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Relevance of Practicable Methods to Deal with Risks in Project Management

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Abstract

Risks have a variety of causes and they follow a pattern in relation to the life cycle of a project. It is evident from observations that risks are more during the initial stages of the project and less during the final stages, but similar rationale cannot be thought about in the case of cost, which has been found to be the reverse. The proposed research work has the aim of analyzing the impact of risk management in projects. Review of literature indicates that the aspect of risk management is crucial in the field of project management. Studies carried out on the root causes failure of a project leads to factors such as lack of attention given to mitigation of risks. A descriptive research methodology is adopted. In the past such a correlation has not been attempted realistically, thus it was found that such a study would be not only enriching and useful but also interesting. The findings will give an insight on to the relevance of practicable methods to deal with risks in project management not only at the industry level but also at global operations level and may serve as input in improving, ensuring efficiency in business methods and support further research on the subject.

Keywords: Project Management, Efficiency, Financial Stability, Risk Management, Global Operations

1. Introduction

A project when planned methodically is expected to provide favourable outcomes, but many a times that may be too theoretical an assumption, hence it should be natural for a project manager to consider that any project during its life cycle will be associated with uncertainties which can be an opportunity if they are supporting like online education and covid lockdown, or inhibiting, resulting in risks. Like any other activity a project is also infested with chances of risks, which may be with regards to time, manpower, funding, complexity of the project, political considerations and foreign exchange volatility. Hence it is up to the project manager to identify the overall risk exposure of a project. It is likely that when certain risks are not attended to in a time bound manner, the damage spreads to other areas and this may have an impact on the whole project leading to premature closure or termination of the project. As evident the chances of risks are more in the initial stages of the project rather than during the later stages. But when the risks occur at a later stage in the life cycle of the project, the project manager would find that it will be costlier to overcome. It is also true that some risks cannot be anticipated and impromptu resolution is necessary, for which the planning should incorporate flexibility [1]. Risk management is a proactive step which involves developing planned responses to meet unfavorable situations. Developing a project risk breakdown structure is an excellent tool for identifying the risk whether it is technical, external or organizational.

Risk reduction can be by way of transferring, sharing or enlarging. In transferring, a particular activity which is appreciated to be risk prone is out sourced [2]. Sharing risk is undertaken by involving partnerships. Risks can also be reduced by spreading the risks among partners and enlarging the sphere of involvement. Like every other aspects of management risks related to a project also follows the Pareto principle or 80-20 principle [3]. Hence it would be prudent for the project leader to make a categorization in this regard and tackle the risk as per priority in a cost effective manner. Those in the highest risk prone category are required to be tackled first so that compounding or collateral effect is removed.

It has been found that majority of the projects do not undertake risk management. Risk occurrence is more in engineering and construction field compared to IT or telecommunication sector [4]. Risk is different from bottlenecks because the former has an effect on the success of the overall project whereas the latter is a temporary

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phenomenon. Considering the impediments, these risks can cause on the success of the project, risk management is a good investment. Fall back plans are necessary for risks that have high impact and potential danger to the overall outcome [5]. During the planning stage the team selected for the project should give adequate time which is necessary for brainstorming on potential risk areas and methods to overcome them [6]. There are many tools available which includes simulation methods. Responding to the risk is after all a satisfying feeling for the project team.

Rest of the paper is organized as follows, Section 1 contains introduction of risks related to project management, Section 2 contains analysis of published related works on the topic, Section 3 contains material and method of the research work, Section 4 Bridgeman's dimensional analysis relating to risk management in projects, risk assessment matrix the probability of the event, correlation of risk probability and life cycle of a project, risk mitigation approaches, foreign exchange exposure, and recommendations, Section 5 concludes research work with future directions.

