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Analyzing Risk Management Tasks in Project Implementation in Ghana

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Abstract
International donor agencies continue to register their displeasure over the manner in which funds allocated for poverty reduction and development projects are recklessly managed. World Bank's Vice President for Poverty Reduction and Economic Management, Danny Leipziger was reported in the 5th December 2008 edition of the Ghanaian Times as saying "Transparent public institutions and the fight against corruption are key for poverty reduction and economic growth," he added that "The current financial crisis shows how important transparency, good governance, and effective regulation are in all parts of the world". On his part the UK Minister for International Development, Ivan Lewis also exclaimed that good governance is at the heart of development and poverty reduction and that "DFID is committed to the global effort to build effective states that serve the needs of their citizens and stamp out corruption. The government partnership facility being envisaged by the Donor Agencies will help create the conditions that will enable millions of people in the developing world to step up from poverty". Ghana's development partners are worried that if funds for poverty reduction projects were not properly managed the necessary safety nets and structures can hardly be established to shelter the vulnerable and keep up the development momentum. Bert Koenders, the Netherlands Minister for Development and Cooperation did not mince words in asserting that" corruption and bad governance obstruct equitable development of poor countries, and that is unacceptable."

Norwegian Minister of Environment and International Development, Erik Solheim also lambasted the executives of developing countries when he indicated that"... several hundred billions of US dollars are illicitly transferred from developing countries each year and this undermines the mobilization of domestic resources, reduces funding for development, facilitates criminal activities, weakens accountability and increases inequality. On the local front, the educational sector has a catalog of abandoned government projects. The new Chemistry Department of the University of Ghana, for instance, commenced in 1979 when Dr. Ivan Addae Mensah was only a lecturer at the science faculty. He rose through the ranks to become a full professor and even the vice chancellor of the university before the project was completed in 2002. The yet to be completed tallest building in Accra near the British Council Library or the Cedi House, funded by Social Security and National Insurance Trust, had its sod cut in 1998 when Jerry Rawlings was in the helm of affairs at the Osu Castle. One is at a complete loss as to when this building project would be handed over for commissioning. Perhaps it might be needless to ascertain the number of upward adjustments to the cost of this project that has been made. Street lighting project commenced decades ago, has not been managed successfully. Traffic lighting systems, even in the capital cities are in deplorable state. Some Traffic lighting systems at intersectional roads in Accra have been permanently out of order for long periods resulting in serious vehicular accidents thereby defeating the rationale behind the installation of these traffic control lights. What exactly might have happened to the project management skills of the officials entrusted with the day to day management of these traffic lights?

The National Health Insurance Scheme and Metro Mass Transit projects are virtually on its knees as a result of corrupt officials who condoned with service providers to defraud the projects. The million dollar question that readily comes to mind is whether the risk factors associated with most of the aforementioned projects were adequately isolated and mechanisms put in place towards addressing this risk factors before and during the implementation of these projects. Brigham and Ehrhardt (2005) argue that "as businesses and projects become increasingly complex, it is more and more difficult for the CEOs and directors to know what problems might lie in wait. Therefore companies need to have someone systematically looking for potential problems and design safeguards to minimize potential damage". This is where projects and businesses ought to have 'risk managers' who assume risk management responsibilities. According to March and Shapira (1987), Risk management involves identifying the risks faced by the project, measuring the potential effect of each risk and deciding how each relevant risk should be handled. Baird and Howard (1985) further added that risk management attempts to reduce the probability of occurrence of an adverse event, reduce the management of the loss associated and totally avoiding the activity that gives rise to the risk. The

study examines the risk management challenges associated with the Metro Mass Transit project and the National Health Insurance scheme.

Keywords: *Project Risk Management, Project Implementation, Project Executive, Project Management, Risk Control*

1. INTRODUCTION

A risk is an uncertain event or set of events that, should they occur, will have an effect on the achievement of objectives. It consists of a combination of the probability of a perceived threat or opportunity occurring, and the magnitude of its impact on objectives, where: **Threat** is used to describe an uncertain event that could have a negative impact on objectives. **Opportunity** is used to describe an uncertain event that could have a favorable impact on objectives. In the context of a project, it is the project's objectives that are at risk. These will include completing the project to a number of targets, typically covering time, cost, quality, scope, benefits, and risk.

Risk and uncertainty are present in most projects. Risk represents the chance of adverse consequences of loss occurring. Generally, risks can be identified and once identified the probability of the risk occurring needs to be assessed. However, there may also be doubt about the validity of qualitative or quantitative data: this is called uncertainty. We can also use the term uncertainty to mean a state where too little is known about something, and the very lack of knowledge represents a danger that can only be addressed by gathering more information. Any person preparing a proposal must take risks and uncertainties into account. To do either requires first that areas of uncertainty and risk are identified. At the stage of making proposals, perceived risks must be brought clearly to the attention of those in authority for the decision to be made in the matter – i.e. the problem is 'escalated' to more senior managers. The problem may then be delegated to someone with the express purpose of investigating further. Crock ford (1980) listed the following categories of risks: Fire and natural disaster**,** Accident**,** Political and social risk (war, civil disturbance, theft, and vandalism), Technical risk**,** Marketing risk**,** Labour risk (stoppages and strikes, turnover of personnel)**,** and Liability risks (product liability, safety)

High – risk proposals: It is likely that the potential for variation of costs should be considered a risk if novel elements predominate in a project. Proposals involving research, development or immature technologies tend to be of higher risk than projects in more mature areas such as civil engineering. However, Chicken (1994) notes that major civil engineering projects which are novel, such as the Sydney Opera House, the Thames Flood Barrier and the Channel Tunnel, suffer from variation in costs, often by factors of from 10 to 200 times original estimates. Information systems developments are particularly prone to this problem, as the designers must often design today for tomorrow's technology, while their experience gained in yesterday's project becomes rapidly obsolescent. Three dimensions of risk exist: Size, Technological maturity (the incorporation of novel methods, techniques, materials etc) and Structural complexity. The larger a proposed project is the greater the risk. Increase in size usually means an increase in complexity, including the complexity of administration, management, communication among the participants and so on. Technological risks lie in the extent to which the technology and the methods proposed to be used are new and untried, innovative or unfamiliar. Structural complexity refers both to the arrangement of the component parts of the proposed project and to the structure of teams, management, and relationships between groups.

While risk is unavoidable, it is manageable. We can manage the risk in such a way that it is either passed on to others or considerably reduced or reduced. Let us say that we are building a house and are afraid that the iron rods price may rise. If we want to eliminate this risk, we can purchase the bars and hold them in stock. (Though one risk is eliminated, other risks may crop up like the risk of stealing, the risk of obsolescence or risk of damages.) Risk management is the identification, assessment, and prioritization of risks (defined in ISO 31000 as the effect of uncertainty on objectives, whether positive or negative) followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risks can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attacks from an adversary. Several risk management standards have been developed including the Project Management Institute, the National Institute of Science and Technology, Actuarial Societies, and ISO standards. Methods, definitions, and goals vary widely according to whether the risk management method is in the context of project management, security, engineering, industrial processes, financial portfolios, actuarial assessments, or public health and safety.

The strategies to manage risk include transferring the risk to another party, avoiding the risk, reducing the negative effect of the risk, and accepting some or all of the consequences of a particular risk. Certain aspects of many

of the risk management standards have come under criticism for having no measurable improvement on risk even though the confidence in estimates and decisions increase. In ideal risk management, a prioritization process is followed whereby the risks with the greatest loss and the greatest probability of occurring are handled first, and risks with lower probability of occurrence and lower loss are handled in descending order. In practice, the process can be very difficult and balancing between risks with a high probability of occurrence but lower loss versus a risk with high loss but lower probability of occurrence can often be mishandled.
Intangible risk management identifies a new type of risk that has a 100% probability of occurring but is ignored by the organization due to a lack of identification ability. For example, when deficient knowledge is applied to a situation, a knowledge risk materializes. Relationship risk appears when ineffective collaboration occurs. Process-engagement risk may be an issue when ineffective operational procedures are applied. These risks directly reduce the productivity of knowledge workers, decrease cost effectiveness, profitability, service, quality, reputation, brand value, and earnings quality. Intangible risk management allows management to create immediate value from the identification and reduction of risks that reduce productivity. Risk management also faces difficulties in allocating resources. This is the idea of opportunity cost. Resources spent on risk management could have been spent on more profitable activities.

Again, ideal risk management minimizes spending and the negative effects of risks. After analyzing the situation the next is to decide what to do about the risks. This is called risk management: the 'identification of countermeasures necessary to meet the requirements identified in risk analysis' (PRINCE, 1993, p. 5) Risks identified in the risk analysis should be tackled in the following order: High-impact, high-probability risks, High-impact, lower-probability risks, Low-impact, high-probability risk, Low-impact, low-probability risks. Low-impact, low-probability risks are probably not worth expending much effort on (but see the discussion of risk acceptance below). The manager can then look at these high-impact or high-probability risks one by one to determine whether there are ways either to reduce the impact if the risk occurs or to reduce the probability of the risk occurring, or both.

