Journal of Entrepreneurship & Project Management

Influence of Agile Project Management Practices on Project Performance in Rwanda: A Case of Priority Skills for Growth Project

Mr. Samuel Bigirumwami, Dr. Alice Wafula & Mr. Francis Mwangi

ISSN: 2616-8464

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship & Project Management
Volume 7||Issue 8 ||Page 114-123||August||2023|
Email: info@stratfordjournals.org ISSN: 2616-8464

Influence of Agile Project Management Practices on Project Performance in Rwanda: A Case of Priority Skills for Growth Project

[1*]Mr. Samuel Bigirumwami
Kigali, Rwanda
***Email of the corresponding author: bigisam08@gmail.com**

[2]Dr. Alice Wafula, Mount Kenya University
Nairobi, Kenya
awafula@mku.ac.ke

[3]Mr. Francis Mwangi, Mount Kenya University
Kigali, Rwanda
fmwangi@mku.ac.ke

How to cite this article: **Bigirumwami, S., Wafula, A. & Mwangi, F. (2023). Influence of Agile Project Management Practices on Project Performance in Rwanda: A Case of Priority Skills for Growth Project.** ***Journal of Entrepreneurship & Project Management*** ***7*****(8), 114-123. https://doi.org/10.53819/81018102t5222**

Abstract

The increasing rate of globalization and technological progress have compounded the volatility and uncertainty of business environments and threatened organizational performance in many ways. In order to increase organizational capacity to effectively respond to changes, agile project management practices have been recommended by management scholars. Thus, this research examined the influence of agile project management practices on project performance in Rwanda using the case of Priority Skills for Growth project. The objectives of this research were to assess the influence of stakeholder collaboration, change management and continuous improvement on performance of Priority Skills for Growth project between 2018 and 2022. The study used quantitative approach with a correlational design. Stratified simple random and purposive sampling methods were used to determine the sample size of 396 respondents out the population of 4,892 people. However, only 223 were able to fully participate in the study, resulting to an average response rate of 56.313%. The close-ended questionnaire with likert-type response items was used for data collection. Subject matter experts and pilot-testing were used to establish validity and reliability respectively. The correlation results showed that that stakeholder collaboration is weakly correlated with project performance (r=.030, N=223, p>.01), change management is strongly and positively associated with project performance (r=.652, N=223, p<.01) and continuous improvement is moderately positively correlated with project performance (r=.321, N=223, p<.01). Furthermore, regression results revealed that stakeholder collaboration diminishes project performance by 9%, while change management and continuous improvement have positive contributions of 70.9% and 49.9%, respectively towards the performance of PSG project. The study concluded that that stakeholder collaboration, change management and continuous learning processes in PSG project are

effective in achieving the desired project outcomes. The research recommends that project management should establish regular communication channels and forums to enable stakeholders to provide feedback on project progress and suggest improvements. They should use feedback to inform decision-making processes and make adjustments to the project approach as necessary and ensure that all stakeholders, including employees and team members, are involved in the feedback process to promote inclusivity and collaboration. Furthermore, there is need to train and coach project managers and leaders to actively listen to stakeholder feedback and suggestions and create an enabling environment that promotes open communication and constructive dialogue between management and stakeholders. The study recommends that future research should focus on examining the effect of different agile project management methodologies such as kanban, scrum, lean, extreme programing, adaptive project framework among others on project performance.

Keywords: *Agile project management practices, change management, continuous improvement, stakeholder collaboration, project performance*

1.0 Background of the Study

In modern times, project stakeholders are becoming more knowledgeable, and their needs and preferences are constantly changing, with the current age of information abundance and speed providing new options and uncertainties bringing new challenges (Gao, Bai & Feng, 2020). Project service ratings and reviews are available and project stakeholders are constantly asking project management to bring in new innovations that will deliver quality services to the project beneficiaries (Coe & Carrillo, 2015). The ability of stakeholders to provide recommendations on how they need to be served puts project management on spotlight to be flexible and adaptable in effectively responding to the evolving dynamics of their operating environment (Ahn, Kim & Lee, 2020).

