

The Impact of Project Management Approaches on Project Performance: An Analysis of IT Sector of Pakistan

ABSTRACT:

The motive of this study is to examine the impact of project management approaches on project performance in the IT sector of Pakistan. The study can be beneficial for the success of IT-based projects under the uncertain business environment and poor economic conditions in the country. In project management, different approaches traditional, agile, and hybrid are applied for increased project performance. The implementation of project management approaches will increase the project performance of the IT sector in Pakistan and enhance the capability of the software organization to achieve a competitive advantage. This study will also facilitate the project managers to adopt the best strategy for projects in this uncertain environment in Pakistan. The result will show the significant impact of agile and hybrid approaches on project performance and will improve the scope of project management in Pakistan. The study focuses on the changing environment how these approaches affect the performance measures of the projects and how the project managers can utilize the best one to enhance the performance of the project. The result of this research will support the IT industry of Pakistan and will bring innovation in this sector which encourages the business economy of the country.

KEYWORDS:

Project Management, Project Performance, IT Sector, Pakistan, Business Environment

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Introduction

For several decades many projects have been managed by using a collection of methodologies which is called traditional or conventional strategy (Larman & Basili, 2003). The focus of this strategy is on strict command and control over project planning in order to achieve the set of goals and objectives. The main theme of conventional management is the project plan with constraints of time budget and cost. Traditional project management has an impact on performance but this methodology is bounded in time budget and scope constraints and significant only in the static environment it has certain implications in dynamic environments and the main cause of these dynamics is the changing economic perspective, cultural intelligence, and end user involvement.

The agile strategy defines the management of a project by dividing it into phases and highly involvement of stakeholders, making desired changes at different phases of the project. e. The scope of this agility is expanding almost in all sectors of project-based organizations. Due to its reliability, the span of the agile strategy is expanding

towards other non-software development projects(Dybå & Dingsøyr, [2008](#)). existing evidence of the studies are not enough to examine that this strategy has been successful or not. This method provides integration in the documentation and is much more reliable in challenging conditions for the project managers. Change in business dynamics and to get a competitive advantage the organizations swapped from standard project management because of end-user requirements. Agile has swept the PM industry in recent years, mostly in software evolution.

The hybrid strategy which is the composition of agile and traditional strategy is an emerging strategy of project management by utilizing a combined strategy, organizations can sake benefit from the agile strategy without neglecting the traditional (Barlow et al., [2012](#)). Project-based firms are using combined models to enhance the features quickly and respond to market dynamics. It ensures the improvement of team performance and proper testimonial and standard business analysis to keep a project in the right direction. (Conforto & Amaral, [2016](#)) Stated that the hybrid approach is growing when an organization adapts the financial process with the antagonistic need to use strategy in an uncertain environment.

The standard definition of project performance is how the project meets the domain of duration, cost and extent, and constraints (Dvir et al., [2003](#)). The projects are different in parameters such as size, value, and duration. There is no clear-cut definition of project performance and in order to achieve this milestone different models have already been developed(Mir & Pinnington, [2014](#)).

Traditional project management has an impact on project performance but this methodology is restricted in time budget and scope constraints and is significant only in static environments it has certain implications in a dynamic environment and the main cause of these dynamics is the changing economic perspective, cultural intelligence, and end-user involvement. Its various types of agile methodologies and their odds of success determine the effectiveness of the agile methodology. They presented important research findings in support of agility.

The impact of agile was not directly compared to other techniques such as traditional or hybrid in this study. (Gemino et al., [2020](#)) In their most recent work, go much further. It examines the consequences of three approaches on project performance: heavyweight, agile, and hybrid. They also reaffirmed the importance of this in meeting stakeholder expectations. In terms of this project success metric, both these approaches outperformed the conventional one.

Three techniques, on the other hand, performed similarly in terms of money and time success, as well as scope and quality success because the majority of the projects were finished in North America, the global impact was also limited. More study is needed in this sector to compare various approaches while taking into consideration different contexts and multifaceted dimensions of project success, indicating a substantial vacuum in the literature.

Outside the software sector, where the waterfall approach was widespread, the numerous types of research into the consequences of the agile strategy on project performance have been circumstantial, \ consisted of minor samples, or restricted by geography (Nowotarski & Paslawski, [2015](#)). So far, many authors have proposed empirical investigations contrasting traditional and agile approaches (Niederman et al., [2018](#)).

Objectives of the Study

The main objective of this research is

1. To explore the association between the Agile approach and project performance measures.ie project efficiency, impact on the team, impact on customer and business success.
2. To explore the association between the traditional approach and project performance measures.ie project efficiency, impact on the team, impact on customer and business success.

Statement of the Problem

Business environment dynamics challenge the project managers in the implementation of the project strategies to the projects. There are different PM approaches that Project Managers adopt while managing the projects. The challenge is to find out which approach is suitable in a given context. This study's objective is to evaluate that under this changing environment how these approaches affect the performance measure of the projects and how the project managers can utilize the best one to enhance the performance of the project.

Significance of the Study

This analysis will be fruitful for the IT sector and it will facilitate the project managers to adopt the best strategy for projects in this uncertain environment as well as for another project sector in Pakistan the result will show the significant impact of agile and hybrid approaches on project performance and will improve the scope of project management in Pakistan.

Review Of Literature

Several major approaches to PM, according to (Baskerville et al., [2011](#)). In research and practitioner literature, agile and traditional methodologies are well defined; the conventional approach is gaining traction. Both approaches are explained in detail; the hybrid approach is addressed in greater depth to provide a comprehensive overview of this rapidly growing category. The key research issue was whether the project management approach had a substantial impact on project deliverables. The research shows that agile projects are more successful. On the traditional success indicators of budget and timeliness, hybrid and traditional techniques perform similarly. An important finding was that in terms of stakeholder success, agile and hybrid techniques overcome the conventional.