2. LITREATURE REVIEW

Managing Risk in Project: Projects are risky undertakings, and modern approaches to managing projects recognize the central need to manage the risk as an integral part of the project management discipline. Managing Risk in Projects places risk management in its proper context in the world of project management and beyond, and emphasizes the central concepts that are essential in order to understand why and how risk management should be implemented on projects of all types and sizes, in all industries and in all countries. The generic approach detailed by David Hillson is consistent with current international best practice and guidelines (including 'A Guide to the Project Management Body of Knowledge' (PMBoK) and the 'Project Risk Management Practice Standard' from PMI, the 'APM Body of Knowledge' and 'Project Risk Analysis & Management (PRAM) Guide' from APM, 'Management of Risk: Guidance for Practitioners' from OGC, and the forthcoming risk standard from ISO) but David also introduces key developments in the risk management field focus on their relevance to practical application. Throughout, David Hillson's goal is to offer a concise description of current best practice in project risk management whilst introducing the latest relevant developments, to enable project managers, project sponsors and others responsible for managing risk in projects to do just that – effectively. For each risk to be managed, the project manager needs to identify what cost-effective countermeasures can be applied. These may need to be specified in great detail, depending upon the complexity of the countermeasures. Possible countermeasures are: Avoiding the risk, Reducing the risk (likelihood or impact), Transferring the risk to others (insurance), Contingency plans (to be implemented should the risk occur) and Accepting the risk (just monitor the situation)

Avoiding the risk: Avoiding the risk means removing the risk totally from the work to be done. Avoiding a risk may mean not doing the project if the risk occurs in one of the key elements of the project. It may be possible to redefine the project to exclude the risk area.

Reducing the risk: Reducing the risk means reducing either the likelihood or the impact of the threat (or both).
Risk reduction is an important strategy; it can be an expensive one or it can be a very cheap one, but in most cases, it is likely to be cost-effective when compared to the cost of incurring the unreduced risk.

Transferring the risk to others (insurance): Insurance is a means of transferring the financial impact of having a risk occur. Insurance against fire or theft simply provides financial compensation for losses actually incurred. Compensation as the result of an insurance claim may not be adequate to keep a project on track, because the financial compensation may only be enough to compensate the organization for time and resources lost, not for repairing the damage so that the project can continue. Subcontracting the risk to a specialist subcontractor can reduce the risk considerably by combining two risk management strategies: risk reduction and risk transfer. The risk reduction element arises if the subcontractor has specialist skills in this area of work and so is less likely to fail to meet standards. The risk transfer element arises if the subcontractor undertakes to complete the work to the standard required at the time required at a fixed price. If the subcontractor is reliable and backed by sufficient resources to cope with the identified risks (which should, of course, be discussed with the subcontractor) then the risk will be effectively transferred. However, transferring the risk doesn't always help in the long run.

Note that, while a contractor or client may wish to transfer risk to a subcontractor, it is not always clear in such a situation as to who will be held responsible should a risk actually occur and result in problems. The client or contractor needs to give a detailed specification to the subcontractor which includes known risk factors and the parties need to understand clearly who has identified the risks, what those are, who will be responsible for risk management and who (if worst comes to worst) will have to shoulder the financial and legal responsibilities, and this should be backed up by the wording in the contract and other documents. The most that the client can gain from risk transfer is some financial protection in the event that the project fails. Risk transfer does not guarantee that a project will be completed successfully, and the financial protection may not be sufficient to prevent the bankruptcy of the client if the project was key to his or her business. The project manager can't simply dispose of his or her responsibilities by subcontracting and ensuring.

Contingency plans: Contingency planning involves 'identifying the range of alternative options for providing acceptable recovery strategies in the event of a loss' (PRINCE, 1993 p13). Contingency plans can involve the allocation of a fund to cover minor cost-overruns or elaborate plans for alternatives or the restoration of lost resources, work or services. For each alternative option identified, its benefits and disadvantages must also be identified so that the optimum solution can be presented to management for a decision. General contingency strategies are:

- Do nothing (choosing this option should be a positive choice, not a default because no one has taken the time to identify other possibilities)

- Alternative procedures, previously identified and described in detail (for example, a retreat to an earlier stage in the project so that work can recommence), to find alternative ways to proceed from the point at which the hazard occurs

- Reciprocal arrangement with other organizations, the client, contractor or subcontractor to provide specific resources and facilities in the event of a hazard arising.

Depending upon the risk, contingency plans can be quite detailed. If the risk probability is high and the impact could be severe, it may even be wise to distribute copies of the detailed plan to all likely participants and even to hold rehearsals on what to do should the risk actually occur. Rehearsal has the advantage of helping to highlight any problems that may exist in a contingency plan, enabling the project manager to alter the plan accordingly.

Accepting the risk: The final strategy for managing a risk is the possibility of risk acceptance: the project manager decides nothing can or needs to be done at present, but notes that the situation needs a review from time to time during the course of the project. It will be too costly to develop a contingency plan against everything that could go wrong. During the course of the project's execution it will be necessary to review the list of risks and risk factors to determine:

- Whether any risk has become or is likely to become critical at any time soon

- Whether any new risks have arisen which require assessment and possible planning or even immediate action? In any case, each risk and any management and contingency plans should be reviewed on a periodic

basis to ensure that, should the worst happen; the project manager will have given some thought about what to do.

Method of Minimizing Risk: For the most part, these methods consist of the following elements, performed, more or less, in the following order.

1. identify, characterize, and assess threats
2. assess the vulnerability of critical assets to specific threats
3. determine the risk (i.e. the expected consequences of specific types of attacks on specific assets)
4. identify ways to reduce those risks
5. prioritize risk reduction measures based on a strategy

Principles of risk management: The International Organization for Standardization (ISO) identifies the following principles of risk management: Risk management should: create value**,** be an integral part of organizational processes**,** be part of the decision making**,** explicitly address uncertainty**,** be systematic and structured**,** be based on the best available information**,** be tailored**,** take into account human factors**,** be transparent and inclusive**,** be dynamic, iterative and responsive to change **and** be capable of continual improvement and enhancement

Process of risk management: According to the standard ISO 31000 "Risk management -- Principles and guidelines on implementation", the process of risk management consists of several steps as follows:

Establishing the context: Establishing the context involves:

1. Identification of risk in a selected domain of interest
2. Planning the remainder of the process.
3. Mapping out the following:
    - the social scope of risk management
    - the identity and objectives of stakeholders
    - the basis upon which risks will be evaluated, constraints.
4. Defining a framework for the activity and an agenda for identification.
5. Developing an analysis of the risks involved in the process.
6. Mitigation or Solution of risks using available technological, human and organizational resources.

Identification: After establishing the context, the next step in the process of managing risk is to identify potential risks. Risks are about events that, when triggered, cause problems. Hence, risk identification can start with the source of problems, or with the problem itself.

- **Source analysis**: Risk sources may be internal or external to the system that is the target of risk management. Examples of risk sources are stakeholders of a project, employees of a company or the weather over an airport.

- **Problem analysis**: Risks are related to identifying threats. For example the threat of losing money, the threat of abuse of privacy information or the threat of accidents and casualties. The threats may exist with various entities, most important with shareholders, customers and legislative bodies such as the government.

When either source or problem is known, the events that a source may trigger or the events that can lead to a problem can be investigated. For example stakeholders withdrawing during a project may endanger funding of the project; privacy information may be stolen by employees even within a closed network; lightning striking a Boeing 747 during takeoff may make all people onboard immediate casualties. The chosen method of identifying risks may depend on culture, industry practice and compliance. The identification methods are formed by templates or the development of templates for identifying source, problem or event. Common risk identification methods are:

- **Objectives-based risk identification**: Organizations and project teams have objectives. Any event that may endanger achieving an objective partly or completely is identified as a risk.

- **Scenario-based risk identification**: In scenario analysis, different scenarios are created. The scenarios may be the alternative ways to achieve an objective, or an analysis of the interaction of forces in, for example, a market or battle. Any event that triggers an undesired scenario alternative is identified as a risk.

- **Taxonomy-based risk identification:** The taxonomy in taxonomy-based risk identification is a breakdown of possible risk sources. Based on the taxonomy and knowledge of best practices, a questionnaire is compiled. The answers to the questions reveal risks.

- **Common-risk checking**: In several industries, lists of known risks are available. Each risk in the list can be checked for application to a particular situation.

- **Risk charting**: This method combines the above approaches by listing resources at risk, Threats to those resources, Modifying Factors which may increase or decrease the risk and Consequences it is wished to avoid. Creating a matrix under these headings enables a variety of approaches. One can begin with resources and consider the threats they are exposed to and the consequences of each. Alternatively, one can start with the threats and examine which resources they would affect, or one can begin with the consequences and determine which combination of threats and resources would be involved to bring them about.