The adoption and development of agile project management practices has been identified as one of the effective ways of responding to the volatility of organization's operating environment and ever-changing project stakeholder needs. Agile project management practices have been identified as one of the techniques that can promote project ability to respond to changing stakeholder needs and environmental dynamics. According to Liubchenko (2016), managing projects through agile practices refer to the techniques, methods, policies, approaches, practices, etc. that can enable the project management and teams to change quickly and often in implementing the project and which empower them to deliver project results quickly, timely, at lower costs, high quality while meeting the standards specifications.

There are many approaches to integrate agile project management practices in project management (Zuzek, et al., 2020; Liubchenko, 2016). However, according to Njeru and Kimutai (2018), the involvement of stakeholders in project processes (stakeholder collaboration), ability to quickly embrace change and respond to opportunities (change management) and the ability of project staffs to continuously improve project processes (continuous learning and improvement) have been identified as key agile project management practices that can effectively facilitate project performance. In 2017, the government of Rwanda, collaborated with World Bank and established the Priority Skills for Growth project in Rwanda. The major goal of the project was to develop relevant capacities and skills that are on demand in the labor market and reduce unemployment among the youth (RDB, 2019). The project coordinates capacity development in demand-driven skills through rapidly responsive training programs, training for out-of-school youth training, apprenticeship trainings and other informal sector training forums, vocational programs, and internships.

https://doi.org/10.53819/81018102t5222

According to RDB (2019), as of mid-2019, 4,866 youths had received skills development through training in critical skills. However, the project has failed to achieve its targeted goals of ensuring that majority youth in Rwanda acquire employable skills, acquire entrepreneurship skills, and acquire gainful employment in both public and private sectors. It is indicated that adopting agile project management practices is a key factor for project success. This study seeks to examine the influence of agile project management practices including stakeholder collaboration, change management and continuous improvement of the performance of the PSG project in Rwanda.

1.1 Statement of the Problem

Priority Skills for Growth Project (PSGP) is a partnership between the World Bank and Government of Rwanda aiming to develop skills for employment and entrepreneurship among the youth. As part of its strategy, the PSGP has been training Rwandan youth to equip them with skills that are relevant for employment and entrepreneurship (Government of Rwanda & World Bank, 2017). As of 2021, 1207 youth have been trained in different skills including engineering, electrification, and entrepreneurship. The project also trained the project staff and management with the goal of instituting a robust governance and institutional framework to support the PSG project. The project had a target of contributing 60% reduction of unemployment rate that is caused by skills shortage among the youth by 2022.

However, it is observed that the project has not achieved its stated performance targets as youth unemployment due to lack of adequate and appropriate skills still persists in Rwanda. For example, a research study by NISR (2017) found that lack of relevant skills was identified as the key driver of youth unemployment in Rwanda which stands at 21% among female compared to 15.2% for male counterparts. The failure to achieve the performance targets can be attributed to the volatile project operating environment which has been compounded by the COVID-19 pandemic which restricted human contact thus putting the project operations to a stand-still. It is envisaged that shortage of relevant skills for employment and entrepreneurship promotion represent the key indicators for the poor performance of the PSG project.

Research studies (Ahn, Kim, & Lee, 2020; Coe & Carrillo, 2015; Gao, Bai, & Feng, 2020) show that agile project management practices have the potential to strengthen project performance outcomes by integrating flexibility and adaptability in project management operations which make it easy for organizations to survive environment volatility and uncertainties. However, there is no accessible study that has been conducted in the Rwandan context to establish the link between agile project management practices and project performance. This study sought to examine the effect of agile project management practices such as stakeholder collaboration, change management and continuous improvement on project performance between 2017 and 2023 using the Priority Skills for Growth project.

