaires and after review, 90 were completed and answered concisely. This gives a response rate of 72%, which is sufficient to make conclusive generalizations on the sample frame.

4.2 Demographic Information

The Table 4.1 below displays the demographic or general information on the participants involved in the research. The demographic characteristics include gender of the respondents, their level of education or academic qualifications, the position held in the organization/institution (any of the departments or agencies under the Ministry of Local Government) and the roles these participants play in projects.

Table 4.1: General Information on Respondents

Variable	Frequency	Percent (%)	Cumulative Percent
Gender			
Male	52	57.8	57.8
Female	38	42.2	100.0
Total	90	100.0	
Level of Education			
Certificate/Diploma	14	15.6	15.6
Bachelor's degree	44	48.9	64.4
Master's degree	23	25.6	90.0

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

Doctorates (PhD)	9	10.0	100.0
Total	90	100.0	
Position Held			
Supply Officer	31	34.4	34.4
Head PMO	8	8.9	43.3
Director	9	10.0	53.3
Project manager	16	17.8	71.1
Human Resource Person	11	12.2	83.3
Administrative officer	12	13.3	96.7
Others	3	3.3	100.0
Total	90	100.0	
Roles Played in Projects			
Project management	31	34.4	34.4
Procurement and logistics	23	25.6	60.0
Monitoring and supervision	11	12.2	72.2
Project analyst	17	18.9	91.1
Steward	8	8.9	100.0
Total	90	100.0	

Source: Field Survey, 2018

The results of the research reveal that majority of the respondents (52) representing 57.8% are male whiles 42.2% of the respondents are female. The close gap between the male and female workers is partly because of equal opportunities given to both sex groups to work with the Ministry of Local Government in Ghana. In addition, the researcher collected information on the level of education of the respondents as this information plays a major role in the understanding and scope of knowledge of the participants in contributing to the topic. Almost half of the respondents (44) representing 48.9% have Bachelor's degree and 25.6% have Master's degree. In addition, 15.6% and 10% of the respondents have Certificate/Diploma and Doctorates (PhD) respectively.

The inference of the result is that all the participants involved in the research are educated and their views were adjudged relevant to the research. The positions held by the respondents have been taken into consideration and these are the results; Supply Officer (34.4%), Head PMO (8.9%), Director (10%), Project Manager (17.8%), Human Resource Person (12.2%), Administrative Officer (13.3%) and others (3.3%). The other positions include engineers, assistant statisticians, environmental health officers, public relation officers etc. Finally, the researcher collected information on the applicants concerning the roles they play in projects and the notable ones are; project management (34.4%), procurement and logistics (25.6%), monitoring and supervision (12.2%), project analyst (18.9%) and stewards (8.9%).

4.3 Respondents Understanding of Risk

The first objective of the research is to analyze the risk content of respective projects and the researcher sought the understanding of respondents on risk and the assessment tools used to handle risk in their organizations. The respondents gave various definitions of risk based on their understanding. Most of the respondents (29) representing 32.2% defined risk as "uncertain events that affects project performance", 21.1% defined risk as "gaps in knowledge that affects project objectives", 16.7% defined risk as "possibility of loss or project failure", 15.6% and 14.4% of the respondents defined risk as "exposure to outcomes or uncertainty" and "threat of damage, injury and loss" respectively.

Table: 4.1.2 Respondents' Definition of Risk

Risk	Frequency	Percent	Cumulative %
Uncertain events that affect project performance	29	32.2	32.2
Possibility of loss or project failure	15	16.7	48.9
Exposure to outcomes of uncertainty	14	15.6	64.4
Gaps in knowledge that affects project objectives	19	21.1	85.6
Threat of damage, injury and loss	13	14.4	100.0

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

Total	90	100.0

Source: Field Survey, 2018

4.4 Identification of Risk in Projects

The research also covers how the participants together with their organizations identify risks or threats in projects. As individuals: brainstorming and challenging of assumptions were identified as the main process of identifying risks or threats in projects, representing 31.1% of the responses. In addition, other means of identifying risks or threats according to the respondents are; assessing any actions likely to affect each project (27.8%), analyzing the sequence of events within the business operation (21.1%), and comparing the projects to similarly completed ones (20%).