2. Related Works

Douglas W Hubbard, (2020), The Failure of Risk Management, Wiley's [6]. This book is the latest and has been written keeping the decision makers in mind. The book has a view on the fast changing world. Events such as natural disasters, data breaches have been dealt in detail. Sam L savage, (2020), The flaw averages, Amazon. This book typically results when someone plugs a single number into a spreadsheet to represent an uncertain future quantity. Savage finishes the book with a discussion of the emerging field of Probability Management, which cures this problem through a new technology that can pack thousands of numbers into a single spreadsheet cell [20]. Norman Marks, (2020), World class Risk management, Amazon. This book considers key questions and provides his insights, focusing on the need to make the management of risk an important ingredient in decision-making and running of the business. He considers not only how risk relates to objective and strategy-setting, but discusses each activity from identifying to treating risk – as an integral part of day-to-day management rather than a separate, periodic exercise. An analysis carried out reveal that quite a lot of work has been carried out on this subject [16]. (Digital content marketing for Organisations as buyers, 2014) analyses utilization of digital marketing for the business sinecures in Serbia. (Bakhtieva, 2017) brings out that touch points have increased extra significance by yielding clientl oyalty [3]. (Schiele, 2018) this article vituperates how marketing students can use the variegated application that address the issues of target consumers [21]. (Negoita, 2018) analyses the level of utilization of digital marketing by organizations in Bucharest Romania [15].

(Kopenkoskey, 2012) inspects inside and outside top-quality digital screens and facial acknowledgment programming that Michigan-based Curtis Cleaners is implementing to teach individuals about the laundry business [9]. (Joanta, 2016) brings out that marketing techniques have additionally changed. [8](Arni,2017) implodes that digital marketing is connecting everybody's life from multiple points of view [2]. (Musova, 2018) Digital promoting tools turgid customer purchasing [13](D Lakshmanan & S Basariya, 2017) brings out transitory changes over the last few years. (Yiyi Li, Ying Xe, 2020), this study empirically analyses the impact of visual content on social media engagement using data sets of social media postings. (Geetika Jain, Sapna Rakesh, 2018) gives marketers in-depth models that help them understand the various aspects that influence consumers' decision to buy after watching internet video advertisements. In the book Fundamentals of Project management, Amacom, the author has made the latest book in line with PMBOK (Heagney, 2019). Topics includes stakeholder management, procurement management etc. It is considered as a guide to plan and execute timely projects. In the book Project management, Viva Books, the author deliberates on successful implementation of projects (Haynes, 2012). The book Project management case studies, Amazon covers case studies from important business like Airbus, Motorola, Disney, Airbus etc. The aim is to include these cases so as to provide the reader a unique opportunity to experience project management at highest level (Kerzner, 2020). Main attention of the author in the book Making Things Happen, Amazon is on projects in software industry. He translates the experience gained in working with IT companies. The guiding aspect of the book is on good project management. The book has some practical illustrations to include topics such as 'what to do when things go wrong' (Berkun, 2020). Katherine Koster in the book titled 'International Project Management' concentrates on the cross-cultural management and its peculiarities in the context of international project management. Thereafter the study is linked to the tools and techniques of project management in the global context (Koster, 2015). Subhdeep Dasgupta in his book titled 'The effect of Globalization in Project Management' dwells on the changes in project management due to internet and technological revolution. Main topic under discussion in the book is effect of global culture on various facets of project management. In the book Management Principles a chapter has been dedicated to Cross Cultural lessons which validates on the theory of relationship between culture, societal, organizational and leadership effectiveness (Dasgupta, 2018). Harold Kerzner in his book Project Management makes a study on Japanese management techniques such as Taguchi method and TQM, globalization and cutting-edge technologies. PMI

global insight blog titled 'The effect on PPPM community' analyses the project management from the point of technological challenges and virtual leadership. Case study titled Issues in Project management studies on the impact of internet on project management (Kerzner, 2020). In Administration of Construction Contracts, Notion Press Media Ltd the author addresses large value and complex contracts in the light of globalization and increased regulations. These along with change in technologies as per the author have rendered administration of contract difficult. He desires that undue control and rigid standards should be avoided in contracts (Srivastava, 2015). Handbook on Project reports, Aggarwal Law House is a practical guide for entrepreneurs, project consultants, bankers and operations managers (RK Garg, 2023). In Drafting Commercial Contracts, Oak Bridge Publications, the writes about key aspects to be considered while in drafting commercial agreements. New chapters on e-contracts and intellectual properties have been included (Verma, 2020).

