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Research Article

Impact Analysis of Agile Method Based on Risk Management for Developing Technology Management (SMEs) Small and Medium - Enterprises

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ABSTRACT

Nowadays, information systems such as the Agile model can adapt to the structures and processes of smart organizations, particularly SMEs. The faster an information technology company adopts risk management-based Agile in a work environment, the higher its performance and energy efficiency. To maximize the value generated by agile decision-makers or managers, SMEs must have the capability and willingness to adopt new risk management-based technology models. Additionally, the study identifies a gap in the use of the Agile Model to influence the success of SME projects in the Middle East region's SMEs (, UAE, KSA, Oman, Egypt, Iraq, and Qatar). The study is aimed at SMEs in the electronics and energy sectors, as well as IT businesses and big data projects, with the goal of encouraging them to adopt an Agile model. This study was characterized positively in numerous ways, including the adoption of technology in the workplace to accommodate abrupt changes in energy management schemes and various government policies promoting energy conservation. Additionally, employee training and adaptability in dealing with programs that can affect the process help accomplish the objectives. Restructuring medium and small businesses to improve their energy management and overall performance.

Keywords: Agile MODEL, Risk management information technology, Agile impact evaluation, (SMEs) Small and Medium Enterprises

Introduction

Risk is omnipresent and travels across all facets of life. Unforeseen circumstances generate extreme exposures to losses for business sectors. In addition, in the case of (hereinafter SMEs) and micro-enterprises where the capital history is not sufficiently large, a disaster will likely result in operational disruption, financial losses and bankruptcy (Ratnasingam et al., 2020; Agranoff & Kolpakov, 2020; Aven & Kristensen, 2019). Furthermore, the role of risk management (RM) is to identify risks, to assess the possibility and future effect of incidents and to handle threats, to minimize or mitigate their

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impact with the least expenditure of resources. In several fields, RM is being developed and implemented, and this study considers RM for (SMEs). SMEs need the implementation of a risk management plan and approach rather than larger organizations because of the lack the capacity to adapt promptly to internal and external risks, leading to potentially massive losses that severely endanger their existence. Protecting creative ventures, which are necessary in order to achieve competitive advantage with compete a market, but inevitably require risky decisions and practices, is another incentive for encouraging the introduction of RM in SMEs (Kamello & Jauhari, 2020; Majid, 2018).Considering Agile Risk Management, the project provides importance to Risk Management by coping with risk on a regular basis, including the entire project team and partners, and resulting in being integrated into the company's community and procedures independent of the approach used. Some methodologies have more systematic methods of handling threats, while others propose more casual ways of approaching them. This research would explore risk assessment in the Agile system in the context of SMEs ventures. One of the most utilized and accepted Agile approaches is the Agile technique. Experienced Agile persons operating in both methodologies point to risk assessment as being now implemented with both. SMEs are distributed in phases called "Sprints" (usually 2-4-week iterations) if agile is used. A sprint begins with preparation and the analysis stops. A sprint preparation meeting is a time-boxed conference devoted to the creation of a comprehensive sprint schedule. To review the status of the organization, the industry, and technologies, project partners attend sprint review sessions. To review the completed sprints, a retrospective meeting can be arranged. A quick regular meeting is a regular agile meeting. Furthermore, in the last two decades, primarily in the context of a project and since the release of the Agile Manifesto in 2001, there are five central market priorities that tend to apply the modern approach to SMEs and management in general. This involves people and encounters with procedures and instruments, detailed analysis of operating applications, client engagement around contract agreement, and response to changes within a schedule. Continuous creativity to meet new consumer requirements. Service adaptability to meet future consumer specifications. Improved. Considering Agile the project provides importance to Risk Management by coping with risk on a regular basis, including the entire project team and partners, and resulting in being integrated into the company's community and procedures independent of the approach used. Some methodologies have more systematic methods of handling threats, while others propose more casual ways of approaching them. This research would explore risk assessment in the Agile system in the context of SMEs ventures. The research aims of this paper are to study and evaluation the state of risk management systems in a micro-company through the agile paradigm and to explore the magnitude of a successful management approach focused on the market scale addressed in this report. Risk management is defined as the risk recognition, evaluation and avoidance process. And what is the impact of risk control on project performance for SMEs?

