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Audit Risk Assessment for the Maturity of Project Management

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Abstract: In order to make an impactful changes and choices in our company or organization. Therefore we will try to contribute to the project management body of knowledge by addressing the following research question: How can we methodically create Audit Risk Assement (ARA) to improve Project Management Maturity in a projects? Through the analysis of the historical data. The method that we used in this paper is a literature study. We looking from any kind of relevant source of information, such as books, journals, and articles from a validated site. Like google scholars, emerald publishing, researchgate, and etc. We found and proposed a method called The Audit Quality Maturity Model -Version 1.0 (AQMM v1.0) by Institute of Chartered Accountants of India (ICAI). The method that we propose has a benefit of making Audit firms able to self-evaluate their current level of Audit Maturity, identify areas where competencies are good or lacking and then develop a road map for upgrading to a higher level of maturity.

Keywords: Project Maturity Model, Audit Risk Assessment, Accounting, Project Management.

INTRODUCTION

We need to make an impactful changes and choices in our company or organization. But how do we determine which one more impactful than others? Project Management Maturity Models (PMMMs), which are produced by experts in Project Management (PM), are a means of enabling us to assess how project leaders manage the projects for which they are responsible [1]. PM literature also shows cases where high maturity levels in PM reduce projects' performance failure, in particular cost overruns, which are a type of project risk. However, authors question the significance of this generic "direct cause-to-effectinference" between PMM and achievement of operational performance. There are several reasons that explain their doubt: most PMMMs are based more on lists of project domains, ill-defined categories, criteria, and practices rather than on models with clear, abstract, and concise backgrounds; their terms are not standardized, some PM categories are not integrated, and they lack usability, with too many items that need to be evaluated during a PMM audit. Our objective is to see if it possible to overcome this problem through audit risk assesment. This general theory of knowledge conceives of probability as a means to weigh beliefs that one has about a generic direct cause, and to compare these beliefs with empirical materials, e.g. collected data from databases. On the basis of the general ideas indicated in the previous paragraph, we will try to contribute to the project management body of knowledge by addressing the following research question: How can we methodically create Audit Risk Assement (ARA) to improve Project Management Maturity in a projects? Through the analysis of the historical data.

1. LITERATURE REVIEW

2.1. Project Management Maturity

Webster [3, p. 617] defines ''mature'' as being ripe or having reached the state of full natural or maximum development. Maturity is the quality or state of being mature. If we apply the concept of maturity to an organisation it might refer to a state where the organisation is in a perfect condition to achieve its objectives. Project maturity would then mean that the organisation is perfectly conditioned to deal with its projects. In the real world we will not find the fully matured organisation; no one has reached the stage of maximum development and no one will. Therefore it makes sense to talk about a certain degree of maturity and make an effort to measure or characterise the maturity of the organisation.

Measuring maturity will perhaps always be more subjective than objective. Some of the most important works on project maturity seems to focus primarily on what organisations and project people are doing operationally. To us this appears as a rather narrow interpretation of what maturity should mean. Skulmoski however, refers to Isabelle Saures, who explains organisational project maturity as the organisation's receptivity to project management. This view extends ''project maturity'' from focusing predominantly on action. Building on this proposition, Skulmoski advocates a framework where competence and maturity are knitted together in order to increase project success. Competence is considered to be a combination of related knowledge, skills, and attitudes that influences performances.

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The concept of process maturity was born in the Total Quality Management movement, where the application of statistical process control (SPC) techniques showed that improving the maturity of any technical process leads to two things: a reduction in the variability inherent in the process, and an improvement in the mean performance of the process [2].

But regardless of whether it is appropriate to apply the concept of process- or organizational-maturity to project management or whether it is preferable to think in terms of developing skilled practitioners through some form of ‘‘situated learning’’, or even some combination of the two, it seems logical to conclude that the longer an industry is subjected to commercial pressures to perform, the more mature both its processes and its practitioners are likely to become.

Taken together, these two dimensions, the human and the technical, will coalesce in a corporate culture that either promotes good project management practice, or that inhibits it.

According to Rabechini Junior [3], "the concern with maturity in project management has arisen in organizations because projects represent the best way to change a complex situation". The concept of project maturity is closely linked to their potential for success/failure. Immature organizations are characterized by improvisation in management, without establishing the required connections between the various knowledge areas.

Experience has shown that organizations work best when they focus their efforts on the improvement of processes in a number of controlled areas that require an increasingly sophisticated effort as the organization improves. A level of maturity consists of specific and generic practices related to a predefined set of process areas that improve the overall performance of the organization [4].