3. Material and Method

Descriptive Research has been used considering the various facets of human involvement in the planning and executing of projects. Here the characteristics of risk fundamentals are identified and analyzed from the point of view of project management. In descriptive research the process does not answer questions about how/why/when the characteristics occurred but describe the features of the system under analysis. Different modes of project operations include part contracting or subcontracting or specific equipment contracting. Project in the form of foreign governmental aid to developing or underdeveloped countries sourcing through direct investment are also prevalent. Certain other issues come up in managing operations. These are make or buy, international standardization of production facilities, robotics, and strategic role of foreign plants, internationalization of research and development, and international quality standards. Technology transfer involves sharing skill amongst institutions to ensure that such facilities are available to wider range of users who can further develop and exploit the technology in to new infrastructural, technological or software projects. Industries or establishments under take this process because they would be gaining from selling the technology, location or logistics advantage. It may also be to overcome certain limitations in the home country or exploit a superior capital market. Technology transfer creates leverage business environment. This research paper aims at analyzing relevance of practicable methods to deal with risks in project management, with the main objectives of analyzing project management from the point of; challenges and risks, procedural changes required to be understood in projects, legal provisions which would be important in a global environment, impact of foreign exchange exposure in global project management

4. Result and Discussion

Risks are possible impediments which can be in the form of challenges to the smooth progress or loss on account of delay in closure of a project or as a result of injury. In the context of projects risk management involves understanding prospective problems in the life cycle of the project [8]. Risk management is timely analysis of risks, understanding its intensity and how to overcome them by timely involvement. A risk management plan goes in to assessing the probability of risk in each activity, the impact such an event has on the execution of the project. These two factors together form the overall exposure of a project [9]. It can be mathematically put down as;

$$Overallexposure = Probability \times Impact$$

Risks in a project manifests in various forms, scale and time. Majority of the risks occur during the inception and planning stage but then these have lesser financial outlay whereas those during the execution stage are less but costlier [10]. In addition to risks associated with project implementation there would be risks emerging in other forms. These may be by technology obsolescence. It may be that due to development of an alternate technology, in certain cases delaying in completion of a project may result in making the competitor bringing out a product earlier and also when confidential characteristics of the project objective is leaked out like the theme of a movie script [11]. These events can result in to a market risks as an outcome of technology risk. Apart from this which has a positive correlation there would always be the risk from the financial angle, which would be in the form of realization of the capital utilization with the project objectives or adequacy of the capital spending on a certain project or necessity of spending the amount in pursuit of an objective. It is possible that in an infrastructural project there can be many forms of risk as enumerated. There can be a level playing ground incase certain parameters identified to visualize or anticipate risks in a project by giving relative importance for factors [12]. As matter of fact it may be desirable to use a scientific method for such an evaluation. Suitable in this context would be the dimensional analysis. It is clear that some costs are not quantifiable, so in such cases their merits and demerits are compared by Bridgeman's dimensional analysis [13]. Here cost ratios of each factor is computed giving approximate weightage by means of an index to which the cost ratios are raised and then these weighted ratios are made to reach a figure representing relative merits of each activity. If the ratio is greater than another plan of executing the project including the objective, then the better combination is preferred over the lesser one. This can be explained with the help of an example. Let us assume that the different costs associated with strategy

A and B are denoted as C1x, C2x, C3x, C4x, C5x, C6x, C7x, C8x , C9x, C10x, C11x, and C1y, C2y, C3y, C4y, C5y, C6y, C7y, C8y, C9y, C10y, C11y. The weight ages given to the items are denoted as W1, W2, W3, W4, W5, W6, W7, W8, W9, W10, and W11. Then the merit ratio of strategy A and B is denoted as equal to (=)$[(C1x \div C1y)^{W1}] \times [(C2x \div C2y)^{W2}] \times [(C3x \div C3y)^{W3}] \times [(C4x \div C4y)^{W4}] \times [(C5x \div C5y)^{W5}] \times [(C6x \div C6y)^{W6}] \times [(C7x \div C7y)^{W7}] \times [(C8x \div C8y)^{W8} \times [(C9x \div C9y)^{W9}] \times [(C10x \div C10y)^{W10}] \times [(C11x \div C11y)^{W11}$. To understand it a bit more clearly let us say that the cost factor of strategy A is 30, 50,60,90, 110,130, 150, 170, 160, 210 and that of site Y is 30, 50, 60, 90, 110,130, 150, 170, 160, 180 and the weight ages to the factors be 19, 16, 15, 10, 9, 9, 9, 9, 6, 5. Then merit ratio of A over B is$[(30 \div 30)19 \times (50 \div 50)^{16} \times (60 \div 60)^{15} \times (90 \div 90)^{10} \times (110 \div 110)9 \times (130 \div 130)^{9} \times (150 \div 150)^{9} \times (170 \div 170)^{9} \times (2 \div 1.6)2 \times (2.1 \div 1.8)^{2}]$ which is = 3.048 a figure greater than 1. That means strategy A is better strategy B. The merit of this method is the inclusiveness of both tangible and intangible factors to arrive at a figurative value to decide on the strategy to be adopted. For identifying these two factors there are various tools available. Some of these are scenario analysis, simulation, PERT [14]. The 80-20 rule applies in the case of risks related to project. Hence probability and cost are important factors to be kept in mind during the analysis [15]. Even though it has been found that frequency of risks are more during the inception and planning rather than execution and closure stage, the cost associated with risk is also a consideration while prioritizing the attention accorded to tackle these risks. This concept can be understood with the help of a histogram Figure 1 and matrix Figure 2.