Literature Review

Agile impact evaluation of the risk. Usage of the Agile Risk Management Impact of Small and Medium Enterprises (SMEs) in this study (Akhtor & Itua, 2019; Taherdoost, 2016). Logically, this hypothesis flows from the documentation of prior studies in the issue field. Considering the parameters and restrictions governing the situation, combining one 's rational convictions with established science is essential in establishing a theoretical framework for exploring the research issue. In short, the theoretical structure addresses the interrelationships between the factors assumed to be integral to the dynamics of the examined case. It allows us to postulate or hypothesize and examine those interactions and thereby to strengthen our understanding of the complexities of the situation by creating such a logical structure (Coppock & McClellan, 2019; Abumandil & Hassan, 2019; Khalid & Rahman, 2019).

Factors adopted of this study

AGILE method is characterized by following attributes:

Quick and Efficient Incremental refers to the fast production periods of small project updates. Cooperative refers to a near team-customer relationship. Straightforward ensures that it is easy to understand and adjust the methodology and that it is properly recorded. Finally, adaptive refers to the capacity to make adjustments at the last moment and to respond to them. Agile approaches are growing that require minimal preparation standards and do not include long-term planning directly. Iterations are small-time spans that span from one to four weeks, usually. Each iteration requires a cross-functional team collaborating on all aspects of software development processes, such as preparation, review of specifications, designing, coding, testing of units, and approval of testing. A usable result is introduced to the stakeholders at the conclusion of each iteration. In this way, handling tasks minimizes the likelihood of failure and helps the project to respond rapidly to changes. In turn, iteration does not bring adequate flexibility to a marketplace update, but at the conclusion of each iteration, the goal is to provide an available update. To release a product or new function, multiple iterations could be required. Agile strategies concentrate on maintaining the basic, frequently checking, and constantly motivating partners to cooperate. Traditional agile methods, on the contrary. Emphasize the efficiency and efficiency of the project. Specific methods and strategies such as continuous delivery, test-driven development, design trends, refactoring and other strategies are used to increase efficiency and project agility. Agile risk management is about finding, mitigating and removing risk factors until they become a threat to the project. This risk management technique, how Agile is a risk analysis approach, and how Agile risk management can be achieved. In the Project Management Body of Knowledge of the Project Management (Ratnasingam et al., 2020; Agranoff & Kolpakov , 2020) to create a list of the most important schedule risks in projects. Project Risk Management is one of the nine management knowledge fields. Risks are paired with an examination of the agile effect on the risk.

(SMES) Small and Medium Enterprises

In establishing countries, (Aven, 2019) lists different characteristics of SMEs under the expansive headings: job characteristics, activity divisions, proprietor sex, and competitiveness. The highest company classification is working operators, provided that most information technology SMEs are one-individual organizations. The bulk of the SME workers in most developed countries make up this meeting; those who appear to be unpaid but dynamic in the campaign usually make up another sixth. The remaining portion of the population is split between working staff and students or undergraduates. SMEs are more extreme than larger businesses in terms of jobs and have therefore decreased capital spending associated with job formation (Kamello & Jauhari, 2020).

Risks in projects' development phase

Customary project management may be to some extent inadequate for projects, especially a vital SMEs aspect when the demands are complicated, uncertain and subject to change. In the business, an elective method, agile project management (APM), is being developed. APM is a very iterative and systematic process in which designers and venture partners work successfully to identify the area, identify what can be created, and coordinate functions. Agile project management: the Agile approach involves several fast iterative arrangements and improvement stages, helping an undertaking party to often review and acquire promptly the emerging object, the organization learns from each incremental period and strengthens the item. Furthermore, the working techniques.

Communication

ISO 31000: ISO 31000 is ISO 31000: Standard recommends:' that organizations create, incorporate and consistently strengthen a system aimed at incorporating the risk management mechanism into the overall policy, strategy and preparation, management, monitoring process, policy, values, and culture of the enterprise. 'the basic risk management concepts, structure, and method. The ISO 31000 standard proposes that organizations establish, incorporate and consistently strengthen a system aimed at incorporating the risk management process into the overall administration, strategy, and planning, management, reporting mechanism, strategies, principles, and culture of the enterprise. The accompanying image provides an outline of the traditional Risk Management concepts, structure, and method. Management the ISO Technical Management Board Working Group on Risk Management published ISO 31000:2009, Risk Management-Principles, and Recommendations after ratification by the ISO member bodies.