2.2. Maturity Models

According to the Project Management Body of Knowledge (PMBOK) guide [5], a project is a temporary endeavor undertaken to create a unique product, service or outcome, which has goals, a defined beginning and end, and which is concluded when the objectives are completed. For Vargas [6], a project is defined as a non-repetitive enterprise that is characterized by a clear and logical sequence of events, with a beginning, middle and end, intended to achieve a clear objective and conducted within predefined parameters. Maturity in project management is the position in which the company finds itself regarding the project management processes. Based on this, maturity models seek to quantify the ability of a company to manage projects successfully [7]. The appropriate level of maturity may vary depending on the available resources and the organizational needs. First, it is necessary to define which type of maturity assessment should be adopted. The models will present the degree of maturity in which the organization finds itself for the subsequent establishment of the level it wants to achieve.

2.2.1. Capability Maturity Model Integration (CMMI)

The Capability Maturity Model Integration (CMMI) project was developed in 1986 by SEI in order to integrate the various CMM models. CMMI, which sought to improve software development processes, was published in 1993, focusing on the fields of systems and software engineering.

CMMI was developed to compare the existing processes in an organization with the proven best practices developed by members of industry, government and academia. And to provide ways to measure progress so as to reveal potential areas for improvement [8].

The CMMI model was not developed for software development only, but to assist software and services organizations in the alignment of process improvements with business objectives, engineering costs, schedules, productivity, quality and customer satisfaction. It is a process improvement model that can be adapted to solve performance problems at any level of the organization or industry by providing guidelines for improvement in the various disciplines of the organization.

2.2.2. Organizational Project Management Maturity Model (OPM3)

The Organizational Project Management Maturity Model (OPM3) was created by the PMI between 1998 and 2003 [9]. It sets forth requirements to ensure and develop capabilities in projects, programs and portfolios so as to assist organizations in accomplishing organizational strategies through projects.

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OPM3 was developed with the purpose of providing a way for organizations to understand project management, and for measuring the maturity in contrast to a comprehensive and wide-ranging set of best practices in project management.

The progress of maturity in OPM3 consists of several dimensions. One of these dimensions involves the valuing of best practices associated with the development stages of processes (Standardization, Measurement, Control, and Continuous Improvement), which represent, respectively, the improvement processes of projects, the implementation analysis of projects, the assessment of practices and their improvement. Another dimension corresponds to the progression of best practices associated with each one of these domains: Projects, Programs and Portfolios. Each progression represents a continuity along the organizational aspirations towards improvement.

A process in the OPM3 model is built based on the five process groups with the three domains, interacting with the four stages of improvement. This interaction can be summarized by the following procedures: Every process is necessary in all domains; the execution of the processes depends on the appropriate inputs, tools and techniques; control of variability within the processes; and the maturity of each domain depends on the progression of the improvement stages of Standardization, Measurement, Control, and Continuous Improvement processes.

At the last stage, the OPM3 model provides that the organization should consider the list of best practice and perform a feasibility and prioritization analysis, establishing a plan made up of the best sequence of improvement actions appropriate for its situational conditions in order to achieve greater maturity.

2.2.3. Kerzner Project Management Maturity Model (KPMMM)

The Kerzner Project Management Maturity Model (KPMMM) presents itself as an extension of the CMMI model, focused on the field of project management. According to Rabechini Júnior [10], KPMMM is made up of five levels of maturity combined with the area structure of PMBOK.

When dealing with maturity, there is a common heresy that all work must be carried out sequentially, but that the levels could overlap. Because the magnitude of the overlap is based on the amount of risk that the organization is able to tolerate [11].

The model proposed by Harold Kerzner distinguishes itself from the others by presenting methods to assess each level of maturity. The objective is to verify the degree of the organization's adherence at every level. It is worth mentioning that the adoption of a project management methodology is a necessary, but not a sufficient condition for obtaining organizational success [11].

2.2.4. Project Management Maturity Model (PMMM)

The Project Management Maturity Model (PMMM) is a formal tool developed by PM Solutions that seeks to measure the maturity in project management of an organization. Once the initial level of maturity and the areas for improvement have been identified, PMMM provides a roadmap, defining the necessary measures to be taken towards maturity in project management [12]. PMMM was first published in book form in 2002 and its second edition was released in 2007. It provides for five levels of evolutionary maturity and examines the development in ten knowledge areas of PMI's PMBOK guide. The objective of the PMMM methodology is to allow any organization to systematically and efficiently develop its project management capabilities [13].