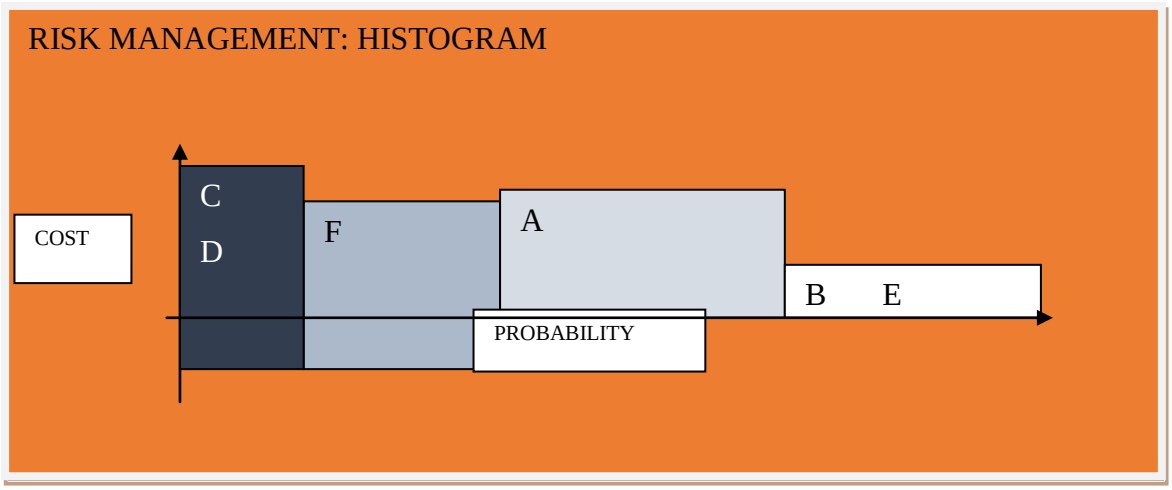

Figure 1: Histogram showing 80-20 rule for risk Management

In order to work out a risk assessment matrix the probability of the event is taken on the x-axis and cost of the y-axis. As given in the figure 2, the activities A, B, C, D, E are symbolic and represents two factors cost and probability. A, B, E are less costly compared to C, D, F and B, E, F have less probability of occurrence compared to A, C, D. Hence C, D falls in the vulnerable category having high probability and cost and B, E