Traditional Approach

The traditional approach is highly composed of rigid logically based strategies for planning and controlling activities that focus attention on the significance of the planning phase (Conforto & Amaral, [2016](#)), but it is limited by the size of the project. Projects are proportional predictable and linear, according to the logical and normative approach. Restrictions and project objectives are clearly specified (DeCarlo, 2004; Fernandez, 2008). Such initiatives are anticipated to have considerably less demand change, and significant end-customer interaction is not required. To maximize project activities and outcomes in their implementation, the focus is on planning and linear monitoring(Boehm, [2002](#)). the traditional project management approach's good practice and deliverables have been proven on a large scale and spread for decades(Davir et al., 2003). This strategy is marked by inflexibility when it comes to shaping project uncertainty, which includes change in customer premises and unpredictable activities, as well as project complications, which include complex involvement both within and outside the project staff. Limitations put on conventional PM systems as a result of an increase in demands for constant innovation, followed by cost-cutting demands, have affected all industries, leading to the birth of new PM methodologies. The information technology (IT) sector was strongly tied to these emergent tactics and software development due to the unique characteristics of this industry.

The conventional approach to designing software is seen as using heavyweight approaches. These approaches are built upon a number of sequential processes, including requirement definition, solution design, testing, and deployment. Heavyweight techniques demand that at the outset of a project, a stable set of requirements be defined and documented. Despite the fact that there are numerous heavyweight techniques, I'll keep our talk to the most important ones: traditional, twist model, and unite process.

Characteristics of the Traditional Approach

There have been heavyweight techniques for a very long time. In order to increase software development's predictability and efficiency, they put a structured method on it. They are not well known for being popular or for

being particularly successful. According to Fowler's criticism, these approaches are overly bureaucratic and require so much compliance that the entire pace of development is slowed down. These are common traits of the heavyweight approaches.

Limitation of Traditional Approach

The way heavyweight techniques approach those participating in the process development is a key point of criticism. Traditional approaches treat individuals the same way they do their processes: as predictable components. People are more important components in software evolution, according to Alistair Cockburn's study, Agile Software Development. From the human factor, he draws this conclusion from his research on software projects. The issue is that methodology has historically been in opposition to the idea that people are in order for a project to succeed.

Anticipating Approach

Heavy-weight approaches have a tendency to first plan out a significant portion of the software development process over an extended time period. This method is based on the development being predictable and reproducible in engineering. A lot of attention is placed on the drawings highlighting the system's demands and how to effectively address them. After that, the drawings are given to a different team that will construct the system. It is anticipated that the construction process will adhere to the plans. The blueprints, which serve as the basis for the construction process, outline exactly how the system must be built.

Complete Documentation

The required document is viewed as the most known piece of documentation in conventional software evolution. The large design upfront (BDUF) process, which is a significant heavyweight technique, is based on the idea that all customer requirements may be gathered upfront before any code is written. Once more, the success of this method in this engineering field makes it appealing in software business. Obtaining the customer's approval first, gathering all the needs, and ordering the procedures (additional paperwork) to restrict and control.

The project's level of predictability is limited by changes. In software initiatives that are vital to survival, predictability is crucial.

Process Based

Waterfall approaches seek to define a process that will function properly for whoever uses it at any given time. The managers, designers, developers, testers, etc. would all be required to carry out specific activities as part of the process. Each of these jobs has a well-laid-out process.

Tool Design

To complete and deliver each task, project management tools, code editors, compilers, etc. must be used.

Agile Approach

In recent years, the Agile project management strategy has had an upper hand in countering the risks of traditional, front-end planning strategies, which frequently result in gained popularity as a way for subsequent development pathologies. It was designed for software developmental projects and is currently involving primarily the IT sector, however, due to its success, it is increasingly being used in non-IT projects.

Agile techniques for project management have become mainstream in the last two decades (Baskerville et al., [2011](#); Dybå & Dingsøyr, [2008](#)). Different agile approaches and practices have been defined and these methodologies could be combined by a common deep coating, which we call agility. Basic results are interpreted, first targets are clearly defined, and project success measures are reanalyzed and further redefined by using an

adaptable process in an agile approach. An important aspect of this strategy is the assignment of responsibilities to the team and the involvement of all stakeholders in both official and informal project coordination. Analyzed that several indicators can be modified by agility such as job satisfaction in their research to examine agile and traditional approaches. Agile methods are now widely used, with evidence that they improve project success. (Conforto et al., 2016) Are extending from outside the software development sectors (Gemino et al., 2020).

In this uncertain business environment the success level of the agile approach is higher than the other ones; much of the research in performance has thus far been incidental or based on small sample sizes. Furthermore, findings of past studies show the result of mixed support for agile methodologies and supremacy. (Magazinius & Feldt, 2011), Looked at the agile versus non-agile differences in companies, or companies that have or have not implemented this methodology, using examination with different respondents from eight companies. According to them, there was no substantial difference between the two strategies in meeting schedule and financial targets and also as the cause of failure. This can result in adverse outcomes such as the nomination of ineffective projects, over-costing more than the original rejected estimate, or the rejection of more advantageous initiatives. The project's success "There are few things in the area of this field that are as regularly discussed and yet so rarely agreed upon as the concept of project success," Pinto and Slevin (1988) observed a few years ago, traditional project performance indicators are the focus in delivering a project of acceptable quality while adhering to the projects time and budget constraints: the "triple constraint" is a term that refers to a set of three Atkinson, (1999); Kerzner, (2013). On the contrary project performance is generally characterized in a vast context. Much of the literature at the time, according to (Munns & Bjeirmi, 1996) believed "projects cease when were handed to the customer. This is the main point at which project the management ends.

Agile Modeling

Agile strategy is making an effort to once again provide a composite solution to the business community which is demanding lighter weight along with fast and lithe software evolution processes. Agile can also defined as "the quality of being agile; study for motion; liteness, sequence, and dexterity in motion" as mentioned in the Oxford Dictionary.. All of the mentioned approaches agreed that "lightness" in their procedures was the only way to create high-standard software and, more importantly is customer satisfaction. The following list includes some of the most popular agile methodologies.