2.2.5. Project Management Maturity Model – Darci Prado (MMGP)

The MMGP model was created to assist the project management team of the Instituto de Desenvolvimento Gerencial (Management Development Institute, INDG), currently Falconi Consultores de Resultado, in the assessment of the maturity stage of the organizations that hire it. According to Prado [14], there is a consensus on the part of project management professionals that a maturity model should consider the following areas: Strategy, Processes, People and Technology. MMGP was developed in six dimensions linked to the five levels of maturity. Prado [14] states that the MMGP model should be applied separately in each sector within the organization, given that the same organization may harbor different levels of maturity.

2.3. Audit Risk Assesment

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Risk assessment is a method of identifying, measuring and prioritising risk. It is a prerequisite of risk management, which is the process of determining whether or how much of the risk is acceptable and what actions should be taken in order to avoid, to share or to control the risk [15]. Risk assessment represents a critical aspect of internal audit planning. As a systematic process for the identification and analysis of relevant risks threatening the achievement of an entity's objectives, risk assessment is helpful for assessing and integrating professional judgments about probable adverse conditions and/or events (COSO, 1992). The process of risk assessment includes identification of auditable activities, identification of relevant risk factors, and determination of their relative significance (IIA, 1995, SIAS No. 9). An efficient and effective audit program is responsive to risk assessment, and is designed to ensure that proper controls are in operation that minimize or eliminate risk and exposure [16].

Internal auditors are concerned with the various risks facing an organization. Organizational risks include anything from lost market share, environmental liabilities, customer dissatisfaction, low employee morale, violation of laws and regulations, to fraudulent financial reporting (Colbert, 1995). In the context of these broadly defined organizational risks, the internal auditor evaluates the controls established by management to assess their adequacy in appropriately limiting the occurrence of adverse conditions or mitigating their impact.

According to the COSO Internal Control Integrated Framework (2013) ''risk assessment involves a dynamic and iterative process for identifying and assessing risks to the achievement of objectives.'' This signals a decisive move from looking at the internal audit risk assessment as a generic check-the-box activity to one that is more value driven in nature. Internal Audit departments are now tasked with pushing risk-based auditing principles into action by working with business stakeholders to learn about pressing issues and ultimately deliver greater value from their assessments. Data Analysis tools can be used to unlock hidden value and act as a key catalyst for delivering insights that can positively influence an organization's risk management framework.
So how do we assersing the risk?

2.4. Validate Assertion

Using insights gained from data during the audit planning stage allows you to understand what is happening, the hotspots for risks, and the current nature of risk management within the organization. Utilizing information gained at this stage allows you to adjust the audit focus before the audit even begins.

For example: During an accounts payables (AP) audit, a request for data during the audit plan would require all of the data from the accounts payables department. You would most likely send a request for data regarding; purchase to payments, the vendor master, all purchasing transactions, purchase orders, high level payment information, and so on. From this data, you can know exact answers on matters such as, the amount of transactions, vendors on file, vendors actually used, vendors used most often, and the purchasing patterns across different goods and services. By running high level tests on the data you can now understand the scope of the business.

Within the data you may find questions that you can pose to the business to assist you in refining your audit plan. Understanding the scope of the business allows you to ask pointed and specific questions backed up by quantitative analysis, rather than generic questions.

Generic question: ''Do you make sure to maximize credit terms with different vendors to guarantee the best possible price?'' (Such a question will undoubtedly result in a ''Yes'' from the business).

Specific question: ''I realize that we normally pay $200 for these chairs we purchase in bulk for the office, however when we opened the location in Cincinnati, we went to the same vendor that we normally purchase chairs at $200 from and purchased the same chairs at $300. Something has changed, what happened?''

A question as pointed and specific as this could not be asked without insights gained from the use of data analysis. Now your analytics are able to provide meaningful data and information that add value to your audits. You may learn that this specific vendor waived shipping on the order or that the chairs, while coded as the same, were actually a different and upgraded model. With pre-audit data analysis you can identify key risks and whether the likelihood of risk is high or low. From here, you are in a position to confidently know which areas need to be focused on during the

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audit. Preliminary analysis also allows you to know which files, transactions, and support to request onsite rather than attempting to find what you are looking for when you begin the audit execution; therefore, less time is spent onsite