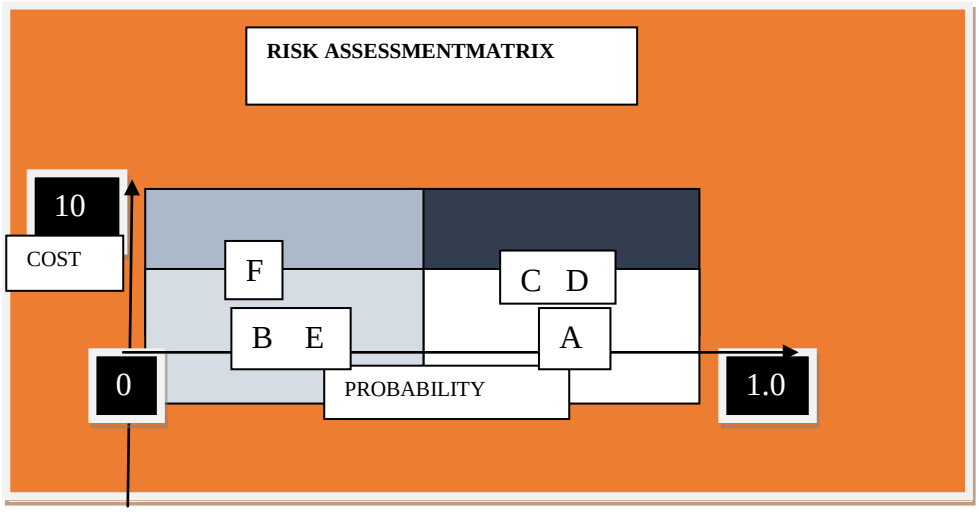

Figure 2: Risk assessment matrix of the probability of the event

the least vulnerable activities from the point of view of execution of project. So the activities C, D are critical to the completion duration of the activity which alone decides the criticality of the project but also the risk. Hence while considering crashing of an activity it can be said that direct and indirect costs having been already taken care of the probability of risk is a major factor [16]. Those in the fourth quadrant indicating high probability or following the 80-20 rule needs prime attention followed by second and third, leaving first to be tackled at relatively less urgency.At this point it may be prudent to introduce another inference linking to risk analysis and that is project life cycle [17]. As it has been made amply clear that existence of risk is high during the inception and planning stage, moderate during execution stage and least during closure stage we may find that correct analysis can bring in minimum risk during the execution stage by extrapolating the three factors, which are cost, probability and stage of life cycle. It is possible to correlate risk probability and life cycle of a project. The correlation is negative, whereas the stages advance from inception to closure the probability of occurrence of a risk reduces butthe cost of preventing the occurrence of a risk increases as the life cycle progresses [18]. In the figure 3 a schematic diagram on risk analysis with stages of project path is shown. As shown in the figure 3 the point of intersection of the two curves which are probability and cost, occurs during the execution phase of project. The inference is that a stage of high probability and high cost risk does not appear to be a reality, but it follows the Pareto principle that few of the risks which occur during the closure stage of the project have prohibitive cost and needs closer attention than the risks during the inception and planning stage [19]. So it should be incumbent on the project manager and the champions to consider the relative importance of risks that occur after the intersection of the probability and cost curve. It is possible for a manager to visualize each risk as a potential opportunity rather than an insurmountable obstacle. With that as the foundation risk management aims at reducing the negative impact of risk on the successful completion of the project and increasing the prospective opportunities [20].