Extreme Programming (XP)

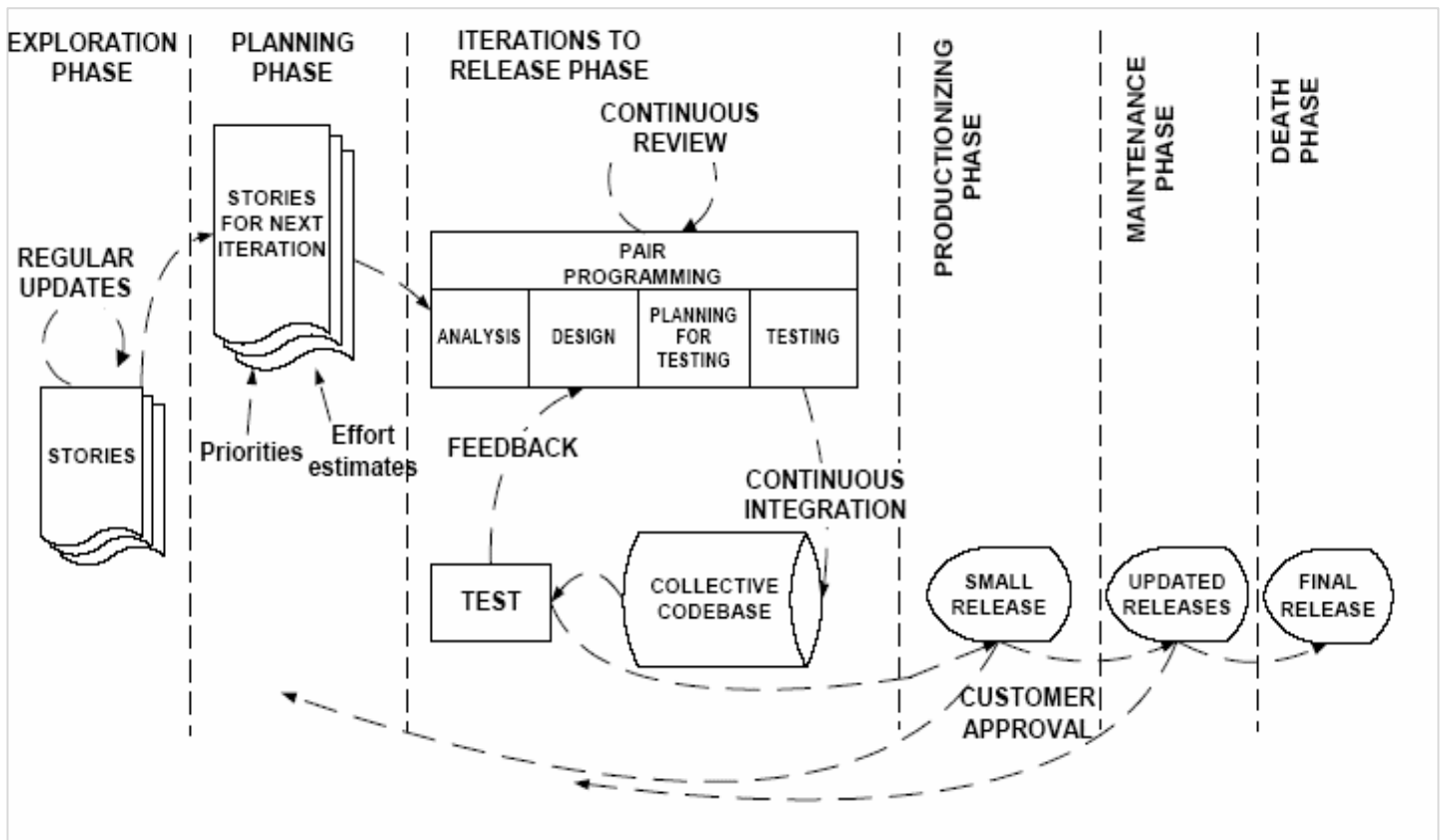
According to Williams and Cockburn (2003), XP team members dedicate a small amount of time each day to team building, project management, feedback, design, and programming. The word "extreme" refers to propelling those reasonable guidelines and practices of their limitations. Below is a list of XP terminology.

- ▶ **Planning:** The client sets the scope, and schedule of releases based on the programmer's estimates of the effort required to implement client stories.
- ▶ **Short/small releases:** an application is created in a succession of brief iterations that are regularly updated. Daily to monthly updates are made to the software.
- ▶ **Metaphor:** A series of analogies between the client and the programmers that illustrate how the system functions define the process
- ▶ **Plain Design:** prominences placed on creating the most straightforward solution implemented, and extraneous complications and code are instantly eliminated.
- ▶ **Refactoring:** entails reorganizing the system to eliminate replication, enhance communication, simplify, and increase flexibility without modifying the program's functions.
- ▶ **Pair programming:** Two programmers write all of the production code.

- ▶ **Continuous unification:** As new code is ready directly included in the running system. The system is rebuilt during integration and will pass tests in order for the modifications to be accepted.
- ▶ **Workweek:** Nobody may work for two weeks of overtime. A 40-hour workweek is the maximum allowed; otherwise, it will create a problem.
- ▶ **On-site consumer:** the consumer must be accessible to the concerned team at all times.
- ▶ **Coding Standards:** The programmers adhere to coding guidelines in order to bring consistency and enhance communication within the development team.