Assessment: Once risks have been identified, they must then be assessed as to their potential severity of loss and to the probability of occurrence. These quantities can be either simple to measure, in the case of the value of a lost building, or impossible to know for sure in the case of the probability of an unlikely event occurring. Therefore, the assessment process, it is critical to making the best-educated guesses possible in order to properly prioritize the implementation of the risk management plan. The fundamental difficulty in risk assessment is determining the rate of occurrence since statistical information is not available on all kinds of past incidents. Furthermore, evaluating the severity of the consequences (impact) is often quite difficult for immaterial assets. Asset valuation is another question that needs to be addressed. Thus, best-educated opinions and available statistics are the primary sources of information. Nevertheless, risk assessment should produce such information for the management of the organization that the primary risks are easy to understand and that the risk management decisions may be prioritized. Thus, there have been several theories and attempts to quantify risks. Numerous different risk formulae exist, but perhaps the most widely accepted formula for risk quantification is:

Rate of occurrence multiplied by the impact of the event equals risk

The above formula can also be re-written in terms of a Composite Risk Index, as follows: Composite Risk Index = Impact of Risk event x Probability of Occurrence. The impact of the risk event is assessed on a scale of 0 to 5, where 0 and 5 represent the minimum and maximum possible impact of an occurrence of a risk (usually in terms of financial losses). The probability of occurrence is likewise assessed on a scale from 0 to 5, where 0 represents a zero probability of the risk event actually occurring while 5 represents a 100% probability of occurrence. The Composite Index thus can take values ranging from 0 through 25, and this range is usually arbitrarily divided into three sub-ranges. The overall risk assessment is then Low, Medium or High, depending on the sub-range containing the calculated value of the Composite Index. For instance, the three sub-ranges could be defined as 0 to 8, 9 to 16 and 17 to 25. Note that the probability of risk occurrence is difficult to estimate since the past data on frequencies are not readily available, as mentioned above. Likewise, the impact of the risk is not easy to estimate since it is often difficult to estimate the potential financial loss in the event of risk occurrence. Further, both the above factors can change in magnitude depending on the adequacy of risk avoidance and prevention measures taken and due to changes in the external business environment. Hence it is absolutely necessary to periodically re-assess risks and intensify/relax mitigation measures as necessary.

Planning: The primary goal of the plan step is to prepare specific management responses to the threats and opportunities identified, ideally to remove or reduce the threats and to maximize the opportunities. Attention to the Plan step ensures as far as possible that the project is not taken by surprise if a risk materializes. The Plan step involves identifying and evaluating a range of options for responding to threats and opportunities. It is important that the risk response is proportional to the risk and that it offers value for money. A key factor in the selection of responses will be balancing the costs of implementing the responses against the probability and impact of allowing the risk to occur. Any chosen responses should be built into the appropriate level of plan, with a provision made for fallback plans

Implementing: The primary goal of the implementing step is to ensure the planned risk responses are auctioned, their effectiveness monitored, and corrective action is taken where responses do not match expectation. An important part of the implementing step is to ensure that there are clear roles and responsibilities allocated to support the Project Manager in the management of the project risk. The main roles in this respect are:

- **Risk Owner**. A named individual who is responsible for the management, monitoring, and control of all aspect of a particular risk assigned to them, including the implementation of the selected responses to address the threats or maximize the opportunities.

- **Risk Actionee**. An individual assigned to carry out a risk response action or actions to respond to a particular or set of risks. The support and taken direction from the risk owner.

In many cases, the risk owner and risk actionee are likely to be the same person. The risk owner should be the person most capable of managing the risk.

Project managers and Risk management: According to Field and Keller (1998), the aim of the project manager is to combat the variety of different hazards to which a project may be exposed. Essentially the co-authors believe that there are two parts to this work:

- Risk identification and analysis
- Risk management

Risk identification and analysis: The risk is an inherent and inevitable-characteristic of projects (though the degree of risk may vary widely) and the definition represents the chance of adverse consequences or loss occurring. That is a very general definition. How does one recognize a risk when planning and estimating a project? We want to be able to do more than identify general risks such as fire or flood! We want to know what is risky about this particular project, and at a later stage, what is risky about this particular activity. What we are seeking is a particular characteristic, circumstance or feature of this project that could potentially have an adverse effect on important deliverables or, worse, on the whole project. What risks are there, and what is the likelihood that they will come to pass? We say that a project is sensitive to a risk when, if the risk occurs, it can jeopardize a key aspect. Only when we have identified risks and have an idea of their likelihood can we plan what to do about them, and gauge their impact on project estimates, budgets and schedules. Risks related to deficient deliverables can lead to: Unmet marketing claims, complaints, loss of image or reputation, loss of market**,** Legal claims**,** Liability**,** Waste of human and financial resources**,** Compromises to health and safety**,** Problems with availability and delivery and Loss of customer confidence

Risk Assessment: At this Risk assessment stage, the project manager has to make a careful identification and analysis of specific risks in order to make 'tactical' plans that affect the shape of detailed project plans and estimates. The process of risk assessment is more than simply identifying specific risks. It means obtaining a clear definition of risks, including how important the risk is to the project – what the severity of its occurrence would be, its sensitivity – and the likelihood of that risk occurring. Risk assessment:

- Identifies risks
- Analyses the risk in terms of their impact on performance, cost, schedule, and quality
- Estimates the probability of the risk occurring during the execution of the project – the project's exposure
- Prioritizes the risks according to exposure, effect, and problems associated with compounding risks

- Enables management to monitor risk factors and take action during the execution of the project.

There are important psychological 'truisms' to bear in mind here. The scope of risk identified in an assessment will be in keeping with the scope and level of project definition used to identify risks. If a project manager asks, 'what can go wrong with this project'? Thinking will be in terms of the entire project. Using well-digging as an example, what could go wrong might be no funding materializes, no tools are available, the people supported to do the work don't do it, or the well once dug, collapses. Small details that could jeopardize the whole project might be missed. The planner is more likely to think in terms of tools not being delivered to the site due to transport problems, not enough tools to go around, wrong tools delivered, the workers not knowing how to use the tools. Once these potential risks are identified in detail, the project planner can decide what to do. If transport is key, someone can check that the roads are open or work out alternative routes; a vehicle in a reasonable state of repair, with a driver, can be made available at the time the tools need to be delivered; someone reliable can be asked to check that the tools to be sent are the right tools before they are loaded on the vehicle.
A detailed level of risk identification makes it possible to determine more specifically what can be done to lessen or eliminate the risk. You should see from this brief example that it is important at the project planning and estimating stage to develop a detailed risk assessment. Another psychological 'Truism' is that two minds are better than one (and three better than two, up to a number beyond which the debate would get too confused and too expensive). No one person can think of all the things that can possibly go wrong with more than the simplest project. There are many kinds of risk. Many projects today are so complex that they will involve several kinds of risk. Different kinds of risk may require different kinds of risk assessment.

Technical risk factors: Technical risk factors of a project often cover a very wide range. According to Chicken's (1994) survey of risk assessment practice, there is no universally accepted way of assessing risks and methods are often matters of opinion and experience. A system such as a project or a complex product may consist of a network of interacting components which may have non-linear and multidirectional or even unpredictable interactions. There are proposed techniques for analyzing such multivariable systems, but the most common technique employed is to consult technical experts. Most risk can be assessed by identifying what kinds of risks may occur, rating their probability of occurring and their impact if they do, and then assessing the result of this data-gathering exercise. Used by experts in risk assessment, this technique is probably also the most accessible one for the project manager who is not an expert. Stakeholders can give valuable assistance in carrying out a risk assessment. This can be a group effort organized by the project manager and including anyone having a significant stake in the outcome of the project manager and including anyone having a significant stake in the outcome of the project. Other people who may have little or no stake in the project can usefully participate if they have experience of similar projects, are experts in particular technical or other subject areas or are familiar with the risk assessment process. Working in a group this way, everyone will build an understanding of what risks exist. Brainstorming and normal group techniques are used to identify risks, and later to identify strategies for dealing with them. These are particularly useful in very novel projects or where pre-existing aids to risk identification and analysis don't exist. One possibility is to undertake a 'negative' brainstorming session: ask the question, 'How could we sabotage this aspect of the project?

Risk factor lists: A number of aids to risk assessment exist in the form of risk factor lists. Some of these are part of proprietary systems of project management. Some have been drawn up by organizations as they have gained experience in projects. Some are simply the result of an experienced project manager keeping a log for each project of what went wrong, why it went wrong, and what was done about it. Such lists are rarely exhaustive and can often usefully be extended by the project manager or others. Most risk assessment lists take a common form: they identify risk factors and ask the project manager to score the risk on a scale such as the low, medium or high likelihood of occurrence and perhaps also to assess the risk as having a low, medium or high impact on the project or its key deliverable.

Risk Monitoring: The purpose of risk assessment is to allow the project manager to identify and plan for risk. The project manager manages risk by monitoring the situation and controlling it when it occurs. Monitoring risks can be

tied to the tracking of milestones, setting aside time periodically to examine the situation for the most likely and most damaging risks, reassessing risks as the project progresses, and, of course, taking corrective action.

3. METHODOLOGY

The Headquarters of the Metro Mass Transit project was contacted and after the initial protocol formalities the list of most senior officers within the various units of the organization was made available and the researcher considered each department as a group or stratum and therefore stratified random sampling technique was used in picking most of the senior officers while in the case of the management members purposive sampling technique enabled the investigator to directly distribute the questionnaire to these higher offices for the views on the topic. Their phone numbers were picked up and periodically the researcher reminded them, on the phone of their responsibility to the study. At the appointed time the investigator did go round to pick up the answered 'scripts' and care was exercised to ensure that every pertinent question was answered except cases where they were not applicable of the respondent. Out of the total number of 40 questionnaires sent to each project 38 (i.e. 95%) were returned by NHIS officials while MMT officials returned 39 (i.e. 97.5). Statistical Package for Social Study (SPSS) was used to analyze the information captured from the field and the relevant pie charts, frequencies, tables and bar charts have been featured in 4.4 and 4.5 of this report.