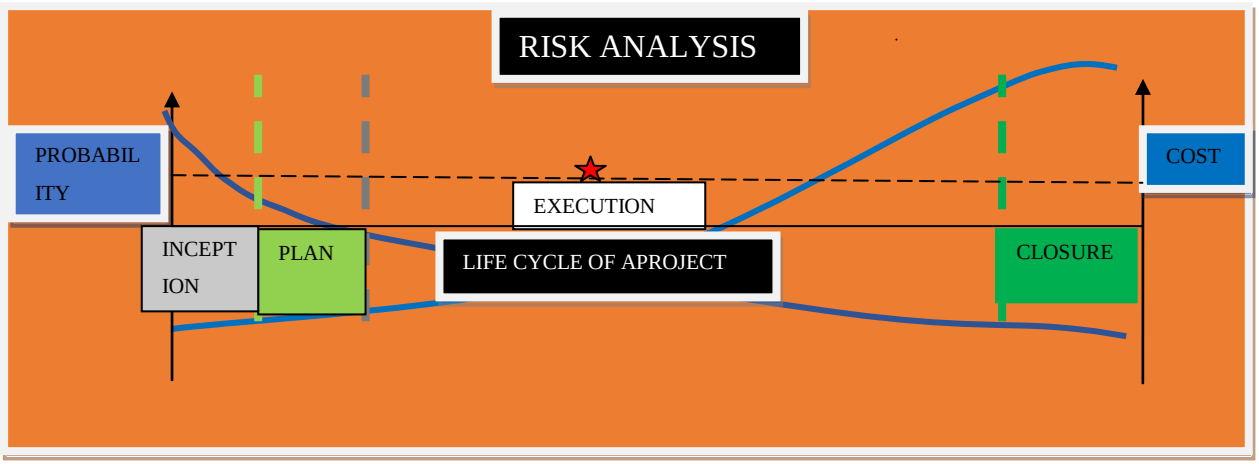

Figure 3: Quantitative analysis involves measuring the risks

For achieving this there are certain elements to be incorporated, which are; planning, identification, analysis, response management and controlling activities. At the outset the project manager should come out clearly to his team as to what approach is to be adopted on identifying a risk. Should they be risk neutral, averse or seeking? After having made a decision on this account, the team should proceed to identify possible risk at each stage of the project, it costs and potential payoffs. This can be done by qualitative as well as quantitative analysis. Qualitative analysis involves prioritizing risk [7] [8]. Along with the importance in cost the objective is to analyze the impact risk has on the project completion. Quantitative analysis involves measuring the risks as shown in Figure 1, 2. Having identified the risk and undertaken analysis the next step is to carry out SWOT analysis to meet the risks by reducing its effect as an impediment to the project facilitation and enhance it as an opportunity for the potential augmentation of the project work. The next step of risk monitoring and control is essentially the most important step in risk management where the effectiveness of all the above mentioned activities is validated. An effective risk management provides a risk management plan. With that being the aim of the project risk management plan the key personalities to be included are the project manager, project sponsor and project sponsors. There are certain pertinent questions which are deliberated while making a risk management plan. Risk has a vital and important relation with the objectives of the project. Hence the main consideration would be the risk analysis keeping the project objectives in mind [11]. The primary decision involved is to identify whether taking a risk or avoiding the risk in advantageous from the objective point of the project and the concurring opinion of the organization sponsoring the project or project manager in case it is a project which is initiated through a sponsor and project champions. Having addressed these aspects the next important look out is to identify the existence of specific risk and understand the locus of control. Once the risks are thus specified,

weighing up is done on steps planned for lessening of risks [5]. The outcome of such an analysis will lead on to the method of mitigating the risk. There are various risk mitigation approaches and generally four types of mitigation strategies used which are; avoidance, acceptance, transference and limitation. Whenever risks involve high probability of financial loss and damage, it would be considered that avoidance may be the correct strategy [8]. Risks that may have low probability for occurrence but high financial impact are ideally transferred or shared by forming a partnership or outsourcing. Purchasing insurance is one of the ways. There are many such risks which has high financial impact involved in mitigation, such risks are if at all possible accepted and carefully monitored. Overall the most preferred strategy adopted is risk limitation by taking some type of action to address a perceived risk and control the exposure. Practically risk limitation involves careful balancing act between acceptance of some risks and avoidance of others. Having identified the risk management strategy the next step is to earmark a professional for implementing the risk management plan [21]. As there various approaches for mitigating the risks the project manager would be required to take a call on when to adopt a particular approach. This is especially applicable when the project is either complex or of longer duration. Finally the risk mitigation strategy is linked to the resources earmarked for its implementation. Having identified these key determinants for making a risk management plan, the project leader and his team should have a sitting or as many sittings required with the organization involved in the project or the project sponsor to finalize their approach to risk mitigation [4]. When these two namely; the project sponsor's approach and that which has been conceived by the team are rationalized, a risk management plan can be given final shape. Yet there may be occasions during the various stages of the project life cycle for the team to review the plan taking time and resources in to