1.2 Research hypotheses

$H_0$1: Stakeholder collaboration has no statistically significant effect on the performance of the PSG project.

$H_0$2: Change management has no statistically significant effect on the performance of the performance of PSG project.

$H_0$3: Continuous improvement has no statistically significant effect on the performance of the PSG project.

https://doi.org/10.53819/81018102t5222

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship & Project Management
Volume 7||Issue 8 ||Page 114-123||August||2023|
Email: info@stratfordjournals.org ISSN: 2616-8464

2.0 Literature Review

2.1 Theoretical literature

The research is guided by the dynamics capabilities theory. The dynamic capabilities theory (see Figure 1) is a framework used in organizational management to elaborate how organizations can acquire and sustain competitiveness and higher performance in dynamic environments. It was first proposed by David Teece, Gary Pisano, and Amy Shuen in 1997. According to the theory, dynamic capabilities refer to a firm's ability to identify, integrate, build, and reconfigure internal and external resources in response to rapidly changing operating environments (Teece, 2007). These capabilities allow firms to not only adapt to changes but also to shape their environment and create new opportunities. According to Teece *et al.* (1997) and Teece (2007), organizations should have three main types of capabilities (sensing, seizing and reconfiguration) if they are to become agile, adaptable, and effectively respond to environmental changes.

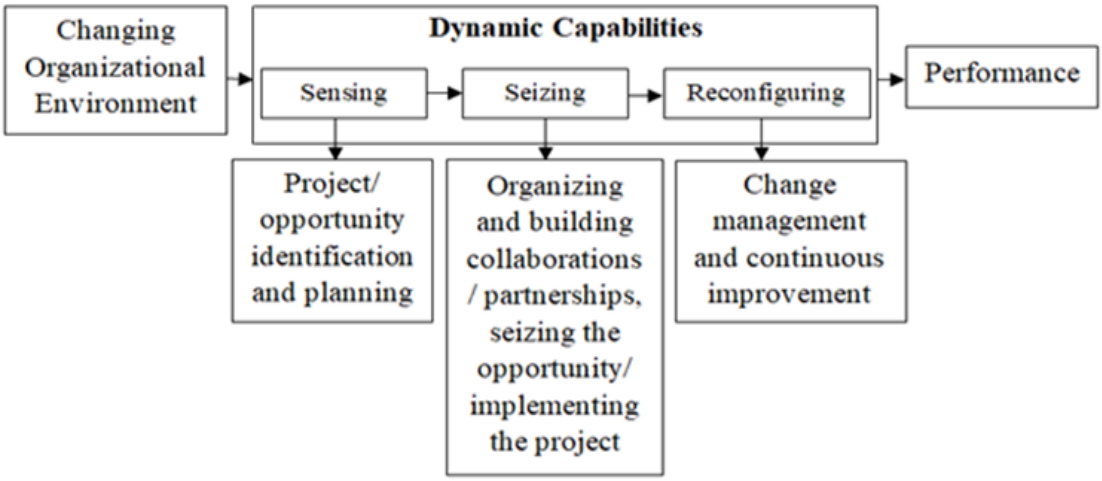

Figure 1: Dynamic capabilities theory

Source: Adapted from Teece, 2007, p.1342

In the realm of agile project management, the trio of sensing, seizing, and reconfiguring capabilities play interconnected roles crucial for an organization's success. Sensing capabilities involve recognizing shifts in the external landscape that impact operations and discerning their repercussions. This aspect is vital for agile project management as it facilitates the detection of evolving project requirements and customer preferences. Collaborative efforts between the project team and customers are pivotal in promptly incorporating these changes into the project plan. Seizing capabilities revolve around capitalizing on newfound opportunities stemming from external changes. This demands a malleable project management approach enabling adjustments to plan and processes in response to evolving conditions. Lastly, reconfiguring capabilities focus on an organization's adeptness at reshaping its internal resources and competencies in line with external shifts. Fostering a culture of continuous improvement and innovation is integral here, encouraging experimentation to enhance performance. These three capabilities intertwine to empower organizations to attain and uphold high performance levels in their projects. A robust set of dynamic capabilities equips organizations to effectively respond to environmental shifts, innovate, and cater to emerging technologies and stakeholder demands.