4. DATA ANALYSIS

4.1 Distribution of respondents' service duration with their projects

Table 4.4.4 Length of Service of respondents

Types of Response	NHIS		MMT	
No. of years	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Below 1 year	4	10.5	2	5.1
1 – 2	6	16.0	7	18.0
2 – 3	11	30.0	9	23.1
3 – 4	10	26.0	11	28.2
4 – 5	3	8.0	5	12.8
Above 5	4	10.5	5	12.8
Total	**38**	**100**	**39**	**100**

Source: Field Research (2010)

Table 4.4.4 above depicts the fact that eleven NHIS respondents representing 30 percent have served the NHIS project for periods between two and three years. Ten (26%) NHIS officials have been around the health insurance project for three to four years while six (i.e. 16%) signed up with the health scheme not more than two years ago. Four NHIS officials (i.e. 10.5%) are yet to register their first milestone with the NHIS. A further four respondents (i.e. 10.5%) have served the health insurance project above five years and can, therefore, be said to be of the pioneer employee group since the project is in its sixth year. The remaining three NHIS respondents (i.e. 8%) have been on the project for periods between four and five years.

With regards to MMTL respondents eleven (i.e. 28.2%) have been with the Metro Mass Transit project for 3 to 4 years while nine officials (i.e. 23.1%) have been around the transport service for 2 to 3 years. Severn MMTL respondents (18.0%) have spent 1 to 2 years on the project. Five MMTL officials (12.8%) continue to serve the project after 4 to 5 years while a further five respondents (12.8%) have been around MMTL over five years possibly might have been part of the pioneer employees. The remaining two MMTL respondents (i.e. 5.1%) appeared to have just been engaged since they are yet to experience a full year's employment with the mass transport project.

4.2 Analysis of Responses to Risk management issues.

4.2.1 Distribution of respondents views on their understanding of risk management

NHIS respondents constituting 36.8 percent are of the conviction that risk management involves identifying risk and minimizing it. Ten health insurance respondents (i.e. 26.2%) explained that risk management has to do with dealing with risk at a most economic cost. Eight NHIS respondents (i.e. 21%) described risk management as trying

to accommodate the effects of uncertainty on projects. Six health insurance respondents (i.e. 16%) are of the view that risk management means assessing risk and controlling it. With respect to responses from officials of MMTL on their understanding of the concept of risk management, seventeen respondents (i.e. 43.6%) believe that risk management entails identifying risk and minimizing it. Twelve mass transportation respondents (i.e. 30.8%) described risk management as assessing risk and controlling it. Six MMTL officials (i.e. 15.4%) felt risk management means dealing with risk at a most economic cost. The remaining four (i.e. 10.2%) MMTL respondents described risk management as trying to accommodate the effects of uncertainty on the project.

4.2.2 Distribution of respondents' views based on the kind of risk management strategies they are familiar with.

Risk Management Strategies known by respondents

Type of Response	Frequency (out of 38) NHIS	Percentage NHIS	Frequency (out of 38) MMT	Percentage MMT
Transfer risk to another party	28	73.7	33	84.6
Avoiding the risk	35	92.1	31	79.5
Reducing the negative effect the risk	31	81.6	28	71.8
Accepting consequents of particular risk	32	84.2	28	71.8

Source: Field Research (2010)

Table 4.5.5 above shows that 35 out of 38 NHIS respondents constituting 92.1 percent indicated their familiarity with the risk management strategy of avoiding the risk entirely. 32 health insurance interviewers (i.e. 84.2%) pointed out that they are aware of the strategy of 'accepting some or all of the consequences of a particular risk'. Thirty-one NHIS respondents (i.e. 81.6%) said they are familiar with the risk management strategy of "reducing the negative effect of the risk". Twenty-eight NHIS interviewees (i.e. 73.7%) also indicated their familiarity with the strategy of 'transferring risk to another party'.

In the case of Metro Mass Transit Limited officials, thirty-three representing 84.6 percent are familiar with the risk management's technique of 'transferring the risk to another party'. Thirty-one MMTL respondents (i.e. 79.5%) pointed out that they "know much about the strategy of avoiding the risk". Twenty – eight respondents (71.8%) from the transport project seemed to be familiar with the strategy of reducing the negative effect of the risk. A further 28 out of the 39 MMTL respondents (71.8%) have good knowledge about the strategy of accepting some or all of the consequences of a particular risk.

4.2.3 Distribution of Responses based on risk factors identified by respondents

Risk factors identified by NHIS respondents

Type of risk identified	Frequency (out of 38)	Percentage
Staff pocketing fees	29	76.3
Staff diverting resources	28	73.7
Service providers lukewarm attitude towards NHIS members	33	86.8
Government interference	25	66
Staff inexperience	29	76.3
Inadequate health delivery facilities	35	92.1
High cost of operation	32	84.2
Delay in receipt of government subvention	28	73.7

Source: Field Research (2010)

Table 4.6 above shows that Thirty – five out of the thirty-eight NHIS respondents representing 92.1 percent indicated inadequate health delivery facilities as one of the greatest risks facing the project. Thirty-three NHIS respondents (i.e. 86.8%) also mentioned the lukewarm attitude of service providers as a huge risk to the project. Thirty-two health insurance officials (i.e. 84.2%) mentioned the high cost of living which could push up the cost of operation as another risk factor worth examining. Twenty – nine (76.3%) NHIS respondents spoke of some dishonest practices of officials such as pocketing of fees as hindering factor to the smooth operations of the project.

Another twenty-nine (76.3%) interviewees from NHIS felt staff inexperience poses a serious risk to the project. Twenty-eight (73.7%) officials mentioned staff diverting resources by way of badly needed logistics as another area of risk. Delay in receiving government subvention was seen by 28 out of the 38 (i.e. 73.7%) respondent as a further risk to the health insurance project. Government interference was also seen by twenty-five (i.e. 66%) respondents as negative signals to the success of the project.

Risk factors identified by MMT respondents

Type of Risk identified	Frequency (out of 38)	Percentage
Staff diverting resources	33	84.6
Delay in the bus schedule	36	92.3
Bus conductors pocketing fares	31	79.5
Government interference	26	66.7
Senior officials not paying for services	28	72
Bad roads	29	74.3
Poor customer care practices	25	64.1
Overloading buses	29	74.3
Delaying in government funds	33	84.6

Source: Field Research (2010)

It can be gathered from Table 4.5.7 that 33 out of 39 respondents (i.e. 84.6%) saw the delay in releasing government subvention as a huge risk to their operation. The possibility of staff diverting resources such as bus outer covers spare parts etc was seen by 33 (i.e. 84.6%) respondents as a huge risk. The delay in bus scheduled movement was seen by 36 out of the 39 (i.e. 92.3%) respondents as a serious setback to their operation. Thirty – one out of the thirty – nine respondents (i.e. 79.5%) recognized bus conductors pocketing fares as huge 'a headache' to their operations. The impassable nature of roads was seen by 29 out of the 39 respondents (i.e. 74.3%) as a potential risk factor to their operations. Overloading of buses was mentioned by 29 out of the 39 respondent (i.e. 74.3%) as another risk factor. The possibility of senior officers hiring the buses for private purposes especially funerals but refuse to pay for such services was seen by 28 out of the 35 (i.e. 72%) as a further risk factor. Twenty-six respondents (i.e. 66.7%) saw government interference in directing how the buses should be used as another serious risk factor.

4.2.4 Distribution of respondent's views on whether their outfits have risk management policies.

From figure twenty out of thirty – eight NHIS officials representing 52.63 percent pointed out that their outfit i.e. NHIS does have a full policy document on risk management. Eighteen out of thirty-eight respondents constituting 47.37 percent indicated that they had no idea whether NHIS has a risk management policy or not but were aware of internal control mechanisms that ensured judicious use of resources allocated to the project.

Twenty – five out of thirty-nine respondents of MMTL forming 64 percent answered in the affirmative that Metro Mass Transit Limited does maintain risk management policy which enables their outfit to minimize if not eradicate risk tendencies of their project. Fourteen out of thirty-nine (i.e. 36%) appeared not to have an idea whether

MMTL had a risk management policy or not. They, however, indicated that control measures were in place to minimize leakages of their project's logistics into private selfish hands.

4.2.5 Distribution of respondents' views on challenges associated with their projects revenue mobilization

Respondent's view on project revenue mobilization challenges

Response type	**NHIS**		**MMTL**	
	Frequency out of 38	**Percentage**	**Frequency out of 39**	**Percentage**
Officers pocketing funds	33	86.80	36	92.30
Delay in government subvention	28	73.68	30	76.92
High operating cost	30	78.94	32	82.05
Government free assignments	27	71.05	29	74.36
Highly poor people	35	92.10	29	74.36
Dwindling foreign support	25	65.78	27	69.23
Competitors activities	22	57.89	23	60.0

Source: Field Research (2010)

From table 4.5.8 above thirty – five respondents from NHIS constituting 92.1 percent indicated that the greatest threat to revenue mobilization was people classify as highly poor who do not pay any premium to enhance operations of the Health Insurance Scheme. Thirty – three respondents (i.e. 86.8%) also felt health insurance officials pocketing premiums posed a huge challenge to revenue mobilization efforts. Thirty (i.e. 78.94%) NHIS interviewees registered high cost of operation as a potential danger to the revenue base of the project. Delay in the release of government subvention has been cited by 28 NHIS (i.e. 73.68%) respondents as a challenge to revenue mobilization Twenty-seven (i.e.71.05) NHIS respondents listed government's frequent interventions for the project to bail out some postnatal poor women and other destitute as a serious drain on the fortunes of the project. Twenty-five health insurance respondents representing 65.78 percent seemed to be worried about the dwindling foreign support for the Health Insurance project. Twenty-two NHIS interviewees (i.e. 57.89%) recognized competitor's activities in reducing their medical charges to attract lower-income patients as a potent force that could disturb the inflow of revenue to the project.