Figure 1

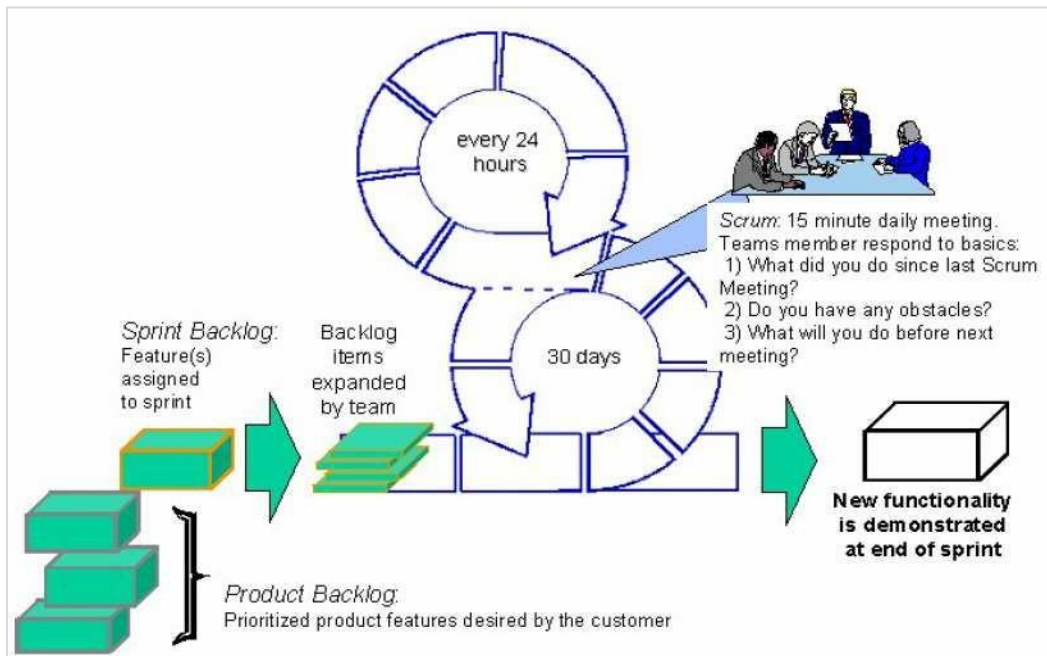
Lifecycle of the XP process



Scrum

Scrum is a gradual, sequential system for handling any type of project or product development. Mainly focus on how the team members should coordinate to generate system flexibility in a dynamic environment. It will create a probable set of functions at the conclusion of each loop.

- ▶ **Product backlog:** this is the prioritized features and modifications that the project team, customers, marketing, and sales teams have all requested be made to the system. The Product Backlog must be kept up to date by the Product Owner.
- ▶ **Sprints:** are a 30-day process for adjusting to the environment's shifting factors (needs, time, resources, expertise, tech, etc.). A sprint's output must be a potentially transferable software increment.
- ▶ **Sprint Backlog:** The features currently assigned to a specific Sprint are listed in this section. A fresh iteration of the system is given once all the features have been finished.
- ▶ **Daily Scrum:** This is a 15-minute counseling that is held every day to judge the Scrum Team's progress and discuss any challenges should be facing.

Figure 2*Scrum process*

Agile Manifesto

The Agile 'Software Development' Manifesto was created when many delegates from various agile approaches were subjected to establish an Agile Alliance to better forward their ideas. Before the alliance, developers used the majority of agile techniques, but it wasn't until the alliance that these techniques were compiled into a useful framework.

Characteristics of Agile Methodologies

- ▶ **People-oriented:** Agile approaches view humans as the most significant element of software methods, including clients, developers, stakeholders, and end users.
- ▶ **Adaptive:** Agile process participants are not averse to swap. Agile is open to fulfill throughout the whole project. Since they signify that they acknowledge more about what it will take to cover the market, they see revisions to the specifications as a positive evolution.
- ▶ **Balancing Flexibility and Planning:** The irreversibility of alternatives is one of the root causes of complications in this viewpoint. Making decisions that are flexible to change means that making the perfect choice is less critical, which eases your life. The result of agility design is that designers must consider how to make decisions without becoming irreversible.
- ▶ **Empirical Process:** Software is created using agile methodologies using a nonlinear or empirical process. Systems in engineering can be defined or empirical.
- ▶ **Decentralized Approach:** It is more economical than an autocratic management approach, integrating a decentralized management style can have a consequential negative influence on a software project.
- ▶ **Collaboration:** Feedback is a main and influential part of agile progressions. The software's user coordinates with the development team and provides frequent feedback on their development. Mutual understanding among agile team members is very important. Collaboration enhances conversation since agile methodologies take a decentralized approach.
- ▶ **Small Self-organizing:** Agile teams are self-organizing teams. After being made aware of the duties, the team as a whole decides how to best fulfill them. Agile teams communicate and discuss every aspect of the project as a group.

Limitations of Agile Methodologies

The goal of this approach is comparable to IBM's goal of being able to always have functional code and develop it over time into a functional system. However, this chief programmer strategy briefly had early success before losing ground. The cause of this is explained by Constantine, who says that not every issue can be broken down into manageable chunks for quick incremental improvement.

The most crucial human factors for a project's success are amicability, talent, skill, and communication, according to Alistair Cockburn and Jim High Smith. According to Boehm, The inevitable fact that 48.9999 percent of software developers worldwide are under average is a big factor in this. Also notes his contribution to this issue with agile techniques. Premium personnel are valued highly in all agile techniques," Although agile doesn't.

It focuses on information that is incorporated by the team instead of writing the knowledge down as documentation, which calls for uniformly high-capability individuals. The application of the agile manifesto concept of "Using Working Software rather Than Detailed Documentation "is another aspect of agile approaches that could be problematic. Boehm queries the applicability of the simplicity-focused approach of agile.

Comparison of traditional and agile approach

There have been conventional evolution methods for a long time. Regardless of the project's size, it has a number of shortcomings, including linearity, a lack of adaptation to changing needs, and unnecessarily rigid processes. After taking these issues into account, Beck created the first agile methodology, called Extreme Programming.

Hybrid approach

Researchers and practitioners have reported on a third way that blends traditional and agile approaches in several disciplines of literature. A hybrid management approach is the composition of the methods and practices from different PM approaches. The combination considered in our sample is agile and traditional approaches. Throughout the paper, we will recommend a hybrid strategy. These combined practices are briefly explained in the field of software, IT, and studies (Papadakis & Tsironis, [2018](#)), but empirical research on the implications of this composite on success has been rare (Bick et al., 2017).