https://doi.org/10.53819/81018102t5222

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship & Project Management
Volume 7||Issue 8 ||Page 114-123||August||2023|
Email: info@stratfordjournals.org ISSN: 2616-8464

2.2 Empirical literature

The agile project management practices of stakeholder collaboration, change management and continuous improvement have gained considerable empirical research attention in recent years as a key factor for project performance.

2.2.1 Stakeholder collaboration and project performance

Stakeholder collaboration refers to the process of working with different groups and individuals who are affected by and/or can affect project outcomes (Savage, et al., 2010). According to Abioye and Awotunde (2020), stakeholder identification involves the identification of groups and individuals who are affected by or who can impact the outcomes of the project. They argue that the failure to identify and engage stakeholders can result in project failure, delays, or even cancellation. Numerous research studies have explored the influence of stakeholder communication on the outcomes of skills development projects. In a notable example, the research conducted by Wang and Guo (2017) revealed a substantial enhancement in project performance through effective stakeholder communication. The study's findings emphasized the vital role of communication in fostering alignment between stakeholders and project goals, thus underscoring its significance.

According to Trif, Boboc, and Luminosu (2016), effective communication is critical in ensuring employees' better understanding of the project's purpose and their role in its realization. The authors found that clear and consistent communication increases the likelihood of successful implementation of skills development projects. Similarly, Dobre and Diaconu (2014) argue that effective communication is essential in ensuring that employees are committed to the project. However, some studies have reported contrasting findings. For example, a study by Kask and Loomets (2017) found that stakeholder communication has no significant effect on project performance. The study argued that communicating with stakeholders represented one of the factors that influenced the performance of the project, and therefore, it cannot be the sole determinant of success.

2.2.2 Change management and project performance

Managing change is the planned and systematic function of managing change from an existing undesirable state to a desirable state in future, within an organization (Cameron & Green, 2015). Researchers have emphasized the importance of change management in the context of organizational development and transformation. For example, Cummings and Worley (2014) suggest that effective change management is critical for organizations to adapt to changing market conditions, embrace new technologies, and improve performance. Cameron and Green (2015) indicate that change management involves many interrelated activities and processes. In the context of agile project management, change management includes agile leadership, agile planning, adaptable execution, and monitoring changes. These processes ensure that there is a smooth and successful transition, while minimizing resistance and maximizing employee engagement. Similarly, Gao, *et al.* (2020) observed that agile planning as a function of change management helps in the identification of project risks and the development of appropriate risk management strategies, thereby reducing the likelihood of project failure. Agile planning also makes project team to effectively respond to changes in the requirements of the project, thus leading to improved project outcomes (Alqahtani *et al.*, 2019).

2.2.3 Continuous improvement and project performance

Continuous Improvement is a method of identifying, analyzing, and implementing incremental improvements to project processes, products, and services over time. This approach is intended