With respect to responses from Metro Mass Transit project officials, thirty-six officials representing 92.3 percent reported the activities of some unscrupulous revenue collection officials to pose serious challenges to the financial strength of the transport project. Thirty – two MMTL interviewees forming 82.05 percent pointed out that high cost of operation especially fuel, out cover tires etc are throwing the operating cost out of gear and this will have unfortunate consequences on the finances of the transport project. Thirty (i.e. 76.92%) MMT respondents listed delay in the release of government subvention as a challenge to the revenue uprightness of the project. Twenty – nine (i.e. 74.36%) respondents expressed worry over government's free transport policy extended to the school children within the basic school level. Twenty – nine (i.e. 74.36%) MMT interviewees also criticized a large number of poor people who board the government buses free of charge as a drain on the project's finances. Dwindling foreign support to the project has been 'fingered' by twenty-seven (i.e. 69.23%). MMT respondents as a potential injury to the funding base of the project. Activities of competitors like VIP, OA CISCO, etc private transport services on the inter-city routes have also been identified by twenty – three (i.e. 60%) MMTL respondents as a possible spanner in the financial wheel of progress of the Mass transport project.

4.2.6 Distribution of respondents' views on risk factors in the cost of operation

Figure indicates that eighteen NHIS respondents representing 47.4 percent believe that risk factors associated with the cost of operation center on operating cost rising over and above budgeted levels. Ten health insurance respondents (i.e. 26.3%) also felt inadequate logistics which often result in the hiring of equipment such as project cars etc pose a risk to the smooth running of the NHIS project. Six (i.e. 15.8%) are also of the conviction that staff pilfering affects operating costs adversely. Four NHIS respondents (i.e. 10.5%) saw risk factors in operation cost as

emanating from the negligence of officials in maintain equipment properly thereby pushing up depreciation charges and by extension the cost of operation.

In respect of responses from Metro Mass Transit project, fifteen respondents (i.e. 38.1%) saw risk factors in the cost of operation as coming from growing cost of inputs which keep budgeted input figures relatively lower. Ten (i.e. 25.6%) respondent explained that the MMT project has high depreciation charges owing to lukewarm attitudes exhibited towards equipment and vehicles. For instance, it was explained that vehicles buses meant to operate for five years have to be written off sometimes within three years owing to their state of disrepair. Eleven (i.e. 28.2%) MMT staff also criticized staff pilfering especially outer cover (tires) spare parts, fuel etc which together pose serious risk factors to the propagation of the project. Three (i.e. 7.6%) respondents pointed out that there have been instances where the project had to hire buses for some national assignments and such financial outlay often increase operation cost.

4.2.7 Distribution of respondents' view on the effect of government interference on project

Respondents view on effects of Government Interference of project

Type of response	NHIS		MMT	
	Frequency (out of 38)	Percentage	Frequency (out of 39)	Percentage
Adversely affects revenue	37	97	36	92.3
Detail the directing of project	34	89.47	37	95
Sidelines some members of the public	32	84.21	30	77
Unqualified people are employed	26	68.4	34	87

Source: Field Research (2010)

Table shows that 37 out of the 38 NHIS respondents representing 97 percent are of the conviction that government interference in the operations of the health insurance scheme adversely affects the revenue base of the project. Thirty – four (i.e. 89.47%) respondents indicated that pressure from the government has the propensity of derailing the direction of the project. Thirty – two (i.e. 84.21%) respondents also believe that government influence often politicizes the project and could keep off some segments of the population from enjoying the project. Twenty – six (i.e. 68.4%) also did not mince words in saying that government intervention results in employing unqualified political party officials. In respect of Metro Mass Transit respondents, 37 out of 39 constituting 95 percent pointed out that government interference in the Mass Transport Project is resulting in a huge unqualified party 'foot soldiers' being engaged as bus conductors inspectors and drivers. Thirty-six (i.e. 92.3%) respondents also indicated that pressure from the government to use buses for political assignments. Thirty-four (i.e. 87%) interviewees also are of the conviction that government interference often pushes their transport business towards the certain direction which could sideline some members of the Ghanaian public from benefiting from the project. Thirty (i.e. 77%) respondent criticized government influences which usually derail the direction of the project.

4.2.8 Distribution of Respondents' view on risk factors in the procurement practices of their projects

Respondents' view on risk factors in procurement practices of their projects

Type of response	NHIS		MMT	
	Frequency (out of 38)	Percentage	Frequency (out of 39)	Percentage
Good not properly received into stock	33	86.84	28	72
Government interference	35	89.70	36	92.3
Favoritism inward of the supply contract	28	73.68	31	79.48
Procurement law not practicable	20	52.63	18	46.15

Dishonest procurement staff	31	81.57	29	74.35

Source: Field Research (2010)

It is obvious from table 4.10 that 35 out of 38 NHIS respondent constituting 89.7 percent perceive government interference in the award of supply contract as a huge risk factor in the procurement practices of the health insurance project. Thirty – three respondents (i.e. 86.84%) health insurance interviewees also see the willful improper receipt of goods into stock as a risk factor in the implementation of the health insurance project. Thirty-one (i.e. 81.57%) respondents mentioned staff dishonesty in procurement practices as another avenue of risk concerns. Twenty – eight (i.e. 73.68%) mentioned favoritism in the award of supply contract as a huge risk in the procurement practices of the health insurance project. Twenty (i.e. 52.63%) mentioned the rigid procurement law as another risk factor.

Regards responses from Metro Mass Transit project thirty - six (i.e. 92.3%) respondents criticized government interferences in the procurement practices of their outfit as a sea of risk which ought to be nipped in the bud. Thirty – one (i.e. 79.48%) also pointed at favoritism practices in the award of supply contracts as a challenge that could destroy the fortunes of the MMT project staff dishonesty in diverting types and spare parts was seen by 29 (i.e. 74.35%) MMT respondents as a huge risk to the project. Twenty-eight (i.e. 72%) respondents referred to improper receipt of goods as a risk factor in the procurement practices of MMT. Only 18 out of the 39 respondents (i.e. 46.1%) respondents of MMT mentioned the rigid procurement law as a risk to their procurement practices.

4.2.9 Distribution of respondents' view on whether those managing their projects' risk are skillful.

Respondents' view on whether those managing their projects' risk are skillful

Response type	Frequency NHIS	Percent NHIS	Frequency MMT	Percent MMT
Yes	21	55.26	6	15.38
No	5	13.16	22	56.41
No idea	12	31.58	11	28.21
Total	38	100	39	100

Source: Field Research (2010)

From table 4.5.11 above 21 out of the 38 (i.e. 55.26%) NHIS, respondents felt their project does have competent risk managers. Twelve NHIS respondents (i.e. 31.58%) indicated that their outfit have inexperienced risk managers while the remaining 12 (i.e. 31.58%) had no idea on the subject.

With respect to MMT officials, six respondents (i.e. 15.38%) believe they have skillful risk managers while as many as 22 (i.e. 56.41%) respondent their risk managers do not have what it takes to handle risk factors prudently in their outfit. The remaining 11 (i.e. 28.21%) had no idea on the subject.

4.2.10 Distribution of respondents' view on whether management has made risk management part of the project?

Respondents' view on whether management has made risk management part of the project?

Response type	NHIS		MMT	
	Frequency	Percent	Frequency	Percent
Yes	10	26.31	6	15.38
No	21	55.28	24	61.53
No idea	7	18.41	9	23.09
Total	38	100	39	100

Source: Field Research (2010)

Table 4.5.12 above shows that twenty-one NHIS respondents said management has not made risk management part of their project. Ten (i.e. 26.31%) respondents, however, believe that risk management has been made part of their project. The remaining seven respondents (i.e. 18.41%) had no idea on the subject.
With respect to views from MMT twenty-four (i.e. 61.53%) did not see risk management as being made part of the project. Nine (i.e. 23.09%) had no idea on the subject while six (i.e. 15.38%) answered in the affirmative that risk management can be said to be part of the project.

4.2.11 Distribution of responses based on whether employees often brainstorm on risk factors

Responses based on whether employees often brainstorm on risk factors

Response type	NHIS		MMT	
	Frequency	Percent	Frequency	Percent
Yes	7	18.39	3	7.6
No	13	34.21	16	41.12
Somehow	18	47.40	20	51.28
Total	38	100	39	100

Source: Field Research (2010)

It can be gathered from Table 4.5.13 above that eighteen (i.e. 47.40%) of NHIS respondents are of the conviction that somehow the projects periodically brainstorm on risk management issues. Thirteen (i.e. 34.21%) NHIS respondents did not believe that issues concerning risk factors are often brainstormed. Seven respondents constituting 18.39 percent indicated in the affirmative that risk management issues are thoroughly discussed quite often.
With respect to responses from MMT, twenty (i.e. 51.28%) officials pointed out that somehow risk management issues are brainstormed. Sixteen (i.e. 41.12%) MMT respondents did not believe that risk management issues are frequently brainstormed. Only three (i.e. 7.6%) responded favorably that risk factors within the project are often discussed.