As an organization, the identification of risks encompasses the use of risk assessment tools (66.7%) and interviews (33.3%). The major risk assessment tool identified is SWOT analysis, which examines both internal and external factors likely to cause risk in projects. In addition, some of the departments organize interviews in relation to projects in order to identify possible areas of threats that may affect project cost, time and quality.

Table 4.1.3 Identification of Risks in Projects

Risk Identification	Frequency	Percent	Cumulative %
As an Individual			
Brainstorming and challenging of assumptions	28	31.1	31.1
Assessing any actions likely to affect each activity	25	27.8	58.9
Analyzing the sequence of events within the business operation	19	21.1	80.0
Comparing the projects to similarly completed ones	18	20.0	100.0
Total	90	100.0	
As an organization			
Risk assessment tools	60	66.7	66.7
Interviews	30	33.3	100.0
Total	90	100.0	

Source: Field Survey, 2018

4.5 Risk Management Process

The researcher outlined some steps identified in literature to ensuring effectiveness of sound - risk management process. The respondents indicated their level of agreement to these steps using a 5-point Likert scale and the rankings displayed in Table 4.4. The highest ranked step is identification of risk (1st), followed by monitoring and reviewing the risk (2nd), analyzing the risk (3rd), treatment of the risk (4th) and the least rank is evaluation or ranking the risk (5th)

Table 4.1.4: Risk Management Process

Variable	Mean	Std. Deviation	Rank
Identification of Risk	4.99	0.105	1st
Monitoring and reviewing the risk	4.80	0.402	2nd
Analyzing the Risk	4.79	0.410	3rd
Treatment of the risk	4.78	0.444	4th
Evaluation or ranking the risk	4.59	0.806	5th

Source: Field Survey, 2018

4.6 Project Portfolio Management

The second objective of the research was to ascertain whether the project portfolio management is suitable in terms of managing the project activities in the organization. The respondents provided information on whether their respective organizations have a project management office (PMO) as well as the functions played in relation to the overall projects covered by the PMO. Majority of the participants representing 87.8% of the respondents said their organizations have project management offices. These PMOs perform a wide range of functions; IT PMO for IT projects (20%) and Enterprise PMO for all projects

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

(58.9%). However, 21.1% of the respondents have no idea of the roles played by the project management offices in their organization. Furthermore, the percentage of projects covered by the respondents' organization is outlined with the other results in Table 4.5. The PMOs in some of the departments handle less than 20% of assigned projects. Meanwhile, majority of the respondents representing 42.5% indicated that their PMOs handle virtually all the projects of the organization.

Table: 4.1.5 Project Management Office

Variable	Frequency	Mean	Cumulative %
Does your organization have PMO?			
Yes	79	87.8	87.8
No	11	12.2	100.0
Total	90	100.0	
Functions of PMO			
IT PMO for IT projects	18	20.0	20.0
Enterprise PMO for all projects	53	58.9	78.9
No response	19	21.1	100.0
Total	90	100.0	
% Projects covered by PMO			
Less than 20%	12	13.3	15.0
20-50%	20	25.0	40.0
50-80%	14	17.5	57.5
80-100%	34	42.5	100.0
Total	80	100.0	

Source: Field Survey, 2018

4.7 Effectiveness of Portfolio Management Units

The third objective sought to examine the portfolio management units in terms of effectiveness and efficiency in the organization. As a result, the participants provided responses to characterize the functionality of portfolio management in their respective units. The objective of this section is to ascertain the effectiveness of the functions of the units or departments in their portfolio management. The results presented in Table 4.6 reveals that most of the organizations' portfolio management units (46.7%) needs improvement in order to satisfy future needs. In contrast, about half of the respondents revealed that the functions played by their portfolio management units are average and sufficient for their purposes.