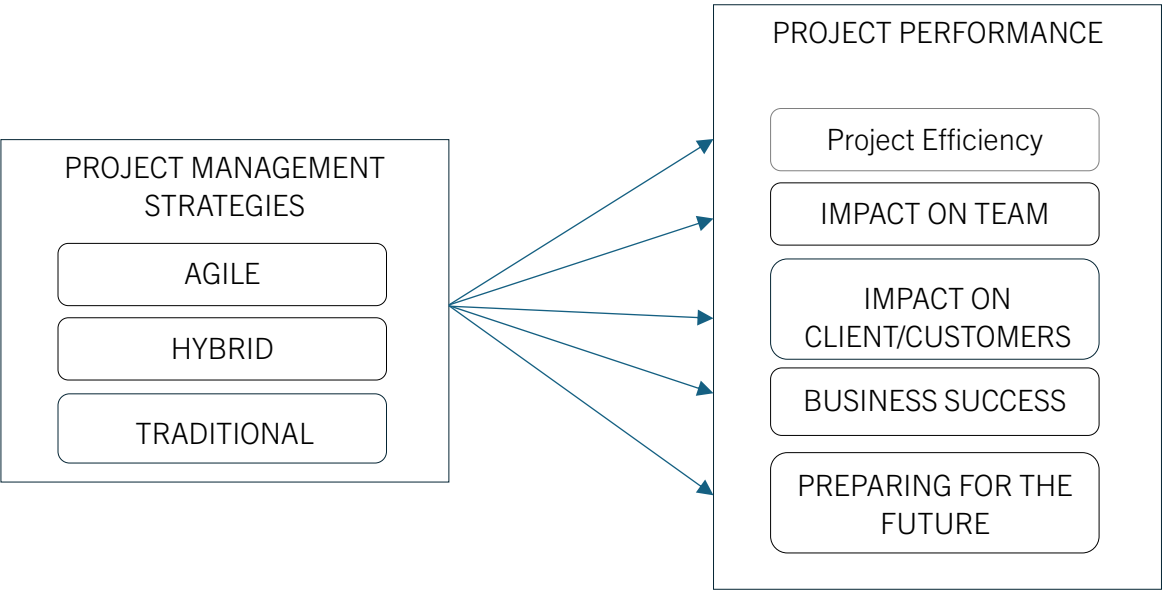
A hybrid method of project management has the ability to produce Pareto improvements, i.e., they can fulfill the criteria of triple constraints and quality as well same as traditional approaches while saving money. Analysis of the small-scale research shows that a considerable percentage of IT projects combined agile and other methodologies (west et al., 2010)and this trend will continue(West et al., 2011) this study's large diversified samples suggest that hybrid techniques are common. Project Management Institute, 2017) covered a variety of hybrid life cycles, while the most recent (Association of Project Management, 2019) added a segment on hybrid life cycles.

The key research issue was whether the project management approach had a substantial impact on project deliverables. The research shows that agile projects are more successful. On the traditional success indicators of budget and timeliness, hybrid and traditional techniques perform similarly. An important finding was that in terms of stakeholder success, agile and hybrid techniques overcome conventional practices.

Conceptual/Theoretical Framework

The conceptual framework of our research is based on previous literature and research studies based on it. The conceptual framework is designed to examine the impact of PM approaches on project performance within the IT sector of Pakistan. Our framework consists of two main variables: approaches which refer to the practices that an organization uses to develop a strategy. The second variable is Performance which refers refers to project success.

Figure 3
Conceptual Model



Research Methodology
Population

The total number of IT companies in Pakistan is 2,354 to further limit the research the IT companies in Federal area will be selected and the total IT firms in Islamabad are 108. The total number of Project Managers, team lead,, and project coordinators in It firms working in Islamabad will be the respondents.

Sample

The sample size will be around 200 based on the responses through simple random sampling.

Variables and their Operationalization

The project management approach as an independent variable is operationalized with an adopted questionnaires from Serrador and pinto (2015), Spundak (2014),Boehm et al, (2002).A unipolar, five point likert scale type will be used that was used by (Nunnaly and Bernstien, 1994) to measure the perception of project success dimensions (1-strongly disagree,5- strongly agree)

Statistical Technique

Descriptive statistics, correlation, and SPSS will be used for the analysis of data.

Questionnaires Design

The questionnaire was developed using (Nunnaly and Bernstien, 1994) to measure the perception of project success dimensions (1-strongly disagree, 5- strongly agree) which includes a cover letter and some instructions that are provided as Appendices A. First, the cover letter listed the researcher's name, institution, academic background, and a reason for gathering data. Secondly attach the questionnaires with the cover letter which helps the respondents to better understand of it. The project management approach as an independent variable is operationalized with an adopted questionnaire from Serrador and pinto (2015), Spundak (2014), and Boehm et al, (2002). A unipolar, five points Likert scale type will be used that was used by (Nunnally and Bernstein, 1994) to measure the perception of project success dimensions (1 strongly disagree,5- strongly agree)

Data Analysis

After collecting the data, the data is coded in software (SPSS) for the purpose of making entry easy and further analysis. SPSS version 25 was used for different types of analysis such as reliability analysis, descriptive statistics, correlation, and regression analysis in this study. The use of five points Likert scale is because it is simple to understand for the respondent and it takes less effort and time to complete higher point scales.

Descriptive statistics

Descriptive statistics is basically a technique of quantitative description which gives us a description of the collected data. The aim of the descriptive statistics to summarize the data set. The main tool used for this was mean and standard deviation.

Reliability Analysis

It is used to study the properties of the measurement instrument and the items it contains. This procedure gives us information about the relationship between individuals on the scale. The reliability test revealed that all of the constructs had values higher than the cutoff point (0.7, as used by Bagozzi and Yi, 1988). This indicates that they were all connected to their respective constructs, hence validating the hypothesized connections between the indicators and constructs.

Correlation Analysis

The correlation is considered as one of the most important tool which is used to analyze the data. To investigate the relationship between the variables, we use the Pearson correlation.

Regression Analysis

Regression analysis essentially searches for relationships that may be contributing to the variable of interest. With the help of this technique, it is possible to determine the quantitative impact of a contributing variable on a variable that it affects.