Project cost

Via several experiments, the cost inflation factors that contribute to project cost growth were reported. Studies also described variables individually or by categories. Each factor poses a challenge to an organization trying to obtain detailed estimates of project costs. As part of a broader analysis to enhance cost estimation and cost control from project creation to bid day, a comprehensive literature review was performed to classify factors affecting (Coppock, & McClellan, 2019) Cost estimates. Exploring scientific papers and journals, official reports, journal papers, and other written sources was part of the literature review

Project flexibility

Managing diversity is not a modern idea. In order to account for the consequences of instability in planning, Sager (Khalid & Rahman, 2019) saw many examples of versatility as one strategy. Sager also states, however, that versatility is an important concept sometimes used by planners but technically seldom scrutinized. Kreiner (Khalid et al., 2020) points out that, under instability, the conventional emphasis on continuity in project management becomes threatened. It causes "drifting conditions". Drifting environments at Kreiners are not generally triggered by real shifts in the context of the project.

They will also arise when project partners develop a greater understanding of their spe-

cific needs and a greater capacity to communicate their needs. Flexibility may also be a solution to environmental instability, as expense and budget overruns of (Khalid & Rahman, 2019), have troubled traditionally large building programs. "In too many situations, the cost of the finished project was greater than the cost forecasts planned and reported during early preparation, preliminary engineering, final design, or even" Megaprojects require further research up front to prevent cost overruns. The ramifications of discrepancies between forecasts of early project costs and contract rates or a project's ultimate cost may be important.

Over the time span between project initiation concept development and the completion of construction many factors may influence the final project costs. This time span is normally several years in duration but for the highly complex and technologically challenging projects, it can easily exceed 10 years. Organizations face a major challenge in controlling the project.

Methodology

Due to this research required the understanding in order to examine the implementation of agile risk management, the research design used somewhat uncommon in some researches. This study applied quantitative research. The terminology of mix methods research is used as an effective research method that integrates quantitative research within a project (Khalid & Rahman, 2019; Khalid et al., 2020). The advantage of the quantitative research methods is it will give the enlightenment about a phenomenon that required the deep understanding collaboratively (Khalid et al., 2018; Hennel & Rosenkranz, 2020; Lima et al., 2020). In this study, however, quantitative research the main method used to obtain the answers to the research questions. During the global crisis sectors that mostly affected are Small and Medium Businesses (SMEs). Plantation, automotive (Mesquida & Pacheco, 2020). Moreover, it also based on researcher observation on the current situation. This present study attempts to test the hypotheses in order to prove relationships between and among variables of interest that considered as the explanatory study. This method is in line with Abramoff, & Polyakov, (Raharjo & Purwandari, 2020), stated that the methods in the sequential explanatory design are highly common among researchers, in which it employs collecting and analyzing. Question proposed for the study: What is the impact of the agile risk management paradigm on the performance of the SME project? "We expect to answer the following sub-questions in order to get a detailed answer to the study paper:

What are the agile model's performance criteria in SMEs?

How can risk assessment use an agile system and do agile methods offer operation and assistance to SME projects?

How will the result of the risk assessment process in SMEs be influenced by the implementation of the agile paradigm in the way of operating and employee performance?

The purpose of this investigation is to discuss the risk management mechanism in the agile system used in SMEs and the priorities that this study can promote.

- To evaluate the efficacy of customer support in the application of SMEs, thus contributing to better results.
- To develop and optimize job efficiency and team results. The importance of the agile / Scrum system must be explained.
- To propose a plan that will benefit humanity by introducing the difficulty of addressing current challenges with new threats.