consideration. This in effect will lead on to set piece action which the team would adopt on identifying the risk. Such a plan would definitely result in saving time, money and other resources [21]. There would be certain risks which will have high impact on the project as a whole. For mitigating these risks the team should develop fallback plans. As each of these plans whether it is meeting a contingency or attending to a high impact risk, involve financial outlay, it would be prudent for the organization or the sponsor to earmark funds for such unforeseen event which would fall in to the overall cost of the project. Conditions associated with planning as regards as developing risk conditions include improper organizational structure, grouping, span of control and flexibility [9]. There may be at times that the objective of the project is kept vague. Another important facet of planning is time allocation and consideration for crashing or buffering. Financial planning is also a source of risk incase due deliberation is undertaken, including the maintenance of reserves for unforeseen contingencies. As regards resource allocation key issues would develop in the human resource field, contract management and finance. In human resource management allocation, poor organizational set up, chain of command, span of control are potential dangers which initiate risks [10]. In addition to this team selected is also important so that they do not develop a conflict orientation which works against the project finalization. Errors in cost estimation are often found to hamper the progress of the project and certain projects have been prematurely terminated owing to this factor [22]. Management of the team is a very important issue which the project leader should take notice of. A complicated and difficult project may require continuous motivation. There may be instance where due to unforeseen eventualities setbacks may come up where balancing act is required from the project manager. These critical incidents when deliberated in a favourable manner can bring up the team spirit or break the team homogeneity. Any event in the business sector comes with an important tag, which is quality; a meeting of perception with performance. A key facet is understanding the task or job in its entirety [9]. Many a times there would be grey areas in defining and enumerating scope of the project as well as making technical parameters transparent. This would later on result in an outcome which is not compatible with the desired quality. Acceptance sampling while undertaking procurement and vendor inventory management are important tool which can assist in quality control. There may be instances when projects are assumed to be without risk and the team fails to plan for risk and its mitigation, which would eventually lead to no-go situations or develop in to prohibitive cost [6]. It would be prudent for the project manager, project facilitators, champions and the team leaders to understand these aspects for facilitating successful completion of the project. For identifying, the risk manager or person who has been entrusted with the responsibility of risk management should have access to the project narrative, planning documents, historical information on past projects of similar nature. Thereafter validate the RBS with the planning team, and identify the level of uncertainty of risks which may be no uncertainty or those with identifiable uncertainty or those risks which are out of the box [15]. Having developed all these details the risk manager should organize a meeting and using various planning tools available dedicates the focus primarily on to the risks. It should be programmed as a second nature to record each and every risk as on occurrence in a risk log. Then categorize risks as per functional area and then classify them on to the four groups identified in the RBS. Along with these details include description of the risk, it severity, detection and impact. In the log the details such as time and date as well as the originator can also be mentioned so as to gain firsthand knowledge in case of a recurrence of the same or similar risk in the same project or in another project. Decision tree is a possible variation of flow diagram where each risk is schematically represented with variable options and consequences available to the decision maker for arriving at appropriate fallback plans [13]. A typical decision tree may be used