Results And Discussion

Demographic Data of Respondents

A questionnaire which consists more than 25 questions were sent to the project managers, team leads and project coordinators. This section describes the details of respondents to whom we send the questionnaire. This data describes gender, age, education, experience, organization and designation of the respondents.

Over All Descriptive Analysis

Table 1

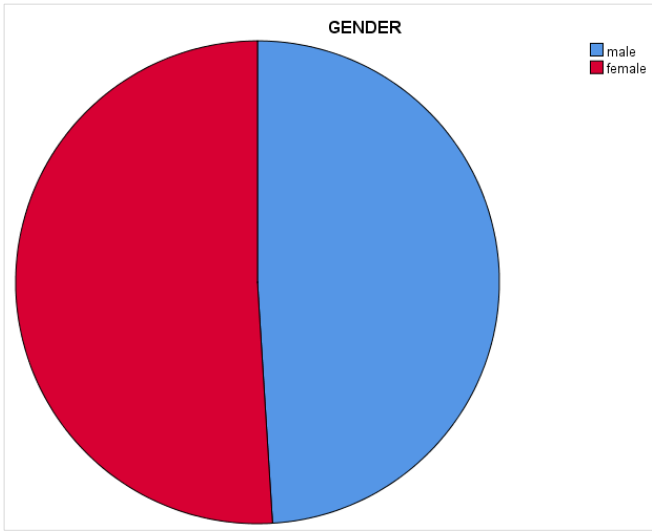
Descriptive Statistics Of The Demographics (N=Number Of Respondents)

Descriptive Analysis		Frequency	Percent
GENDER	Male	74	49.0
	Female	77	51.0
AGE	under 25 years	73	48.3
	25-35 years	78	51.7
LENGTH	LESS THAN 1 YEAR	52	34.4
	1-2 YEAR	42	27.8
	MORE THAN 2 TO 5 YEAR	27	17.9
	MORE THAN 5 TO 10 YEARS	30	19.9

Descriptive Analysis		Frequency	Percent
LEVEL	TEAM LEAD	7	4.6
	PROJECT MANAGER	47	31.1
	PROJECT COORDINATOR	17	11.3
	4	63	41.7
	5	14	9.3
LOCATION	NATIONAL	51	33.8
	INTERNATIONAL	79	52.3
	REGION	21	13.9

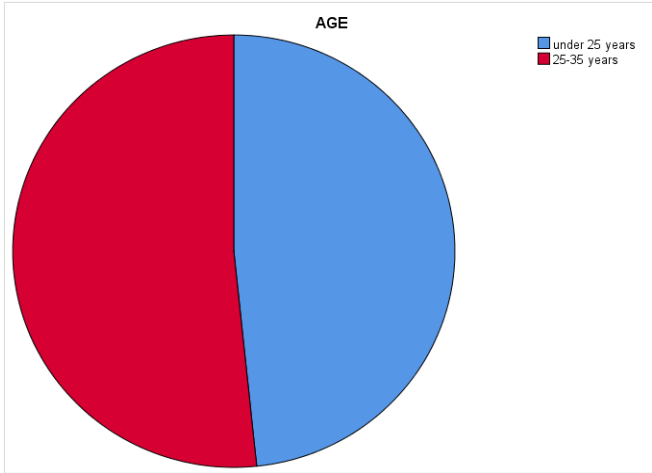
The diagrammatic (Pie chart) representation of the above demographic data analysis is given:

Figure 1
Gender



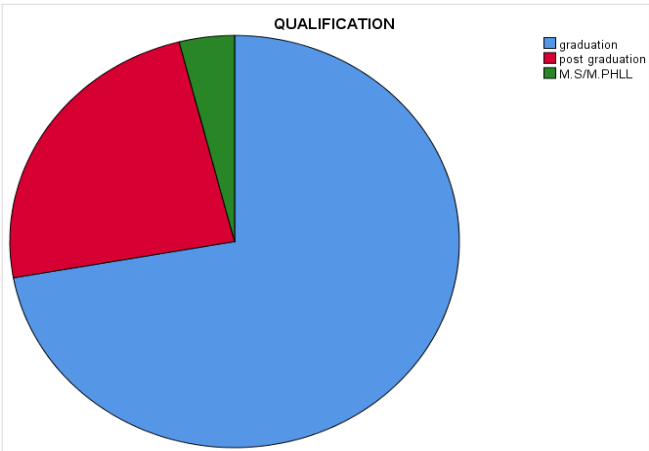
Here the data is collected from the manager and operational managers. The total number of respondents is 152 out of which are 70 male and 82 are female. Its shows that majority of the respondents are females.

Figure 1
Age



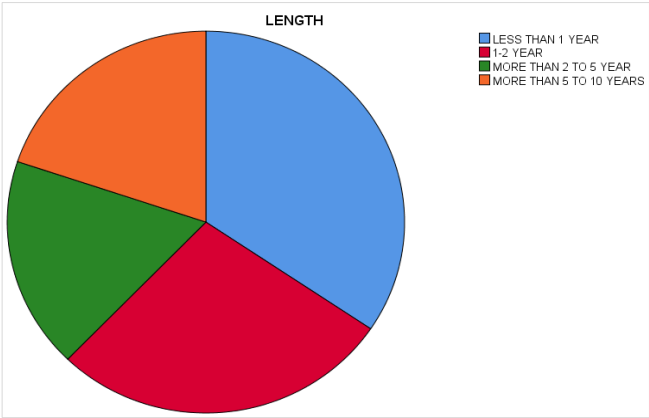
Here is the age distribution of the respondents the majority of the respondents having age about 25-35 years.