Conceptual research framework

One is ready to establish a theoretical structure after completing the literature survey. The study theoretical framework is defined as a cognitive model of the relationships between the various variables that have been formed as important to them are theorized or make logical sense. The following sub-sections discuss the formulation of scientific theories based on previous literature to analyze the relationships in order to meet the study's goals and answer its questions. In our research study, the theoretical and the empirical research on adopting Agile model for risk management is to be reviewed. In the context of an integrative system, seen in the diagram, this is achieved. 1.1 The interactions resulting from the use of the Agile model and their impact on the threats occurring in the course of project creation, customerorganizational coordination, project expense, and project sustainability are analyzed. Centered on the structure of Figure 1, each partnership analysis was then categorized. The method resulted in four wide study sources. Stream I discuss the relationship resulted from adopting Agile model and its effects on the risks associated with the project in the development process. According to the previous literature reviews and other findings, our hypothesis is proposed:

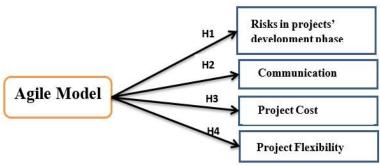


Figure 1. Conceptual Research Framework

H1: Using Agile model reduces the associated project risks in the development process. Stream II studies the relationship and effects of adopting Agile model on the communication between customers and organization. And according to the previous literature reviews and other findings, the following hypothesis is proposed: H2: Adopting Agile model results in better communication between customers and organization. Stream III pertain to research on the relationship between Agile model adoption and its effects on overall project cost. And according to the previous literature reviews and other findings, the following hypothesis is proposed:H3: Adopting Agile model results in overall cost reduction of the project. Finally Stream IV relates to research on the relationship between Agile model use in SMEs' projects and its effects on project flexibility. And according to the previous literature reviews and other findings, the following hypothesis is proposed:

H4: Using Agile model results in more flexibility of the projects. In conclusion and as shown in Figure 1 Conceptual Research Framework of this study shows the relationship between the independent variable "Agile Model" and the dependent variables which include the risks arisen in the project development process, communication between customers and organization, project cost, and project flexibility. Figure 1 Conceptual Research Framework.

Results and Discussion

This study, which examines, Agile risk management influence of Small and Medium information technology and Businesses (SMEs). However, the study considered as members of the study population. The survey was sent to 25 companies. We received 250 respondents who answered the online survey questionnaire using Google Form and the researcher will be us-

ing a quantitative method to tabulate and interpret the results., companies in the Middle East, and collectively employ 55,703 employees who fit the definition put forward in this study. This sample represents 51% of the total number of employees and. The businesses were given roughly ten days to respond to the survey we carried out, and then we took all the data and review them to find the final version. We were able to meet field employees working overseas as a result of making an online survey, and thus collect replies from 6 different countries based in the Middle East. Our research is targeting the small and mediums scale of information technology business firms and projects for developing companies. The average workers are 1-50 workers, we received 250 answers from different countries 110 from Iraq which has workers 5-10 and 15-20 that show its small firms and 30 to 20 and 20-40 from Middle East countries that have a large scale of companies. The number of answers from countries for us to set the data will be seen. Country Based on the findings by Akhtar, & Itaú, (Qazi & Akhtar, 2020) the present study identified a sample size of 250 employees who met the population inclusion criteria outlined in this study. As mentioned previously, in multivariate analysis, the sample size should be several times larger than the number of variables. The required sample size should be at least 200. Thus, a population size of 250 subjects can be considered appropriate for this study. The breakdown of the study population by the company and by a total.

countries	Responding Number
Iraq	110
UAE	30
KSA	40
Oman	30
Egypt	20
Qatar	20
Total	250

Table 1. Numbers of responses in different countries

The study instrument preliminary assessment to look at the possible problems that the prospective respondents might face while filling it out, the measuring tool. Pretesting, in other words, requires validating the content of the measuring instrument. Validity of quality refers to the degree of appropriateness of all things for the intent of the measuring device (Khalid et al., 2018). To ensure this, the expertise of 4 lecturers With Ph.D. and managers, engineers, developers in Middle East Based on their input, changes were made to the elements required by the form of the sentence, acceptable word collection, and its arrangement. The improvements are necessary to ensure a high response rate shows questionnaires instrument development. We split our questionnaires into four distinct parts. The first includes an introduction to identify and explain briefly what all the analysis is about; thank the respondent for his / her contribution and guarantee that their answers and all knowledge gathered in connection with this study will remain confidential. The second section of the questionnaire includes demographic details concerning the respondent, such as gender, age, occupation, years of experience, country of employment, name of the business (optional), number of employees in the business, years of experience. The agile model. Two responses "yes" and "no" were given to the respondent here, and if yes, the respondent has the choice to provide the value they see in project management processes using the agile model, especially in the study and review of the questioners we asked by small and medium companies. It begins with the query and then our key hypothesis, in which we present the experiments carried out to explain our observations and expertise. A summary of the interviews followed, where we present the main outcomes specific to our own, where we present the findings linked to the analysis reveals the staff numbers.