4.2.12 Distribution of respondents' views on the challenges associated with implementing official risk management practices.

Respondents' views on the challenges associated with implementing official risk management practices.

Response type	NHIS		MMT	
	Frequency	Percent	Frequency	Percent
No clear-cut risk isolation mechanism	25	65.79	36	92.30
Risk management personnel enough	27	71.05	30	76.92
Sector ministries not monitoring risk management practices	32	84.21	26	92.30
Poor risk management culture	25	65.79	34	87.20
Only a few people risk handle risk management issues	30	78.95	33	84.61
Inadequate logistics to manage risk	22	57.8	25	64.10

Source: Field Research (2010)

The above table depicts the fact that thirty – two (i.e. 84.21%) of health insurance respondents are of the conviction that the sector ministries i.e. ministries of health, social welfare and finance, and economic planning are not doing much in terms of monitoring the risk management practices of the project. Again 30 out of the 38 NHIS respondent (i.e. 78.95%) recognize the challenge of implementing risk management policies as emanating from the fact that only a few people are in charge of risk management issues. Twenty-seven (i.e. 71.05%) NHIS respondents also believe that risk management personnel of the health insurance project are not skillful enough to adequately handle the projects' risk issues.

Twenty-five (i.e. 65.79%) health insurance respondents also perceive the fact that the NHIS is yet to have a clear-cut risk isolation mechanism as a challenge that disturbs the smooth implantation of the official risk management policies. Poor risk management culture has been identified by 25 out of the 38 (i.e. 65.79%) of NHIS respondents as a big challenge to the implementation of risk management policies. Twenty-two NHIS respondents (i.e. 57.8%) lay the problems with rolling adequate risk management practices to the door steps of inadequate requisite logistics.
With respect to responds from Metro Mass Transit project, 36 out of the 39 (i.e. 92.3%) indicated that there are adequate mechanisms to isolate risk within their project. A further 36 (i.e. 92.3%) MMT respondents blamed the sector ministries namely Roads and Transport, Local Government and Finance for not monitoring the risk management practices of the Metro Mass Transit project.

Thirty – four (i.e. 87.2%) respondent pointed at poor risk management culture as a hindrance to the implementation of the official risk management of the official risk management policies. Thirty – three (i.e. 84.61%) mentioned few people running the risk management 'show' at MMT as a huge challenge to properly propagating the official risk management policies and practices. Thirty (i.e. 76.79%) MMT respondents recognized the incompetence of risk management personnel as a great hurdle which has to be cleared in order to effectively implement official risk management practices. Twenty – five (i.e. 64.10%) MMT respondents felt inadequate logistics could be responsible for the projects inability to properly implement official risk management practices.

4.2.13 Distribution of respondents' views on how projects risk factors are analyzed.

Respondents' views on how projects risk factors are analyzed

Response type	**NHIS**		**MMT**	
	Frequency	**Percent**	**Frequency**	**Percent**
Opinions are sought and cross-fertilized	4	10.5	7	18.0
Risk factors are discussed at staff durbar	11	28.9	13	33.0
External consultants are engaged	8	21.05	5	12.8
The team in charge of risk do the analysis	15	39.47	14	36.2
The team in charge of risk do the analysis	38	100	39	100

Source: Field Research (215010)

From table it can be seen that fifteen (i.e. 39.47%) of NHIS officials pointed out that teams formed and put in charge of risk management do the analysis as well. Eleven (i.e. 28.9%) respondents pointed out that analysis of risk factor is conducted at staff durbars where some brainstorming work goes on over risk issues. Eight (21.05%) NHIS respondents said external consultants are sometimes hired to help 'fix' some risk factors. Four (10.5) respondents disclosed that opinions are sought and cross-fertilized when analyzing risk factors.

With respect to MMT officials, fourteen (36.2%) respondents indicated that teams put in charge of risk management meet periodically to analyses risk factors. Thirteen MMT respondents (i.e. 33.0%) pointed out that risk factors are discussed and analyzed at staff durbars. Seven (i.e. 18%) Metro Mass Transit respondents also pointed out that opinions on particular risk issues are cross-fertilized as bases for analyzing risk factors. Five (12.8%) respondents indicated that external consultants are engaged in most cases to help unravel the negative impact of certain risk factors.

4.3 Findings

Upon critical analysis and evaluation of data, the following findings have been revealed:

- Both Metro Mass Transit (MMT) project and the National Health insurance scheme (NHIS) are male-dominated organizations.
- Majority of the MMT and NHIS employees are married making them more focused and stable in their employment decisions.
- Both projects have relatively youthful employees.
- Both organizations have well educated and qualified staff.

- The two projects have all enjoyed relatively stable labour force as the majority of the work force have been with the organizations for periods between two to five years.
- Respondents of both projects have a good understanding and meaning of risk management.
- The study revealed that majority of MMT and NHIS employees have good knowledge of risk management strategies.
- The study revealed that both MMT and NHIS have risk management policies which cover:
    - revenue mobilization
    - cost of operation
    - government interferences
    - procurement practices
    - environmental friendliness
    - the culture of repair and maintenance
    - staff retention.
- Employees of both organizations not too sure of the people or person in charge of risk management in the various projects.
- NHIS respondents are of the conviction that their risk management officers are doing a good job because the project is meeting its targets and the beneficiaries seem to be happy. However, MMT project respondents complained that the projects risk managers are not on top of issues.
- The study revealed that employees of NHIS and MMT either did not know or mentioned concisely that risk management was not part of their project.
- The study further revealed that employees of both organizations had no idea about the positive aspect of risk factors, that is, some risks have the propensity of generating opportunity.
- The study also uncovered the fact that no individual is put in charge of particular risk factors associated with the two projects. Both projects according to the respondents have teams that are in charge of risk analysis.
- Both MMT and NHIS have project monitoring teams.
- NHIS managers complained of lack of co-operation from the district directors which they considered as very risky to the success of the NHIS project.

- The study further revealed that the following are the risk management factors of NHIS
    - Staff pocketing revenue
    - Staff diverting resources
    - Service providers lukewarm
    - Attitude towards NHIS members
    - Government interference
    - Staff inexperience
    - Inadequate health delivery facilities
    - High cost of operation
    - Delay in receipt of government subvention

- The study further revealed that the following are the risk management factors of MMT
    - Staff diverting resources
    - Delay in bus schedules
    - Bus conductors pocking fares
    - Government interference
    - Senior officials not paying for services
    - Bad debts
    - Poor customer care practices
    - Overloading buses
    - Delaying government funds

- The study revealed that the following are some of the key risk management challenges associated with the executing and implementing the NHIS and MMT projects.
  - Absence of clear-cut risk isolation mechanism
  - Inexperience of risk officers
  - Poor monitoring from supervising ministry
  - Poor risk management culture
  - Only a few people take the center stage in risk management issues.

4.4 Discussion of findings

In a research work of this nature, whatever findings ascertained ought to be discussed. The following therefore are the discussions on the findings: Both Metro Mass Transit (MMTL) project and the National Health insurance scheme (NHIS) are male-dominated working environments. MMT has a male population of 64 percent while NHIS has 60.52 percent, male employees. Traditionally the transport business has been a male preserve venture especially in developing countries like Ghana where one could hardly find a female operator of the taxi, mini commuter buses or intercity coaches. It is, however, difficult to place a finger on the rationale behind the apparent male dominance at the National Health Insurance Scheme. Studies by Aryeetey et al (2002) show that the health sector in Ghana has more female population than the males. This is mainly due to the fact that the nursing job is also dominated by females and considerable proportions of medical doctors are also females. Perhaps one explanation lies in the fact that the Health Insurance project itself is a facilitator and not a provider of the health services. NHIS acts as the 'liaison' between the Ghanaian public and the Health providing institutions such as teaching hospitals, clinics, polyclinics, health centers and health posts scattered throughout the country. Again as a project with definite termination period the females, who are more risk-averse than their males counters parts that are rather exploratory, would want more permanent jobs and therefore might not be enthused at project jobs. It also came to light that 66 percent of NHIS staff are enjoying married life, 18 percent are single while 16 percent are divorced. MMT has 72 percent married employees 15 percent singles and 13 percent divorcee employees. Psychologists Robin and Judge (2007) believe that married people are more focused and stable in their employment decisions than singles and divorcees who turn out to be more susceptible at quitting a job at the slightest opportunity. The two projects can, therefore, be said to have fairly stable employees.

With respect to age, 84 percent of NHIS employees are not more than fifty years while the figure for MMT is 82 percent. This presupposes that these projects have relatively youthful employees who could help activate and achieve the mission statements of their projects. The study uncovered the fact that 87 percent of employees of the NHIS have university and other tertiary institutions qualifications while 70 percent of MMT also possess qualifications from these institutions. This discovery of high quality of manpower has been corroborated by Mensah (2004) who remarked that there has been consideration improvement in the human capital base of the country. With regard service duration 74.5 percent of NHIS officials have been on the project for periods between two to five years while 77 percent of MMT officials have also served the transport project for periods between two to five years. This indicates that the two projects have all enjoyed relatively stable labour force but as to whether this situation is attributable to efficient and effective motivation strategies is a subject for another study. Could it also be that the worsening unemployment situation in developing countries like Ghana leaves one with no alternative but to keep one job even when one is uncomfortable with a particular job? Evaluating the respondents' understanding of what risk management meant precipitated very rewarding disclosures. Approximately 37 percent of NHIS and 44 percent of MMT respondents explained risk management as "identifying risk and minimizing it". This definition was also mentioned in crock ford's (1990) book an introduction to risk management. He further explained that most risk factor cannot easily be eradicated and for that matter minimizing it appears very logical.