https://doi.org/10.53819/81018102t5222

to increase the efficiency, quality, and effectiveness of project activities, resulting in better outcomes and higher levels of stakeholder satisfaction. According to Berger (2010) and PMI (2017), continuous improvement is a key component of project management, and it involves "identifying opportunities for improvement, analyzing the current process, and making changes to achieve better performance. It involves many practices among which include employee involvement and empowerment, monitoring and evaluation and continuous learning which have potential effect on project performance outcomes. Continuous learning refers to the continuous acquisition of knowledge and skills, often through formal or informal education, training, and development activities (Mayer, 2017). It involves a willingness to learn, adapt, and grow in response to changing circumstances and opportunities. Tynjala (2013) argues that continuous learning is a necessary response to the rapid pace of technological and societal changes, which require individuals to update their knowledge and skills to remain relevant in the workforce. Similarly, Diener and Seligman (2019) stress that continuous learning helps individuals develop a sense of personal fulfillment and mastery, which contributes to their well-being and resilience. Eze *et al.* (2018) explored the relationship between continuous learning and the performance of oil and gas projects. The authors found that continuous learning was positively correlated with project performance, particularly in terms of cost control and risk management. They suggest that by continually learning and adapting, project teams can identify and address potential issues before they become major problems.

3.0 Research Methodology

The research employed a quantitative approach with correlation analysis to establish a connection between agile project management practices and the performance of the Priority Skills for Growth (PSG) project. The study involved 396 participants, including project management personnel, staff, and beneficiaries, who were selected using stratified simple random and purposive sampling methods. Data collection utilized a five-point Likert scale structured questionnaire, allowing efficient collection of extensive data from a large sample within a limited timeframe. Validity and reliability were ensured through content validity index determination by subject matter experts and piloting of the questionnaire. Data analysis encompassed descriptive assessment (means and standard deviations) and inferential examination (correlation and regression analysis).

4.0 Research Findings and Discussions

Regression analysis

The regression analysis shows the contribution of stakeholder collaboration, change management and continuous improvement towards variation in PSG project outcomes. The study results are presented in Table 1

Table 1: Regression coefficients[a]

Model		UC		SC	t	Sig.
		B	SE	Beta		
1	(Constant)	.432	.334	-	1.293	.197
	Stakeholder collaboration (X_1)	-.090	.045	-.103	-1.999	.047
	Change management (X_2)	.709	.055	.624	12.928	.000
	Continuous improvement (X_3)	.499	.089	.288	5.576	.000

a. Dependent Variable: Project performance

Source: SPSS Data Output, 2023

https://doi.org/10.53819/81018102t5222

Stratford Peer Reviewed Journals and Book Publishing
Journal of Entrepreneurship & Project Management
Volume 7||Issue 8 ||Page 114-123||August||2023|
Email: info@stratfordjournals.org ISSN: 2616-8464

$Y=.432-.090X_1+.709X_2+499X_3$

According to the regression coefficients in Table 1, it can be observed that change management contributes up to .709/70.9% of the variation in the performance of PSG project. This means that holding other factors constant, an improvement change management improves the performance of the PSG project by 70.9 percent. This is followed by continuous improvement which contributed up .499/49.9% of the variation in project performance. This indicates that assuming other factors constant, enhancing continuous improvement practices improves the performance of the PSG project by 49.9 percent. However, stakeholder collaboration shows a negative contribution of up to .090/9% towards the performance of the PSG project. This shows that holding other factors constant, an improvement in stakeholder collaboration reduces project performance by 9 percent.

Hypotheses testing

Table 2 shows the results of the test for the hypotheses based on the levels of significance as derived from the regression coefficients in Table 1.

Table 2: Hypotheses testing

Hypothesis description	P-value	Conclusion
$H_0$1: Stakeholder collaboration has no statistically significant effect on the performance of the PSG project.	Sig.=.047, p<.05	No evidence to support the hypothesis. H01 is not accepted
$H_0$2: Change management has no statistically significant effect on the performance of the performance of PSG project.	Sig.=.000, p<.05	No evidence to support the hypothesis. H02 is not accepted
$H_0$3: Continuous improvement has no statistically significant effect on the performance of the PSG project.	Sig.=.000, p<.05	No evidence to support the hypothesis. H03 is not accepted