In this section of this study, by using agile model techniques, we included the questions on the impact of risk assessment process results of Small & Medium projects. This section begins by asking the respondent whether or not their current organization is adopting some form of risk management method, followed by a query to see whether the use of agile model techniques prevents project failure. In Figure 2 below. Most respondents with 103 votes suggest that the most important gain will be under management and predict the danger that could exist in the future in small and medium business companies, the outcome we see in collected responses. My opinion is that Agile creates more ways than conventional strategies to track what is going on and thus provides more efficient ways to respond. The aim of conventional project tracking is to measure how much time is spent on each job. This is a waste of time, I guess (unless you're paying a client on this basis). The key strategy of Agile monitoring is to watch what functionality has been delivered incrementally. This is much simpler and has a much greater client effect. Agile has many other ways to measure improvement, too. Velocity monitoring is the closet of conventional effort monitoring. But for the whole Time Box, Velocity is a single number for the whole project, so monitoring this is much easier than monitoring a multitude of distinct tasks. By breaking down the project into manageable units, the second vote rating goes to high efficiency level with 91 votes; the project team will concentrate on high-quality development, research, and teamwork. In addition, consistency is increased by easily detecting and correcting errors and recognizing expectation mismatches early during each iteration by creating regular builds and performing checks and evaluations during each iteration.

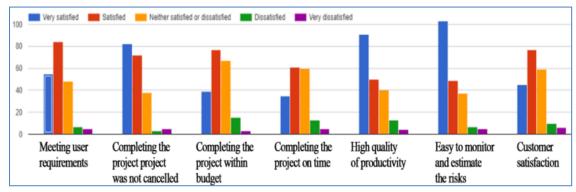


Figure 2. Agile Satisfaction in Firms and Benefits Earned

Pursuant to Figure 3, the outcome reveals that 100 of the respondents claim the most significant conditions for agile initiatives in SMES business organizations are time and customer satisfaction. Agile typically uses business-focused usage stories to describe product capabilities. Each function incrementally provides value, not just an IT component, by concentrating features on the needs of actual users. During each Sprint, this also offers the chance to beta test apps, receive useful input early in the project and have the opportunity to make improvements if required.

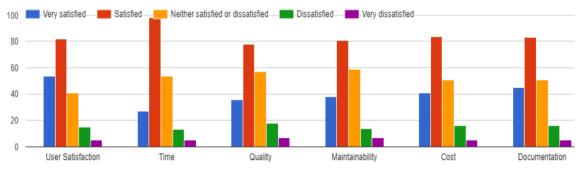


Figure 3. SMES Firms Evaluate by Agile Criteria

According to the analysis conducted in Figure 4, not all respondents agreed with the implementation of the agile model in small and medium-sized businesses. 59 % of respondents chose the 3 that which cause failure or performance because implementation of the agile requires certain tactics to implement before acceptance. In our recodes, we found that managers did not support the implementation of agile in business firms because they need a staff with ample information and experience from various businesses to implement and some of them feel that the company it does has a strong guidance.

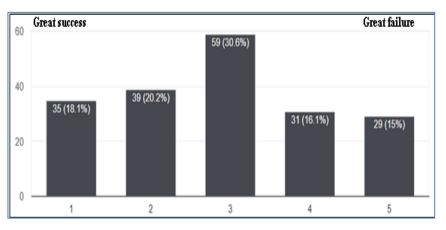


Figure 4. Rates of agile model in organization adoption program

It is necessary to make clear that the team is self-responsible for its success and efficiency and that the manager is still there to assist the team in its actions. Figure 5: The study indicates that most respondents firmly believe that the implementation of agile practices improves efficiency at 51.8 percent in small and mediumsized enterprises. If an Agile Company wishes to optimize the factor of efficiency, it should concentrate on the product's agility, as this might allow for greater use of the software to be produced and eventually contribute to a longer product lifecycle. The findings revealed that in this new paradigm, individuals feel more active and the subjective feeling of efficiency in Figure 3 has improved in Figure 6.