Figure 3
Qualification



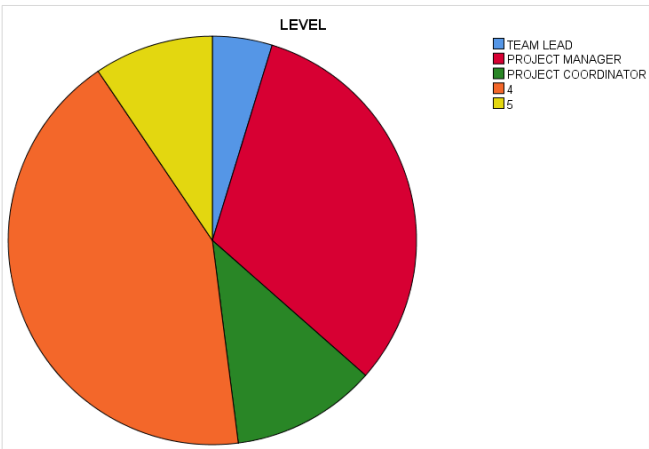
Here is the qualification level of the respondents mostly the graduates.

Figure 4
Experience



Here the data is collected from the manager and operational manager of the bank. The total number of respondents is 151 out of which are 70 male and 81 are female. Its shows that majority of the respondents are females.

Figure 5
Level



The data is collected from the manager, project manager, team leads. And project coordinators

Data Analysis

In our questionnaire, we have two independent and one dependent variable based on the literature review are used to calculate the relationship between independent (PM approaches) and dependent variable (project performance). For analysis the data we have send the questionnaire to the 200 employees of IT sector which re on the position of managers, project managers, team lead and operational manager in the different IT firms out of which we have receive only 151 responses. We have collected the data from the different branches of both the banks which are located in Islamabad region. The response rate of our research is:

Response rate= $(152/200) * 100 = (0.76) * 100 = 76.3 \%$

Reliability

In our study reliability means calculating a construct ability to produce consistent results. The overall reliability of the variables are:

Table 2

Reliability	No of items	Cronbach Alpha
Traditional	4	.814
Agile	3	.710
Project efficiency	3	.723
Impact on team	3	.813
Impact on customer	3	.823
Business success	3	.712

Descriptive Analysis

The descriptive test founded on data for sample size (N), minimum, maximum, mean, and standard deviation.

Table 3

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
AG1	152	1	5	2.99	1.638
P1	152	1	5	3.38	.919
P2	152	1	4	2.20	1.116
AG2	152	1	5	2.07	.882
T1	152	1	5	1.93	1.155
P3	152	1	5	2.91	1.069
AG3	152	1	5	2.70	1.163
P4	152	1	5	2.04	1.228
P5	152	1	5	3.25	1.075
P6	152	1	5	1.84	1.026
P7	152	1	5	2.75	1.251
T2	152	1	5	2.06	1.368
P8	152	1	4	3.36	.785
T3	152	1	5	3.28	.938
T4	152	2	5	3.43	.743
P9	152	2	5	3.35	.721
P10	152	1	4	3.32	.742
P11	152	1	4	3.29	.697

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
P12	152	1	4	3.20	.740
Valid N	152				

Correlation Analysis

As we know that the correlation is the mutual relationship and degree of association between variables and its shows the strength connection between two or more two variables. We use Person correlation to inspect the correlation between the variables. If the correlation coefficient is between -1 and 1, closer to 1 shows a strong correlation between the two variables. Values with a negative sign show a negative correlation between the variables or an inverse correlation, whereas values with a positive sign show a positive correlation between the variables.

Table 4

Correlation

Correlations		P	T	AG
P	Pearson Correlation	1	.235**	.495**
	Sig. (2-tailed)		.004	.000
	N	152	152	152
T	Pearson Correlation	.235**	1	.125
	Sig. (2-tailed)	.004		.123
	N	152	152	152
AG	Pearson Correlation	.495**	.125	1
	Sig. (2-tailed)	.000	.123	
	N	152	152	152

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

Regression analysis is used for testing the hypothesis because our research is based on testing the relationship between dependent variable (project performance) and (project approaches independent variables).

Table 5

Model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.525a	.275	.266	.33424

a. Predictors: (Constant), T, AG

Table 6

ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.325	2	3.163	28.309	.000b
	Residual	16.646	149	.112		
	Total	22.971	151			

a. Dependent Variable: P

b. Predictors: (Constant), T, AG

Table 7

Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.980	.132		15.044	.000
	T	.087	.035	.176	2.503	.013
	AG	.262	.039	.473	6.726	.000
a. Dependent Variable: P						

Agile Approach**H1a:** There is a positive relationship between agile methodology and PE**Table 8**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.057	.184		11.155	.000
	AG	.298	.068	.335	4.361	.000

Dependent Variable: PE

H2a: There is a positive relationship between agile methodology and IOT**Table 9**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.915	.217		8.804	.000
	AG	.178	.080	.178	2.212	.028

Dependent Variable: IOT

H3a: There is a positive relationship between agile methodology and IOC**Table 10**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.775	.156		11.407	.000
	AG	.515	.056	.599	9.157	.000

a. Dependent Variable: IOC

H4a: There is a positive relationship between agile methodology and BS**Table 11**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.204	.192		16.679	.000
	AG	.025	.069	.030	.367	.071

a. Dependent Variable: BS

Traditional Approach

H1b: There is a positive relationship between agile methodology and BS

Table 12

		Coefficients			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	2.776	.225		12.353	.000
	T	.019	.081	.019	.235	.815

Dependent Variable: PE

H2b: There is a positive relationship between agile methodology and BS

Table 13

		Coefficients ^a			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	.936	.223		4.203	.000
	T	.537	.080	.479	6.677	.000

Dependent Variable: IOT

H3b: There is positive relationship between agile methodology and BS

Table 14

		Coefficients			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	2.897	.168		17.259	.000
	T	.099	.062	.130	1.960	.10

a. Dependent Variable: IOC

H4b: There is a positive relationship between agile methodology and BS

Table 15

		Coefficients			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	3.556	.166		21.467	.000
	T	-.110	.061	-.145	-1.790	.075

a. Dependent Variable: BS

Conclusion And Recommendations

Discussion

In this research, the several approaches to software evolution through traditional and agile approaches were defined and discussed. We developed and verified this research model that explores the new research ground. We can conclude that this is very unique in examining the efficiency of agility against traditional project performance. The different types of agility and traditional methodologies have been defined and five project performance measures are analyzed in the study. Every project has its own criteria.