A few NHISs respondents (i.e. 16%) and 30.8 percent of MMT respondents looked at risk management as the process of "Assessing risk and controlling it". Chicken (1994) agrees with this definition and stressed the importance of the ability to assess risk within projects. Some respondents 21 percent of NHIS and 10.2 percent of MMT defined risk management as "Trying to accommodate the effects of uncertainty on projects". Crockford (1990) again agrees with this description of risk management and indicates further that accommodating risk sometimes entails restructuring the directions of the project. Twenty-six percent of NHIS respondents and fifteen percent of MMT officials indicated that risk management involves 'dealing with risk at most economic cost'. In discussing his "Top

Ten Reasons why projects fail" Winters (2003) touched on the need to cost conscious in dealing with risk and explained that project managers should exercise circumspection in handling cost associated with risk management.
The study also wanted to assess the knowledge of respondents on risk management strategies. Seventy-three percent NHIS and eighty – four percent of MMT respondents all indicated that risk can be managed by transferring it to another party.

On the strategy of avoiding the risk 92.1 percent NHIS officials and 79.5 percent of MMT respondents explained that it is a potent strategy worth exploiting by project managers. Another strategy mentioned by 81.6 percent of NHIS and 71.8 percent MMT respondents was 'reducing the negative effect of the risk' Hopkin (2010) shares this view of strategizing to management risk by reducing the negative effect of the risk'. Paul Hopkin explains that establishing enviable motivational strategies has a propensity of reducing the negative effect of fund embezzlement by staff. Accepting some or all of the consequences of a particular risk was identified by 84.2 percent of NHIS and 71.8 percent of MMT officials as another useful risk management strategy. Gorrod (2004) argues that accepting some or all of the consequences of a particular risk is a forthright strategy of managing risk in that it helps in designing a road map towards addressing the harmful effects of the particular risk. Although no respondent from either NHIS or MMT answered in the negative to a question as to whether their projects do have risk management policy 48 percent of NHIS respondent indicated that they had no idea whether risk policy existed or not. Thirty – six percent of MMT also had no idea of the existence of risk management policy. Fifty – two percent of NHIS interviewees and sixty-four percent of MMT respondent however answered in the affirmative that they do have risk management policy. Respondents from both MMT and NHIS project disclosed that their risk management policies were unequivocal revenue mobilization, inputs of the cost of operation, government interferences, procurement practices, and environmental friendliness, the culture of repair and maintenance and staff retention. On revenue mobilization, the policy rolls out clearly sets that should be taken to ensure safe custody of all funds. MMT officials mentioned additional measures taken to ensure that the bus conductors and those in charge of hiring services and transmission of money to the bank do not please themselves with project funds. On the cost of operation, respondents explained that adequate measures have been proposed in the policy to guide against cost overrun and other negative practices which turn to hike operating cost.
On government interference, the respondents explained that positive interferences are welcome but negative one ought to be discussed with the government agency involved. Metro Mass Transit mention political party rallies as areas where buses are rented yet no proceeds are received. National Health Insurance also mentioned free services extended to those stricken by abject poverty as areas where government interference pushes them into losing revenue.

Risk policy on procurement lays down the modalities for initiating purchases as well as the process that should be followed in sources materials and equipment to strengthen the direction of the study. MMT officials indicated that a chunk of their inputs is imported especially vehicles, car outer covers, spare parts and in most instances the sector ministry i.e. Road and Transport liaise with the Finance and Economic Planning Ministry to effect payment for the items procured. Some guidelines have also been inculcated in the risk management policies on the culture of repair and maintenance. MMT, for instance, indicated that buses have a routine or scheduled period for maintenance. Maintenance garages have been scattered through to the ten regional capitals of the country where the buses' road worthiness is 'updated'. NHIS officials also mentioned regular maintenance of project vehicles, air conditioners, and other assets.

On the issue of who exactly is in charge of risk management in the various projects, it turned out that employees are not too sure of those in the helm of Affairs. In the case of MMT the respondents 64 percent pointed out a conference of regional managers and top executives meet periodically to discuss strategic issues most of which touch on risk management. Thirty – six percent of MMT officials also mentioned a project management team which ensures that risk factors are isolated and readily addressed. March and Zur (1997) are of the conviction that risk management issues ought to be handled by a clearly defined group or team whose members are knowledgeable enough to cover the menace of most risk factors. Fifty – eight percent NHIS officials also pointed out that a committee within the board of directors has been charged with brainstorming over risk management issues within the health insurance project. The remaining forty-two percent of NHIS respondents indicated that a budget monitoring and control committee sees to the identification of risk factors and prescribe solutions accordingly.

NHIS respondents (55.26%) are of the conviction that their risk management officers are doing a good job because the project is meeting its targets and the beneficiaries seem to be happy while the developing partners are also

increasing their investments in the scheme. With respect to the MMT project, 84.4 percent do not seem to be happy with the future prospects of the transport project. They complain that the projects risk managers are not on top of issues because out of the 400 buses acquired between April 2004 and 2006, Hammah (2009) says as many as 268 (67%) have broken down with 166 of them with serious engine, ditches, gear box, and electrical system challenges. It was therefore not suppressing that the minister of road and transport Mr. Mike Hammah disclosed in the 12 September 2010 issue of the Spectator newspaper that government will launch a full-scale investigation into the MMT project. The public is also getting increasing worried over the delay in the bus services and this adversely affects the revenue base of the project sound risk management practices will obviously help turn the fortune of the project around thereby reversing the gloomy picture painted above. Safo- Mensah (2005) confirmed that delays in the operations of the MMT project are discouraging commuters who have resorted to alternative means of travelling. Hammah (2009) however assures that project's intended beneficiaries that the government was launching a full-scale investigation into the operations of the MMT so as to address its challenges and strategize the direction of the project.

To a question as to whether risk management has been made part of the project 73.5 of NHIS respondents either had no idea or were emphatic of the fact that no such arrangement existed. In the case of MMT as much as 84.6 percent respondents either did not know or mentioned concisely that risk management was not part of their project. The respondent complained that only a few officials were privy to the difficulties facing their projects. The MMT for instance according to Mike Hammah, the transport minister is facing hydra-headed problems while Avinu (2006) also says the "NIHIS is facing problems". Project activists like Gorrod (2004) argues that when the largest segment of the employees are exposed to the challenges and risk factors of the problem the project wins the sympathy of the employees and are often cautions at the activities which invariably helps in improving the repair, maintenance and other cultures of the project.

The study further evaluated the knowledge of respondents on the positive side of risk, that is, some risks have the propensity of generating opportunity. Eight-seven percent of NHIS respondents, as well as 91 percent of MMT respondent, had no idea about the positive aspect of risk factors. The 13% NHIS and 9% MMT respondents who seemed to have an idea of opportunities that could come with risk factors correctly pointed out that in addressing some risk factors 'some good doors were opened which enhanced the image of the project. The MMT official (i.e. 9%) explained that delay in bus schedule resulted in a crisis meeting with the City Authorities and the result is that special bus lanes were in the process of been established solely for the MMT buses so that journeys that 'consumed' one and half hours could now be undertaken in thirty minutes. According to Henk (2009) if these arrangements were eventually put in place most private car owner would be forced to park their cars and patronize the much faster MMT buses to and from their work places.

The study also uncovered the fact that no individuals are put in charge of particular risk factors associated with the two projects. The various team's groups or conferences dilate on the risk factors and bulletins are used to address the menace posed by the risk. Every employee of the organization works towards helping to address identified risk issues. Risk-averse, in the view of the respondents on both projects, is everybody's business and not a few individuals. The study brought to the fore the fact that analysis of risk factors is conducted through a number of avenues. Both projects according to the respondents have teams that are in charge of risk analysis. Some risk factors are also thrown to the domain of the entire staff and opinions are crossed fertilised for a solution to be effected.

Seemingly complex risk factors are given to hired consultants who brainstorm and prescribe solutions to address these risk issues. In some instances, staff durbars are converted to avenues for discussing and analyzing risk factors. Santomero (2003) agrees with some of the methods used in analyzing risk above but emphasized the fact that much as project staff ought to be exposed to the looming risk factor care should be exercised not to prescribe mediocre solutions which could worsen the plight of the project. Anthony Santomero, therefore, advocated for hiring a consultant to buttress the efforts of the local risk management team to ensure effective resolution of risk issues.

Both MMT and NHIS have project monitoring teams which in the case of MMT also double as the Budget monitoring and control committee. The project monitoring team of NHIS, according to Abdul-Majeed (2006) discovers that the district health management teams of the various districts in Ghana were usurping the role of the National Health Insurance Scheme in their districts. According to Yakubu Abdul-Majeed, the district directors of health services accused the National Health Insurance Scheme managers "of assuming the role of auditors and dictating what should be done".