Table 4.1.6 Effectiveness of Portfolio Management Units

Functionality of Portfolio Unit	Frequency	Percent	Cumulative %
Average	17	18.9	18.9
Sufficient for our purposes	27	30.0	48.9
Needs improvement	42	46.7	95.6
Non-functional	4	4.4	100.0
Total	90	100.0	

Source: Field Survey, 2018

In addition, the research sought to assess how effective portfolio management processes are carried out in the respondents' organization. The portfolio management processes were ranked according to their mean and standard deviation as presented in Table 4.7. The highest ranked process is gathering and uploading vendor information (1st) with a mean of 4.40 and standard deviation of 0.804. The second highest ranked process is setting up a portfolio management plan (2nd) with a mean of 4.33 and standard deviation of 0.835. The third highest ranked process is assessment of potential changes during portfolio management, which has a mean of 4.20 and standard deviation of 0.690.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

Table 4.1.7 Effective Portfolio Management Process

Portfolio Management Process	Mean	Std. Deviation	Rank
Gather and upload vendor information	4.40	0.804	1st
Portfolio management plan	4.33	0.835	2nd
Assess potential changes	4.20	0.690	3rd
Identification of objectives and constraints	4.17	0.753	4th
Identify areas of improvement and cost saving	4.12	1.026	5th
Structure data into categories and assets	3.94	0.725	6th

Source: Field Survey, 2018

4.8 Procurement Principles Practiced

One of the objectives of the research is to delve into the procurement principles practiced in the respondents' organization and the results obtained are presented in figure 4.1. Among the procurement principles listed, client-oriented represents 28.9% of the responses, followed by integrity (22.2%). The other procurement principles practiced include transparency (14.4%), innovativeness (16.7%), meritocracy (10%) and accountability (7.8%). The results revealed that the least procurement principle practiced is accountability, which is a major area of concern in the Ghanaian economy. There is little or no accountability for projects executed especially in the public sector.

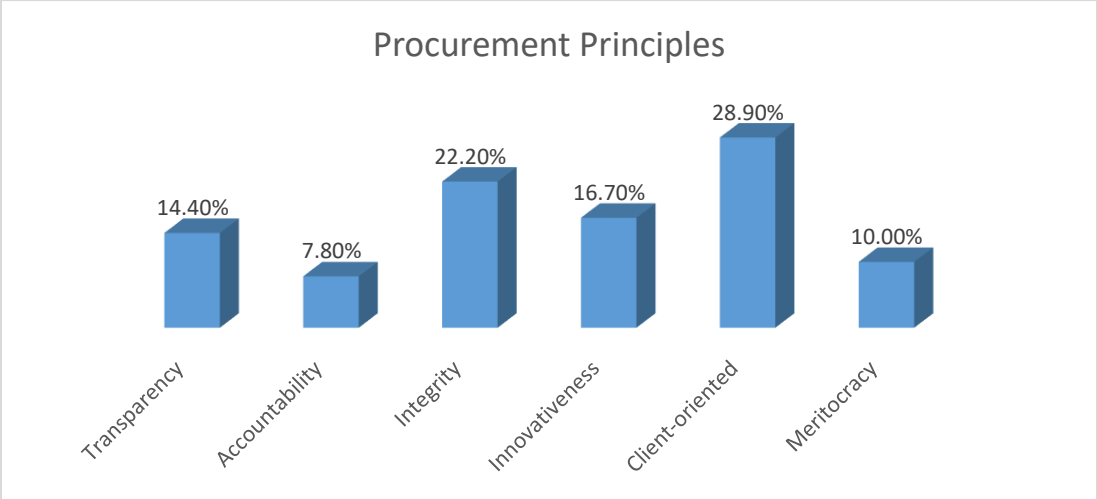

Figure 4.1 Source: Field Survey, 2018

4.9 Factors that Impede Implementation of Project Auditing

The figure 4.2 below reveals the responses on factors that impede the implementation of project auditing. The majority of the respondents identified lack of overall audit plan as a factor that impedes implementation of project auditing and this accounts for 33.3% of the responses. In addition, unavailability of progress reports has been identified as another factor, which represents 27.8% of the responses and closely followed by lack of resources (25.6%). The least factor identified by the respondents is the lack of experts in the area of auditing to handle successful implementation of project audits in the country.