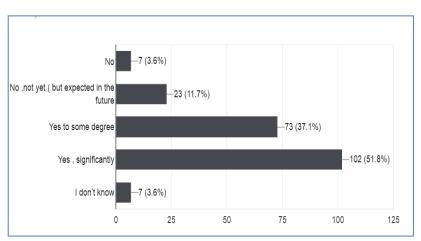


Figure 5. Adopt Agile Model to Enhance Productivity

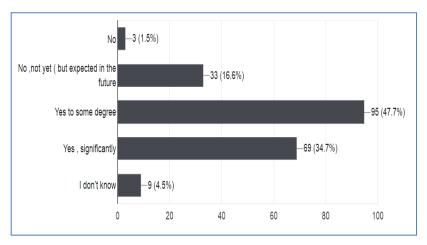


Figure 6. Adopt Agile Model to Enhance the Quality of Deliverable

Pursuant to Figure 7, most of the responses disagree with reacting to changes, and do not obey the plan with 75 votes because plan is one of the most essential components of the agile system or without it no project can be successful with any of their processes. Responding to the changes is another component that cooperated in an effective project, but that does not mean that we will deal with it without preparing all of them are complete. Again, with 100 votes, most of the respondents said that danger would be another component to reflect on, according to the same number.

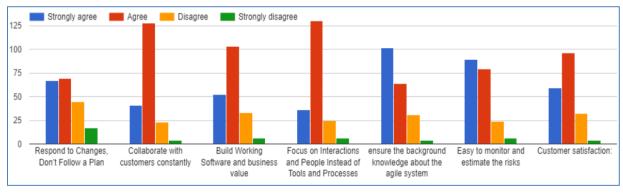


Figure 7. The Most Role Effective to Start Agile

Generally, and in line with Figure 8, with 62 percent and 67 percent of other limiting factors, our respondents tend to be more insufficient in project specifications and restricted implementation assistance involving small team agile with 62 percent and 67 percent of other limiting factors. We notice that the key sequences of using agile in medium and small enterprises are the team with ample experience to adapt the agile concept in small and medium business firms. One of the drawbacks of agile methodologies is that, since there is not any documentation for the methodology, it is not sufficient for maintenance. Developers should not focus too much on the documents because the primary purpose of using an Agile Approach is to write non-documentation applications in our 37 percent response demonstrate that weak documents would impact and hinder the process of using agile in small and medium-sized enterprises. Another drawback is that, according to our results from the study, Agile Methodologies rely heavily on Ineffective Training of 40 percent, and therefore the project's performance would depend on the user's cooperation and coordination. Methodologies Of 33.5 percent minimal support for distributed production environments.

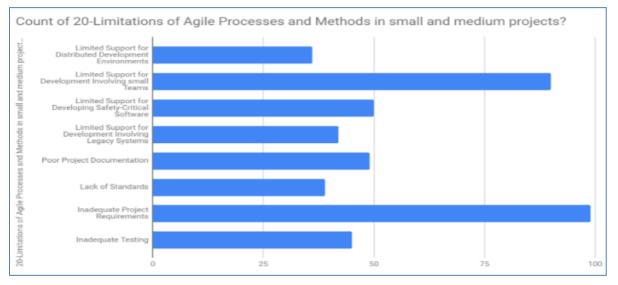


Figure 8. Agile Process Limitations

Methods As seen in Figure 9 and according to our answers to the survey, it was observed that the key driver is external threat to the team 51.5% of the most driver and problem areas toward agile operating methods in small and medium project. Customers often attempt to specifically force their goals and deadlines to developers. Due to the essence of the position of subcontractors and cultural factors, this can happen much more often in subcontractor and customer direct contact. The duty of the Project Manager is to shield the staff from this form of operation. Agile techniques can show the unplanned task effort for iteration. And 17.3 percent claim that as the team offers multiple items, the brad of the client base is evident that preferences of those will shift. There is also a

