

أثر التوجهات الرشيقة على المشاريع الإنشائية في المملكة العربية السعودية

The Influence of Agile trends in the Construction Projects in KSA

الإعداد:

تيسير عمار تيسير أحمد – 221002434

عبدالمك هاشم بن مليح – 221000546

بندر عبدالعزيز العبيدان – 20223006460

الإشراف:

الدكتور وليد سليمان

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1. Introduction:

Agile project management has appeared as a response to the increasing complexity, volatility, uncertainty, and ambiguity of software development industry projects (Augustine, 2005). From its successful implementation in the software development industry, Agile has become a trend in project management. Agile has demonstrated many benefits realization from its adaptation such as increased flexibility and adaptability, reduced risk, improved communication and collaboration, increased customer satisfaction, and improved quality (Ekström & Pettersson, 2016; Mohammed & Jasim, 2018). Many industries have become influenced by Agile project management and sought after the transformation of its project management methods (Krishna, 2019).

Construction Projects has also recognized the benefits of agile project management. Many construction projects worldwide have opted for agile and hybrid approaches. Project Management Institute (PMI) in its “pulse of the profession 2021: Beyond Agility” report surveyed over 3,000 project management professionals from around the world, including over 300 project management professionals working in the construction industry and found that the use of agile methods in the construction projects has increased from 14% in 2017 to 24% in 2021. The study also found that 90% of respondents believe that agile methods are beneficial to the construction projects, citing benefits such as improved communication and collaboration, reduced risk, and improved quality. Such study proves that the construction projects worldwide is influenced by the agile trend positively.

However, construction projects in Saudi Arabia are a late adopter to Agile project management. Multiple studies conducted in Saudi Arabia found that there is a growing interest in agile project management. However, these studies also found that there is a lack of awareness and training for agile project management. An example, a study surveyed 250 construction professionals in Saudi

Arabia found that only 10% of respondents had received any training in agile project management. Additionally, 60% of respondents believed that there was a lack of training and support for agile project management implementation in the industry. Thus, From the findings of such studies the question of whether the agile trend is influencing Construction Projects in Saudi Arabia is posed. Furthermore, are project managers and workers in Construction Projects in KSA aware of APM. Therefore, this research paper aims to investigate how is the construction projects in Saudi Arabia are influenced by the Agile trend. Furthermore, to investigate the awareness of PMs and Workers in construction projects in Saudi Arabia of APM. By providing statistics on ongoing construction projects and professional insight in the field in Saudi Arabia, the research aims to contribute to the existing knowledge by providing more information. Furthermore, the research results will help to guide other researchers to where they should put their efforts by showing the gaps found in this field by this research.

2. Research problem:

The research problem is that most projects in the construction industry are still using the traditional approach. Hence raising the question; **How Construction Projects in KSA is influenced by Agile trends?**

- Is PMs in Construction Projects in KSA being aware of APM?
- What are the reasons contributing to Construction Projects in KSA being/not being influenced by agile trends?

3. The importance and objectives of the research:

- Is to identify how much Construction Projects in KSA is influenced by the Agile trends.
- To identify whether PMs and Workers in the industry are aware of APM and its benefits.
- To identify the underlying reasons behind the weak/strong influence of the agile trends in Construction Projects in KSA.

4. Research hypotheses:

From the literature review, multiple related studies found that there was a lack of awareness of agile methods, lack of training in agile project management, resistance to change, cultural challenges, and integration of agile with traditional project management methods. Thus, the research hypothesis that, while there is a growing interest in Agile, the agile trends are not strong enough to influence Construction industry to incorporate it in its projects. The research also hypothesis that PMs and workers have a shallow understanding to Agile and how to be incorporated in construction projects.

5. Literature review:

Another study by Abdelrahman and El-adawy (2021) found that agile project management (APM) can enhance collaboration in Saudi Arabian construction projects. APM was associated with improved communication, decision-making, and conflict resolution. APM encourages frequent communication and feedback, collaborative decision-making, and flexibility in planning and execution. These factors can help to keep projects on track and resolve conflicts before they escalate.

The authors recommend that organizations adopt APM and provide training to their employees on how to use it effectively (Abdelrahman and El-adawy, 2021).

A study by Alnaser and Al-Saleh (2019) surveyed 125 construction professionals in Saudi Arabia to identify the factors that influence the adoption of agile construction. The study found that the most crucial factors were leadership support, organizational culture, and training. Leadership support was the most crucial factor, followed by organizational culture and training. Project complexity and client requirements were less important (Alnaser and Al-Saleh, 2019)

6. Research Methodology:

The study will utilize a mixed-methods research design, which includes both quantitative and qualitative data collection methods:

Literature Review: A comprehensive review of academic literature on the adoption of agile project management (APM) in the construction industry in Saudi Arabia will be conducted. The review will target studies that used surveys or interviews to identify the current state of APM in Construction industry in KSA, including their findings, which will serve as the foundation for this research.

Data Collection: Surveys will be constructed with questions designed to identify whether the participants in Construction industry in KSA are aware of APM, aware and using APM values and methods, and their perception of Construction projects converting to APM. The surveys will be distributed online to collect data from a broad range of participants in the industry.

Interviews: Semi-structured interviews will be conducted with Construction industry participants in KSA. The interview questions will be constructed based on the survey's results to figure out the underlying reasons behind the results. Furthermore, the interviews will help to identify the gaps in academic research that need to be fulfilled to better support the adoption of APM.

Consolidation: All data gathered through data collection and interviews will be merged to answer the research questions. The study will present its results in a coherent manner, reinforcing other studies, findings, updating them, and drawing up-to-date conclusions.

7. Research limits:

Sample size and geographic location: The study's findings may be limited if the sample size is too small or if the participants are not representative of the population of interest.

Human factors: Surveys are subject to human factors such as honesty and transparency.

Participants may not always answer questions honestly, and they may not always be transparent about their opinions. This can introduce a margin of error into the findings.

Bias: The study's findings may be biased if the participants are all PMs. PMs may have a personal stake in promoting agile methods, and their opinions may not be representative of the views of all stakeholders in the construction industry.

8. The General Perception of the research structure:

The researcher generally envisions the following structure for the research:

- **An introduction** includes an opening statement that captures the reader's attention, followed by background information on the topic, the purpose of the research, and a brief overview of what the reader can expect to learn or gain from the research.
- **A literature review** to identify and synthesize the existing research on the topic.
- **A research question** that clearly defines the purpose of the study and the specific research questions that will be addressed.

- **A methodology** that describes how the research will be conducted, including the data collection methods and data analysis methods.
- **A conclusion section** that interprets the findings, discusses their limitations, and identifies directions for future research.

9. Initial reference list:

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