for capacity planning and related decision but nevertheless can be effectively employed in giving consideration for risks of greater concern. It is similar to a tree diagram and hence derives the name form it. In this type of diagram, there are nodes and branches. Little bit different from networking diagram here there are two types of nodes; circular nodes depicting chance events and square nodes indicating decision points. Likewise the branches leaving from circular nodes are chance events and those emerging from square nodes are options available [11]. While making the diagram it moves from left to right but when it comes to analyzing the chart is read from right to left. While deciding on decision tree diagrams it is more useful for analyzing options available involving sequential conclusions. Various flow diagrams which can be used are as given figure 4.

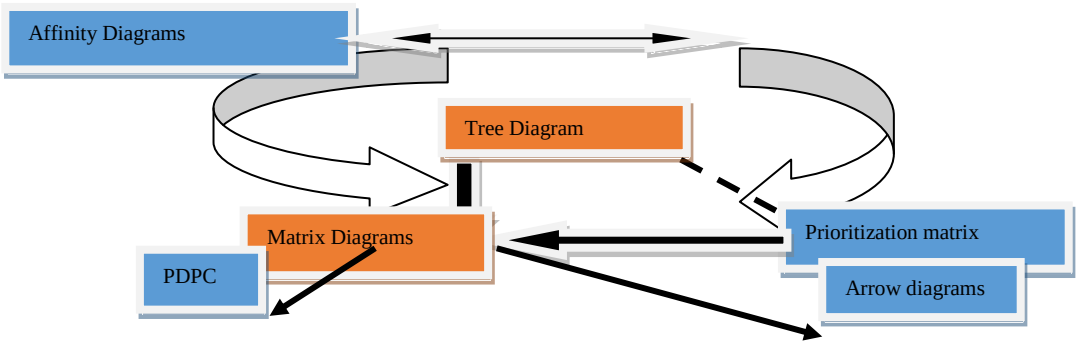

Figure 4: System flow diagram for Qualitative Analysis

During risk response planning the team would be interested in making a response plan based on the company or project sponsor's mitigation plan [6]. Risk management becomes that much simpler with the deliberate planning but that does not absolve the team from undertaking constant monitoring to keep up to date data on the progress of the risk management. There may be instances when the risk response may be better undertaken by circumventing the risk, like the case of tunneling done through the Konkan railway route. Such a response maybe considered as one such contingency plan [14]. A good monitoring and control plan would result in timely mitigation of risk without heavy involvement of time, resources and finance. In case the result is not contract violation, a proposal for modification of project may be sought. Monitoring would be without purpose in case control is not exercised on the risk response, which is done primarily to ensure that the risk planning that7 has been made is put in to effective during the stages of the project lifecycle as and when the contemplated risk appears or reappears [21]. When working out on contingency plans for risk mitigation it would be ideal to involve the sponsor. Software's which assist in risk control are available not only for IT related projects but also for other projects. Companies specializing in infrastructure or commercial or technical or communication project may not restrict to the limited avenues available in the country but also explore opportunities beyond its boundaries. In such cases other than these aspects an important factor is that such an engagement is very sensitive to fluctuations in the currency market. Some of the currencies are relative stable, whereas there are others which are quite volatile [23]. Recent examples of highly volatile currencies have been of Lebanon and Mexico. Similar is the case in some of the African countries. Foreign exchange exposure is an indicator of the prospective change for a firm's profitability, net cash flow, and market value because of the change in exchange rates. How does the variation in exchange rate affect a firm? This can be on three counts; which are operating exposure, transaction exposure and translation exposure. Operating exposure, deals with value of a firm on account of future operating cash inflows. Both transaction exposure and operating exposure exist because of unexpected changes in future cash flows. Tax outcome of foreign exchange exposures includes creating realized foreign exchange gains and deducting realized foreign exchange losses for income tax purposes. Some of the firms attempt to mitigate the foreign exchange exposure through hedging. In a volatile foreign currency market, it is prudent to consider the impact of operating and transaction exposure [18]. Rather than adopting a wait and watch policy, it is accepted that a better step in this direction would be to anticipate and influence the effect of unexpected changes in exchange rates on a firm's future cash flows.How can this be undertaken? For this it is suggestive for management to undertake diversification of operating and financing underpinning. After doing so in case it is required the firm should go in for review if found unsatisfactory and change the policies taken until that time. Such a strategy does not require management to predict disequilibrium but on the other hand recognize it when it occurs. As a result the management of a firm which is branched out internationally can promptly recognize and address the cause of such disequilibrium. Recognizing a temporary change in worldwide competitive conditions permits management to make changes in operating strategies. The case is not similar for domestic firms. They do not have such an option for diversification and as a result may have to absorb the full impact of foreign exchange operating exposure. Temporary deviations which are from the Fischer effect are automatically taken care of in case the sources of financing are diversified.

While addressing the issue of operating exposure we were quite clear that a global firm is subject to foreign exchange exposure. Because of volatility of exchange rates there is a likelihood of change for a firm's profitability, net cash flow, and market value because of a change in exchange rates. As it stands it is a cause of concern for finance manager [20]. So it is up to him to address this situation by measuring the extent of foreign exchange exposure, and adopt measures to stabilize the impact of such currency fluctuations on the profitability, net cash flow, and market value of the firm. In transaction exposure obligations or agreements are related to a period before the currency fluctuations occurred, but fructified or settled subsequently (after the occurrence of foreign exchange variation). The exchange rate changes cause the transaction exposure for existing obligations, which start in the past and end in the future. Foreign exchange exposure is one of the financial challenges faced by global companies [20]. Other than that these companies encounter variety challenges in the form of interest rates, and commodity prices. These fluctuations when they occur at a later time point would cause translation exposure. Some of the firms attempt to arrange the foreign exchange exposure through hedging. Technically speaking hedging involves taking a position for the future. It is a form of forward contract that will change in value of the present position, which can be in the form of cash flow, asset or contract. It is a defensive and protective test because of which not only loss is prevented but also gains. Still firms undertake this for increasing the present value of the firm [9]. As per financial theories present value of a firm is all expected future cash flows, hence for high risk expected cash flows, higher discount rates are used for calculating present value. Hence by hedging a lower present value is generated. Accordingly hedging the firm reduces the risk of such an exposure due to challenges in the form of interest rates, exchange rates and commodity prices. This then translates in to using lower discount rate for arriving at the present value of the firm's expected future cash flows.

Conclusion and Future Scope

Risks have cost potential if left unattended, but then that also depends upon the impact of risk on a particular event. Evaluation of risk is undertaken through risk analysis, which include qualitative and quantitative analysis. During the project life cycles risks are bound to occur but then it depends upon the mitigation strategy of the management and project sponsor to respond to the challenges put up by the risks. Some of the risks become opportunities and in that way it's beneficial for the organization. A project management team may respond to a risk by sharing, transferring or enlarging. It has been found that risks in general whether it is a small or a large project follow the Pareto principle and hence the risk response contingency financial provision can be made keeping this principle in mind.

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Conflict of Interest

Nil

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