possibility that different developers may be responsible for the execution of unique goods. Tasks will not be spread equally in that case, and there will be variations in the workload between team members. 13.8 percent think the board client base prefers to address preferences for clients and their demands while getting multiple client triggers. If the clients are not very involved, the project manager wants more work to coordinate and make a decision on the competing goals. The other 10.7% state that the composition of the mixed and delivery team is a problem field against agile As teams are formed from both local and outsourced resources, it poses several agile concepts challenges. Face-to - face sessions are not feasible, tasks are not spread equally, and individual assistance for remote team members will not be offered by a team leader. 6.6% of the comments collected are about waste whenever long-term deployment is introduced The same refers to the authenticity of product backlog goals, the task of project manager is to work with clients to keep details current. In mission selection for execution, the priorities must be recognized. Prototyping, when performed at a too thorough stage, will trigger needless.execution.

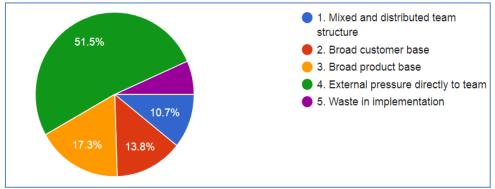


Figure 9. Problem of SMEs against Agile job practices

Figure 10. indicates the respondents' years of experience in which 5.6 percent of respondents were 10-15 years of experience and most of them are company owners, CEOs and

seniors. We understand that most businesses do not focus entirely on the experts that help youth blood to play a role in their industry.

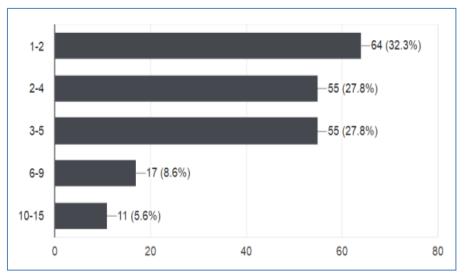


Figure 10. Respondents' Years of Experience

In Figure 11: we asked the respondents whether or not 76.6 percent of them knew about the agile paradigm of risk management and were mangers and others with back-grounds from 6-10 years, the remaining 23.6

percent were only 1-3 years of experience and was a recent graduate aged 20 to 25 years. We have 24.4 percent of that. A brief essay on the agile risk assessment methodology to assist them with the questioners' though.

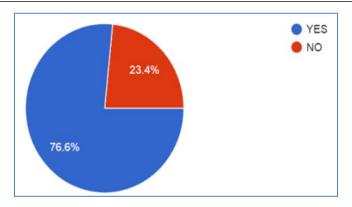


Figure 11. Respondents' Agile Experian

Conclusion of the Study

Conclusion results indicate that most employees are adjusting to the new agile management method they have begun using at work, and the majority report feeling at ease with the new system.

The purpose of this analysis is to prepare consumer views and suggestions for small and small. Smaller organisations with a view to applying the agile model of risk management and to the contextual investigation of businesses. Inside the case organization, review, risk management, and evaluation were analysed by interviews completely for the author to finish up on Al researcher suggestions. Similarly, to ensure inside and out interpretation of the postulation foundation.

Future Study

In the outcome section, the author affects a few suggestions for the case to effectively upgrade business venture-risk control to companies and other small-scale enterprises. As a result of the outcome of the above, this study led to a critical commitment to writing by effectively exploring the influence of risk control on the writing. achievement of projects. This was achieved by taking a wider view of "accomplishment requirements" in SMEs, rather than merely relying main objectives that accomplishes this is on the running of the mill triangle of accomplishment: on time, on, and satisfying prerequisites, and to the best of our understanding. Furthermore, we suggest organizations in agile of the results.