2.5. Excecution and Reporting

Using data analysis in the planning phase helps create better audits. Sophisticated data analysis tools such as CaseWare IDEA can analyze 100% of transactions regardless of data formats to deliver valid duplicate payments in a timely manner. While it is conceivable to perform data analysis manually, according to the IIA GTAG 16 Data Analysis Technologies, 2011, ‘‘it is most effective when implemented using data analysis technology.’’iii While even the use of an analysis tool as basic as Microsoft Excel may produce tangible insights, purpose-built data analytics technologies for audit specific tasks will not only save time, but deliver the result driven insights that matter most. For example, if during the AP audit, you analyzed all transactions and found 120 valid duplicate payments, this would be done very quickly. Collaborating with the business to gain a thorough understanding the business process can help eliminate false positives within data to strengthen results. Time saved would now allow you to pull supporting documents for a sample of those exceptions for your audit report. Once reported, the business takes on the responsibility of examining the others and addressing the control deficiencies that caused the issues. The report should always be based on validated control deficiencies found in the audit execution. An audit report with strong data analytics content will include exact findings, monies lost, root causes, control breakdowns, residual risks, and recommendations to address root causes.

2.6. Follow-up and Monitoring

It is also important to have a follow-up mechanism driven by data analytics to help identify the root causes of control deficiencies found in the audit report. For example, following the audit, you should gain insights into its effectiveness. During follow-up you may find that an issue in accounts payable is recurring and requires further analysis. You may find that the root cause was a lack of controls in segregation of duties that allowed an employee access to create and modify vendors as well as approve payments. If this root cause was found and eliminated, you should see the risks and number of exceptions reduced over time. The insights gained about what is being done in different areas of the business and the reasons as to why things are happening will close the loop back to your audit planning. This will feed into the annual risk assessment for the following year.

2. METHODS

The method that we used in this paper is a literature study. We looking from any kind of relevant source of information, such as books, journals, and articles from a validated site. Like google scholars, emerald publishing, researchgate, and etc.

The reason we choose literature study as our method of researching this paper is because in this paper we try to look for the implication of digital technology and big data, and furthermore to prove our point that we believed big data is already used by many, if not all, people. We want to prove that just by doing reading we can come up with a solid conclusion that not only belieavable but also validatable.

Of course we will filter the data that we used, and we’ll make sure that the data we used is valid. We will compared and also make a summary from the data that we found valid, the things that we will compare are theory, conclusion, and also other things that is relevant to this paper. With that, we believed that already answered all of you, our dearest reader, question wether our way of resarching this paper is valid or not.

3. RESULT AND DISCUSSION

4.1. Result

We found and proposed a method called The Audit Quality Maturity Model -Version 1.0 (AQMM v1.0) by Institute of Chartered Accountants of India (ICAI) [17]. The Audit Quality Maturity Model -Version 1.0 (AQMM v1.0) is a capacity building measure initiated by ICAI and the objective of this Evaluation Matrix is for sole proprietors and Audit firms to be able to self-evaluate their current level of Audit Maturity, identify areas where competencies are good or lacking and then develop a road map for upgrading to a higher level of maturity. Using the above-mentioned collaborative approach, the AQMM v1.0 would be recommendatory initially and after 1 year the Council will review the date from which it would become mandatory.

Firms auditing following entities are covered in AQMM v1.0:

1. A listed entity; or

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2. Banks other than co-operative banks (except multi-state co-operative banks); or
3. Insurance Companies

However, firms doing only branch audits are not covered.

4.2.DISSCUSSION

There is some competency basis that attached with The Audit Quality Maturity Model Version 1.0 (AQMM v1.0) listed bellow :

1. Practice Management – Operation
   - 1.1. Practice Areas of the Firm
   - 1.2. Work Flow – Practice Manuals
   - 1.3. Quality Review Manuals or Audit Tool
   - 1.4. Service Delivery – Effort Monitoring
   - 1.5. Quality Control for Engagements
   - 1.6. Benchmarking of Service Delivery
   - 1.7. Client Sensitisation
   - 1.8. Technology Adoption
   - 1.9. Revenue, Budgeting and Pricing
   - 3.4.
2. Human Resource Management
   - 3.1. Resource Planning & Monitoring as per the firm's policy
   - 3.2. Employee Training & Development
   - 3.3. Resources Turnover & Compensation Management
   - 3.4. Qualification Skill Set of employees and use of Experts
   - 3.5. Performance evaluation measures carried out by the firm (KPI's)
3. Practice Management – Strategic/Functional
   - 3.1. Practice Management
   - 3.2. Infrastructure – Physical & Others
   - 3.3. Practice Credentials

With The Firm Maturity Rating and Basis :

Table 1. Firm Maturity Rating

Section Reference	**Total Possible Points**
Section 1. Practice Management – Operation	280
Section 2. Human Resource Management	240
Section 3. Practice Management – Strategic/Functional	80
Total	**600**