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

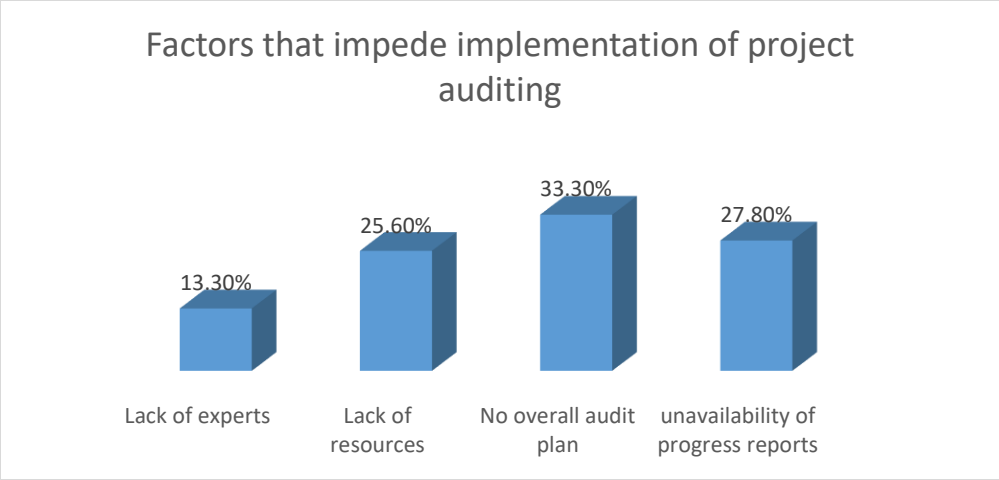

Figure 4.2 Source: Field Survey, 2018

4.10 Strategies to Enhance Effective Project Auditing

With the numerous issues regarding the implementation of project audits in the country, the researcher sought the view of staffs of the ministry of local government service on the strategies the ministry has adopted to ensure effective project auditing. The responses have been educative in the sense that it gives an idea of how other ministries handle project audits. The majority of the respondents (26.7%) identified effective allocation of resources as the most effective strategy adopted by the ministry in dealing with project audits. Moreover, other strategies such as effective communication and a well-structured management framework each account for 21.1% of the strategies adopted for effective project auditing. The ministry also has a well-established audit department to handle auditing of projects and this accounts for 17.8% of the responses. The staffs also identified accountability as an effective strategy adopted by the ministry to ensure that project audits are effective. Accountability represents the least response on the strategies adopted in the ministry with 13.3% of the responses.

Table 4.8 Effective Project Auditing Strategies

Strategies	Frequency	Percent	Cumulative %
Effective communication	19	21.1	21.1
Effective allocation of resources	24	26.7	47.8
Accountability	12	13.3	61.1
Well structure management framework	19	21.1	82.2
Well established audit department	16	17.8	100.0
Total	90	100.0	

Source: Field Survey, 2018

5.0 CONCLUSION

This covers the summary of the findings, conclusions and recommendations of the research. The aim of the research is to examine project auditing, effectiveness, efficiency and compliance with statutory and corporate guidelines.

5.1 Findings and Discoveries

The study sought to determine the procurement principles practiced in the public sector. The results revealed principles such as integrity, client oriented, innovativeness, transparency and meritocracy. The most prominent procurement practice identified is client-oriented and least practice identified is accountability. In addition, the respondents identified factors that impede implementation of project auditing in the public sector and these factors include lack of experts, lack of resources, no overall audit plan and unavailability of progress reports. Finally, the research identified strategies to enhance

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

effective project auditing. The strategies adopted by the ministry include effective communication, effective allocation of resources, and establishment of an audit department, well-structured management framework and accountability.