NHIS managers complained of lack of co-operation from the district directors which he considered as very risky to the success of the NHIS project. The NHIS district officers and Ministry of Health District Directors were virtually at each other's throat as to who should run some aspects of the NHIS project. Perhaps with the two groups having the same goal i.e. helping to bring quality health care to the door steps of the average Ghanaian their top brass should organize a round table conference to resolve their various differences. During staff, Half year durbar some lectures, according to the respondents are given on risk management and this often creates the necessaries awareness for them to make meaningful contributions towards risk management issues. Some of the challenges associated with implementing official risk practices include the absence of clear-cut risk isolation mechanism, inexperience of risk officers, poor monitoring from supervising ministry, poor risk management culture and the fact that in most cases only a few people take the center stage in risk management issues.

5. RECOMMENDATIONS

The following recommendations are made by the researcher to the Management of NHIS and MMT for consideration and further implementation.

- ✓ Making risk management part of the projects
- ✓ Early identification of risk factors
- ✓ Capitalizing on the opportunities of risk factors
- ✓ Strategic planning and implementation of risk responses
- ✓ Improvement of risk management cultures
- ✓ More training for risk management officials
- ✓ Minimizing challenges facing government project managers

Making risk management part of the project: It is important for managers of both NHIS and MMT to make serious efforts at making risk management part of the project life. The situation where a few top bosses of the company arrogate to themselves the knowledge of risk issues will certainly not help the projects. This is exceptionally essential in the case of MMT where dishonest practices like staff pocket bus fares and stealing spare parts and outer covers could seriously impair the ability of the project to deliver.

Early identification of risk factors: Delays in bus services which have angered commuters so much so they no longer rely on MMT for their transportation need could have been averted if these risk factors were identified much earlier at the onset of the project. As one of his 10 golden rules for successful management of projects Westland (2007) enjoins all project managers to endeavour to isolate risk factors in good time so as to sustain the interest of the project's patrons. The NHIS was also reported to be delaying in paying service providers especially hospitals, pharmacy shops, and other medical centers this is really negating most of the gains so far made. It is therefore of paramount importance for projects to identify risk factors at the early days of the project.

Capitalizing on the opportunities of risk factors: Although the majority of risk factors seem to influence projects negatively risk factors could also precipitate some outstanding opportunities. Management of project should conduct serious and painstaking research into risk factor and this invariably would stumble on some opportunity for enhancing the revenue base of the project. The NHIS health insurance, for instance, could consider the possibility of involving the quasi-state owned banks to discuss their payment arrangement with service providers. Some credit agreement with those banks will ensure that payments are always on schedule to enhance the smooth operation of the health project. The Metro Mass Transit has also done the spade work by discussing its risk factor i.e. delays in bus scheduling services with the city of Accra authorities and specials lanes are being created for the service on the roads of Accra. It is believed this specialized service will even attract private car owners who will keep their cars at home during the week days and switch over to MMT services.

Strategic planning and implementation of risk responses: It is recommended further that risk management teams should be properly impanelled with knowledgeable people who will strategically plan and implement risk management responses. Discussing risk management issues at staff durbars as practiced by MMT is not a bad idea however this

comes up only twice in a year. A strategic risk management team will obviously be able to isolate risk factors much earlier and prescribe effective solutions to cover any likely harmful effects of the risk factors.

Improvement of risk management cultures

There is a great need for mangers of both NHIS and MMT to work towards the improvement of the risk management cultures within their undertakings. Enhancing work place culture essentially requires knowledge. This presupposes that risk management knowledge should be adequately shared to ensure that projects employees all understand the harmful efforts of most risk factors. Where workers understand that risk factors could jeopardize the very existence of the project they will certainly co-cooperate in any possible way towards minimizing it not eradicating the risk factors.

More training for risk management officials: Risk management officials ought to be well equipped to be able to clearly identify, assess, analyze and prescribe risk mitigation measures. Well trained risk activists will easily identify any associated risk factors which must then be assessed as to their potential severity of loss and to be the probability of occurrence. It is important for well-trained risk officers to periodically re-assess risks that are accepted in ongoing processes, such as MMT and NHIS, as a normal feature of business operations and modify mitigation measures. Risk officers could also advise on the option of transferring risks to an external agency for instance to an insurance company.

Minimizing challenges facing government project managers: The study uncovered some challenges facing government project managers as unclear risk isolation mechanisms, inadequate training, poor monitoring from supervising ministries and uncomplimentary risk management culture. As mentioned above the right training ought to be given to government risk managers in addition to creating the enabling environment for them to perform. Sector ministries should strengthen their supervision by hiring an external consultant who could act as the liaison officers between the ministries and the project directorate.

5.1 Summary

Figures from Ghana statistical services (GSS) 2007 indicated that 41 percent of Ghanaians live on less than the US $11.00 a day. As many as 72 percents of the people of Ghana also live on less than US$2.00. The implication of this startling revelations is that most Ghanaians are unable to adequate access social amenities especially Medicare, education, transport etc. Consequently, the central government has put in place various safety nets with the view to making life a bit more meaningful for the average Ghanaian. Some of the social projects are the National Health Insurance Scheme and the Metro Mass Transit (MMT) projects. These two projects have travelled six out of their project years nevertheless the public seems to receive the benefit of these projects with mixed feelings. While the MMT project is criticized for the delays in its scheduling resulting from the breakdown of over 268 out of its 400 fleets of buses others are not happy with the NHIS because payment to service providers such as clinics, hospitals etc are delayed and therefore NHIS members are denied access to healthcare at these medical facilities.

One, therefore, wonders whether risk factors associated with these projects are properly identified, analyze apportioned and addressed. The study, therefore, took a critical examination of the risk management challenges associated with government project execution in Ghana with special reference to the National Health Insurance Scheme and the Metro Mass Transit project. The objectives of the project included investigating the effectiveness of the risk management culture of government projects, evaluating the capacity of officials handling government projects, examining the challenges faced by government project managers and making appropriate recommendations to address any deficiencies.

In conducting the study questionnaires were administered to senior officials of the marketing, finance, procurement and the executive wings of both projects. Simple random sampling techniques and purposive sampling helped in picking up the needed sample of 40 from each of the two projects. It came out clearly that the project employees have a very fair idea of what risk management entails. Some of the definitions given for risk management included identifying risk and controlling it, trying to accommodate the effects of uncertainty on projects and dealing with risk at a most economic cost. About 48 percent of NHIS officials did not know whether the project had risk management policy or not while 64 percent of MMT had full knowledge of the existence of a risk management policy.

It came to light the risk management policies provided a guideline on how to safe guard revenue mobilization, the modalities for maintaining if not reduce cost of operation, the mode of dealing with government interference, how to conduct economic procurement as well as guidelines on the culture of maintenance.

The study also uncovered the fact that with the Metro Mass Transit project, risk management issues are discussed at a conference of regional managers and top executives besides a project management team which takes charge of risk issues. With respect to NHIS, risk management issues are the responsibilities of a committee within the board of directors as well as a budget monitoring and control committee. Whereas NHIS respondents believe that their risk management personnel are on top of issues, respondents from MMT indicated that there is everything wrong with the skills of their risk management team. They questioned why 268 out of their 400 fleets of buses procured between 2004 and 2006 should break down with serious damages to the engine, gear box, electrical systems etc. NHIS officials, on the other hand, appeared to be happy with their projects risk management officials because the NHIS is meeting its targets and the stakeholders are contemplating increasing their investments in the project.

The respondents were unanimous that their managements have not made risk management part of their projects. They further explained risk management issues in most cases are the domain of a few senior officials and even then no particular person is charged with the resolution of particular kind of risk. Twice a year during staff durbars some risk issues are raised and some lectures are also given to create the awareness of risk management issues. Such durbar/training sessions are often helpful since the staff gains good knowledge on risk issue which helps them to handle their schedules properly. Majority of respondents 87% for NHIS and 91% for MMT did not know that risk management could precipitate some opportunities. The few (13% for NHIS and 9% for MMT) related very convincing experiences in which their projects capitalized on the golden doors opened by risk management opportunities. Project management teams with MMT and NHIS to a large extent also double as internal audit and control committees. Challenges mentioned which disrupt the implementation of official risk management practices include poor risk isolation mechanisms, poor skills of risk management, personnel, poor supervision from sector ministry and uncomplimentary risk management culture.

5.2 Conclusions

Base on the findings made and the discussions thereto, the following conclusions can be safely drawn.

i. Government risk management officials are not well equipped towards meeting the risk management aspirations of their projects

ii. Government projects have risk management policies which display guidelines for regulating the safe custody of revenue mobilized, operating cost, procurement practices, financial disbursements, repairs and maintenance culture and the general well being of the projects.

iii. There seems to be no influence whatsoever of external donor agencies over government risk managing policies however, training and workshops are often sponsored by external donors to sharpen the risk management faculties of government officials.

iv. Government risk management officials have a very fair knowledge of risk management however they do not risk management specialist.

v. Project managers report on their risk management activities to the sector ministries for assessment and advice on the way forward.

vi. Adequate funding, vehicles, equipment, boards of directors, guidelines on risk management, clearly defined organizational structural are all logistics that the central government has put in place to maintain projects like MMT and NHIS.

vii. Challenges associated with implementing official risk management policies include blurred risk isolation mechanisms, inadequate training of risk management personnel, poor risk management culture and inadequate logistics to pursue risk management issues.

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