Table 2. Basis

Up to 25% in each section	Level 1 Firm	Indicates that the firm is very nascent -will have to take immediate steps to upgrade its competency or will be left lagging behind
Above 25% to 50% in each section	Level 2 Firm	Indicates firm has made some progress -will have to fine-tune further to reach the next level of competency
Above 50% to 70% in each section	Level 3 Firm	Indicates firm has made substantial progress -will have to fine-tune further to reach the highest level of competency
Above 75% in each section	Level 4 Firm	Indicates firms that have made significant adoption of standards and procedures - Should focus on optimising further

This method is new, so in order to know whether it will workout or not, we need to wait for the result. But nevertheless, its a good model because it cover very much everything.

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4. CONCLUSION

This paper aims to make a method for building a good assertion of audit risk assertion in maturity in PMM. The subject of this paper is therefore not Risk management in the project, but how to use the model in which they being used, which concern organizations' capacity to achieve projects by implementing best practices in PM,to diagnose drifts and predictthe effects of corrective actions. The model that we found, which is The Audit Quality Maturity Model -Version 1.0 (AQMM v1.0) by Institute of Chartered Accountants of India (ICAI), use risk assertion as the basis in creating the model of Project Maturity Model. The method that we propose has a benefit of making Audit firms able to self-evaluate their current level of Audit Maturity, identify areas where competencies are good or lacking and then develop a road map for upgrading to a higher level of maturity.

5. REFERENCE

6. AC08787871, A. (Ed.). *EDPACS: The EDP Audit, Control and Security Newsletter*. Taylor & Francis, 1973.
7. CMMI Institute. *Capability Maturity Model Integration.* Disponível em [online]. Accessed 3 November 2014.
8. Cooke-Davies, Terence J., Schlichter, F. John, & Bredillet, Christophe. "Beyond the PMBOK1 Guide." *PMI Annual Seminars and Symposium 2001*. Nashville, TS, 2001.
9. Crawford, J. K. *Project Management Maturity Model.* Auerbach Publications, New York, 2007.
10. Kerzner, H. *Strategic Planning for Project Management Using a Project Management Maturity Model.* John Wiley and Sons, New York, 2001.
11. McNamee, D. *Business Risk Assessment.* Institute of Internal Auditors, Altamonte Springs, 1998.
12. PM SOLUTIONS. "What is the Project Management Maturity Model (PMMM)?" Available at: https://www.pmsolutions.com/resources/view/what-is-the-project-management-maturity-model/.
13. Prado, D. *MMGP – Um Modelo Brasileiro de Maturidade em Gerenciamento de Projetos.* Ponto GP, 2006.
14. Prado, D. "Por que é importante evoluir em Gerenciamento de Projetos?" *Mundo PM*, Curitiba, 2011, No. 38, pp. 37-40.
15. Project Management Institute (PMI). *A Guide to the Project Management Body of Knowledge (PMBOK Guide).* Project Management Institute, Newtown Square, 2013.
16. Rabechini Jr., R. *Competências e Maturidade em Gestão de Projetos: Uma Perspectiva Estruturada.* Editora Annablume, São Paulo, 2005.
17. Rabechini Jr., R., & Pessoa, M. S. "Um Modelo Estruturado de Competências e Maturidade em Gerenciamento de Projetos." *Revista Produção*, 2005, Vol. 15, No. 1, pp. 034–043.
18. Sanchez, F., Bonjour, E., Micaelli, J. P., & Monticolo, D. "An Approach Based on Bayesian Network for Improving Project Management Maturity: An Application to Reduce Cost Overrun Risks in Engineering Projects." *Computers in Industry*, Vol. 119, 2020, p. 103227.
19. Sawyer, L. B., & Dittenhofer, M. A. *Sawyer's Internal Auditing: The Practice of Modern Internal Auditing.* 4th edition, Institute of Internal Auditors, Altamonte Springs, FL, 1996.
20. TEAM, CMMI Product. *CMMI® for Development, Version 1.3: Improving Processes for Developing Better Products and Services.* No. CMU/SEI-2010-TR-033, Software Engineering Institute, 2010.
21. Vargas, R. V. *Gerenciamento de Projetos: Estabelecendo Diferenciais Competitivos.* 7th Edition, Brasport, Rio de Janeiro, 2009.
22. Zaguir, N. A., & Martins, M. R. "Revisão Crítica do OPM3: Um Estudo de Redundâncias." *Revista Gestão Industrial*, 2007, Vol. 3, No. 1, pp. 75-86.

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