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References

- Abumandil, M. S., & Hassan, S. (2016) Information quality and decision-making effectiveness: A study of banks in Palestine. International Review of Management and Marketing, 6(S7), 127-132
- Agranoff, R., & Kolpakov, (2020) A. Researching networks through sequential explanatory design. J. Voets, K. Robyn, & C. Koliba, Networks and Collaboration in the Public Sector Essential Research Approaches, Methodologies and Analytic Tools, 20-44
- Akhator, P. A., & Itua, O. P.(2019) Work-Life Balance and Performance of Female Medical Practitioners of Federal Government owned Medical Centres in Edo State, Nigeria. Journal of Accounting, Business and Finance Research, 6(1), 19-26
- Aven, T., & Kristensen, V. (2019) How the distinction between general knowledge and specific knowledge can improve the foundation and practice of risk assessment and risk-informed decision-making. Reliability Engineering & System Safety, 191, 106553
- Coppock, A., & McClellan, O. A. (2019) Validating the demographic, political, psychological, and experimental results obtained from a new source of online survey respondents. Research & Politics, 6(1), 2053168018822174
- de Araújo Lima, P. F., Crema, M., & Verbano, C.(2020) *Risk* management in SMEs: A systematic literature review and future directions. European Management Journal, 38(1), 78-94
- Hew, T. S., & Kadir, S. L. S. A.(2016) Predicting the acceptance of cloud-based virtual learning environment: the roles of self-determination and channel expansion theory. Telematics and Informatics, 33(4), 990-1013

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- Hennel, P., & Rosenkranz, C. (2020) Investigating the "Socio" in Socio-Technical Development: The Case for Psychological Safety in Agile Information Systems Development. Project Management Journal, 8756972820933057
- Khalid, L. S., & Rahman, I. A.(2019) Conceptual Model for the External Factors Affecting Project Performance Using . PESTLE Factors
- Khalid, L. S., & Rahman, I. A (2019). *Measuring the Effect of the External Factors on Iraqi Construction Projects Performance Using.* PESTLE Technique
- Khalid, L. S., Rahman, I. A., Abdulaali, H. S., & Abdulhasan, M. J.(2020) Structural Equation Model to Evaluate the External Factors of Iraqi Construction Projects Performance Using PESTLE Technique
- Khalid, S. S., Ahmad, M., Khalid, L. S., & Odimegwu, T. C. (2018) Problems and Factors Affecting Property Developers Performance in the Dubai Construction Industry. International Journal of Scientific and Research Publications, 8(11)
- Khalid, S. S., Ahmad, M., Khalid, L. S., & Odimegwu, T. C. (2018) Problems and Factors Affecting Property Developers Performance in the Dubai Construction Industry. International Journal of Scientific and Research Publications, 8(11)
- Kamello, T., & Jauhari, I. Legal Protection for Micro, Small, and Medium Enterprises in Aceh Province, Indonesia. In International Conference on Law, Governance and Islamic Society (ICOLGIS 2019) (pp. 259-263). Atlantis Press, 2020.
- Majid, U.(2018) *Research fundamentals: Study design, population, and sample size.* Undergraduate research in natural and clinical science and technology journal, 2, 1-7

- Mas, A., Mesquida, A. L., & Pacheco, M. (2020) Supporting the deployment of ISO-based project management processes with agile metrics. Computer Standards & Interfaces, 70, 103405
- Raharjo, T., & Purwandari, B. (2020) Agile Project Management Challenges and Mapping Solutions: A Systematic Literature Review. In Proceedings of the 3rd International Conference on Software Engineering and Information Management (pp. 123-129)
- Ratnasingam, J., Khoo, A., Jegathesan, N., Wei, L. C., Abd Latib, H., Thanasegaran, G., & Amir, M. A. (2020) How are Small and Medium Enterprises in Malaysia's Furniture Industry Coping with COVID-19 Pandemic? Early Evidences from a Survey and Recommendations for Policymakers. BioResources, 15(3), 5951-5964
- Romano, G., Guerrini, A., & Senoner, T. (2020) *Establishing* a new water tariff method that complies with european principles and respects statutory autonomy: The case of South Tyrol. Utilities Policy, 64, 101050
- Taherdoost, H.(2016) Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in a research. How to Test the Validation of a Questionnaire/Survey in a Research (August 10, 2016)
- Tillmar, M. (2020) Practicing participant observations: capturing entrepreneurial practices. In Research Handbook on Entrepreneurial Behavior, Practice and Process. Edward Elgar Publishing
- Qazi, A., & Akhtar, P. (2020) Risk matrix driven supply chain risk management: Adapting risk matrix-based tools to modelling interdependent risks and risk appetite. Computers & Industrial Engineering, 139, 105351