For the implementation of these PM approaches these approaches should be used with care and the characteristics of the project should be kept in mind. Traditional techniques were clearly dominant throughout my research. This involved substantial design work, copious documentation, and thorough planning. The swift movement will soon surpass the heaviness of the thoughts that go along with them. Large, long-lasting projects with unique needs for security, reliability, or safety will still require traditional approaches. Agile development is not constrained to a few specific practices and methods.

In a time when there is less volatility and strict procedures may be used for a variety of tasks, heavyweight plan-driven approaches have a place. However, agile methodologies appear to be the predominant methodology in this unstable environment and the growing ambiguity of what the consumer wants. Businesses want to innovate and react fast to changing market conditions for their rivals. They make plans but do not let those plans deceive them. Instead of counting the number of procedures they have in place, they concentrate on providing value to the client. I already stated that the adoption of agile methodologies in software development is mandated by the necessity for the IT sector to react quickly to the environment in a creative, economical, and efficient way. Agile approaches appear to have a very strong future.

Limitations of the Study

The study focuses only on the IT sector of Pakistan and the results of the study are not generalized to other industries or countries due to its limited external validity of the research. The second limitation was that the respondents were from a specific area. Another limitation for this research was the use of cross-sectional design in which a specific group of employees is selected for a certain period of time it would provide more insight into the long-term effects of project performance.

Future Directions of the Study

In the future, researchers may increase the size of the sample to make the study more applicable. A large sample would make it easier for researchers to find out how PM approaches enhanced the project performance industry of Pakistan. Researchers can use different ways to get data, like surveys interviews, and case studies, to get more complete and various content. This can help us get a more comprehensive understanding of how PM approaches impact the performance of employees in the banking industry of Pakistan. Improvement in the testing procedure will enhance the results and findings of the research.

References

- Barlow, J., Giboney, J., Keith, M. J., Wilson, D., Schuetzler, R., Lowry, P. B., & Vance, A. (2012). Overview and Guidance on Agile Development in Large Organizations. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1909431>
- Baskerville, R., Pries-Heje, J., & Madsen, S. (2011). Post-agility: What follows a decade of agility? *Information and Software Technology*, 53(5), 543-555. <https://doi.org/10.1016/j.infsof.2010.10.010>
- Boehm, B. (2002). Get ready for agile methods, with care. *Computer*, 35(1), 64-69. <https://doi.org/10.1109/2.976920>
- Boehm, B., & Papaccio, P. (1988). Understanding and controlling software costs. *IEEE Transactions on Software Engineering*, 14(10), 1462-1477. <https://doi.org/10.1109/32.6191>
- Conforto, E. C., & Amaral, D. C. (2016). Agile project management and stage-gate model—A hybrid framework for technology-based companies. *Journal of Engineering and Technology Management*, 40, 1-14. <https://doi.org/10.1016/j.jengtecman.2016.02.003>
- Dvir, D., Raz, T., & Shenhar, A. J. (2003). An empirical analysis of the relationship between project planning and project success. *International Journal of Project Management*, 21(2), 89-95. [https://doi.org/10.1016/s0263-7863\(02\)00012-1](https://doi.org/10.1016/s0263-7863(02)00012-1)
- Dybå, T., & Dingsøyr, T. (2008). Empirical studies of Agile software development: A systematic review. *Information and Software Technology*, 50(9-10), 833-859. <https://doi.org/10.1016/j.infsof.2008.01.006>
- Gemino, A., Horner Reich, B., & Serrador, P. M. (2020). Agile, traditional, and hybrid approaches to project success: Is hybrid a poor second choice? *Project Management Journal*, 52(2), 161-175. <https://doi.org/10.1177/8756972820973082>
- Kerzner, H. R. (2013). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling* (Google eBook).
- Larman, C., & Basili, V. (2003). Iterative and incremental developments. a brief history. *Computer*, 36(6), 47-56. <https://doi.org/10.1109/mc.2003.1204375>
- Magazinius, A., & Feldt, R. (2011). Confirming Distortional behaviors in software cost estimation practice. *2011 37th EUROMICRO Conference on Software Engineering and Advanced Applications*, 411-418. <https://doi.org/10.1109/seaa.2011.61>
- Mir, F. A., & Pinnington, A. H. (2014). Exploring the value of project management: Linking project management performance and project success. *International Journal of Project Management*, 32(2), 202-217. <https://doi.org/10.1016/j.ijproman.2013.05.012>
- Munns, A., & Bjeirmi, B. (1996). The role of project management in achieving project success. *International Journal of Project Management*, 14(2), 81-87. [https://doi.org/10.1016/0263-7863\(95\)00057-7](https://doi.org/10.1016/0263-7863(95)00057-7)
- Niederman, F., Lechler, T., & Petit, Y. (2018). A Research Agenda for Extending Agile Practices In Software Development and Additional Task Domains. *Project Management Journal*, 49(6), 3-17. <https://doi.org/10.1177/8756972818802713>
- Nowotarski, P., & Paslawski, J. (2015). Barriers in Running Construction SME – Case Study on Introduction of Agile Methodology to Electrical Subcontractor. *Procedia Engineering*, 122, 47-56. <https://doi.org/10.1016/j.proeng.2015.10.006>
- Papadakis, E., & Tsironis, L. (2018). Hybrid methods and practices associated with agile methods, method tailoring and delivery of projects in a non-software context. *Procedia Computer Science*, 138, 739-746. <https://doi.org/10.1016/j.procs.2018.10.097>
- Serrador, P., & Pinto, J. K. (2015). Does Agile work? — a Quantitative Analysis of Agile Project Success. *International Journal of Project Management*, 33(5), 1040-1051. <https://doi.org/10.1016/j.ijproman.2015.01.006>
- Williams, L., & Cockburn, A. (2003). Agile software development: It's about feedback and change. *Computer*, 36(6), 39-43. <https://doi.org/10.1109/mc.2003.1204373>