5.2 Limitations

The nature of this research is exploratory and open ended however, small number of people will be interviewed in depth and or a relatively small number of focus groups will be contacted for the study. According to the available statistics, the total populations of those directly involved in these organizations are estimated to be approximately two hundred and forty (240), with this in mind time and finance will be constraints and limitation to the study.

5.3 Recommendations

The research revealed that majority of the portfolio management units need improvement whiles others are non-functional. There is the need to put structures in place to ensure that portfolio management units are functional. The research identified lack of expertise, lack of resources, no overall audit plan and unavailability of progress reports as factors that impede implementation of project auditing in the ministries. The research thus recommends that the organizations should train more personnel in the field of auditing and equip them with resources to ensure successful implementation of audits in the ministry.

5.4 Further Study and Research

The respondents provided little information on project team-client relationship in Ghana. As a result, the researcher recommends that future studies should focus on project team-client relationship since it forms an important segment of project auditing. Finally, the researcher recommends that future studies should be centered on improving accountability in the public sector.

5.5 Conclusions

The main study areas considered in this research are risk content of projects, effectiveness and efficiency of portfolio management units, procurement principles, factors that impede implementation of project audits and strategies to enhance effective project auditing. The research distributed structured questionnaires to the staffs of Ministry of Local Government and had a response rate of 72%, which was sufficient to make conclusive remarks on the total population.

The research was conducted with the voluntary participation of supply officers, heads of PMO, directors, project managers, human resources persons, administrative officers and other officers of the Ministry of Local Government. These groups of respondents represented by 57.8% males and 42.2% females have good education backgrounds from certificate/diploma to doctorates. The significance of the high educational levels depicts the level of knowledge possessed by the respondents in contributing to the research topic. The respondents have diverse experience in handling projects ranging from project management, procurement and logistics, monitoring and supervision, project analysis and stewardship. The general information on the respondents was presented in Table 4.1.

The first objective of the research was to analyze the risk content of respective projects. To achieve this objective, the researcher sought respondents' understanding of risk and how it is handled in their organization. The definitions given to risks by the respondents include; uncertain events that affects project performance, possibility of loss or project failure, exposure to outcomes of uncertainty, gaps in knowledge that affects project objectives, and threat of damage, injury and loss.

The significant factor in the definitions given is the fact that risks affect the objectives and performance of projects. The respondents also highlighted how they identify risks in projects as individuals and as an organization. The research reveals that individuals identify risks by brainstorming and challenging of assumptions, assessing any actions likely to affect project activities, analyzing the sequence of events within business operations, and comparing the projects to other completed and similar projects.

The organizations also identify risks by carrying out SWOT analysis and interviews. The SWOT analysis is carried out to determine the organizations' strength, weaknesses, opportunities and threats, a

https://damaacademia.com/pmsj/ August 2022 Pages: 92-116 Volume 6 | Issue 8

concept that takes into consideration internal and external factors of the organization. The respondents also ranked risk management processes from literature in order of importance. These include risk identification (1st), monitoring and reviewing of risk (2nd), analyzing the risk (3rd), treatment of the risk (4th) and evaluation or ranking of the risk (5th).

The second objective of the research was to ascertain whether the project portfolio management units are suitable in terms of managing project activities in the organization. In order to achieve this objective, responses from the respondents were collated on whether their organizations have project management office and the functions of the units in managing projects. More than 70% of the organizations have PMO's who operate as IT PMO and Enterprise PMO's. The IT PMOs' functions in the information technology unit whiles the enterprise PMO's handles all kinds of projects.

The third objective was to examine the effectiveness and efficiency of the portfolio management units in the organizations. The respondents were asked to rate the performance of their project management units and majority of the respondents representing (46.7%) said the project management units need improvement. Meanwhile, 30% of the respondents said the portfolio units are sufficient for their purposes. On the contrary, 4.4% of the respondents stated that the portfolio units are non-functional. The research revealed that in order to ensure effective portfolio management, there is the need to gather and upload vendor information, provide portfolio management plan and assess potential changes in the portfolio management process.

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