Discussion of findings

From the first hypothesis, findings show that stakeholder collaboration has a statistically significant effect on the performance of the PSG project (β=-.090; p<.05). The finding aligns with previous research by Wang and Cheng (2018) who observed that effective collaboration with stakeholders allows for better communication, increased understanding of project requirements, and the alignment of project objectives with stakeholder expectations. Findings on the second hypothesis show that change management has a statistically significant effect on the performance of PSG project (β=.709; p<.05). This finding also aligns with previous research (Cameron & Green, 2015) that has emphasized the importance of change management in achieving successful project outcomes. From the third hypothesis, findings show that continuous improvement has a significant effect on the performance of PSG project (β=.499; p<.05). The significant effect of continuous improvement on PSG project performance aligns with previous research that has highlighted the importance of continuous improvement practices in achieving favorable project outcomes (Smith et al., 2019).

https://doi.org/10.53819/81018102t5222

5.0 Conclusion

The results of this study suggest that stakeholder collaboration, change management and continuous learning processes in PSG project are effective in achieving the desired project outcomes. The findings support the importance of stakeholder collaboration, change management and continuous learning processes as effective strategy for addressing complex challenges and achieving common goals in agile project management to enhance project performance outcomes. The positive perception of respondents towards stakeholder collaboration, change management and continuous improvement processes highlights the need for continued efforts to build and maintain effective partnerships and engagement with relevant stakeholders as well as embrace change and continuous improvement. However, observations also show inadequacy of stakeholder feedback, management failure to listen to stakeholder suggestions, lack of employee empowerment to make own decisions, employer's failure to value team members' ideas and opinions, lack of employee autonomy to solve problems and make their own decisions, lack of regular M&E activities and lack of regular engagement in continuous learning by team members. More efforts are needed to eliminate these ineffective practices. Additionally, further research is needed to explore the causal mechanism between stakeholder collaboration, change management and continuous learning processes on one hand and project performance on the other. It is also needed to identify potential moderating or mediating factors that may affect the relationship between these variables.

6.0 Recommendations

The research recommends that project management should establish regular communication channels and forums to enable stakeholders to provide feedback on project progress and suggest improvements. They should use feedback to inform decision-making processes and adjust the project approach as necessary and ensure that all stakeholders, including employees and team members, are involved in the feedback process to promote inclusivity and collaboration. Furthermore, there is need to train and coach project managers and leaders to actively listen to stakeholder feedback and suggestions and create an enabling environment that promotes open communication and constructive dialogue between management and stakeholders. Further, future research should be focused on studying the effect of different agile project management methodologies such as Kanban, Scrum, Lean, Extreme programing, Adaptive Project Framework, etc. on project performance which have not been included on the scope of this study. Similarly, further research is needed to explore the causal mechanism between stakeholder collaboration, change management and continuous learning processes on one hand and project performance on the other.

REFERENCES

Abioye, O. P., & Awotunde, J. M. (2020). Stakeholder identification and engagement for successful project execution. *International Journal of Innovative Technology and Exploring Engineering*, *9*(5), 1186-1192. https://doi.org/10.35940/ijitee.D1816.029420

Ahn, K., Kim, H., & Lee, S. (2020). Impact of project adaptability on project performance in skills development projects. *Sustainability, 12*(12), 4904.

Alqahtani, M., Alshehri, A., Alzahrani, A., & Alotaibi, M. (2019). The impact of agile project management on project success: A case study of Saudi IT industry. *International Journal of Computer Science and Network Security, 19*(1), 182-189.

https://doi.org/10.53819/81018102t5222

Berger, A. (2010). Continuous improvement and kaizen: standardization and organizational designs. *Integrated manufacturing systems*, *8*(2), 110-117. https://doi.org/10.1108/09576069710165792

Cameron, E., & Green, M. (2015). *Making sense of change management: A complete guide to the models, tools, and techniques of organizational change*. Kogan Page Publishers.

Coe, C., & Carrillo, P. (2015). Exploring the impact of adaptive project management on project performance: A case study of the construction of a mega-bridge. *International Journal of Project Management, 33*(2), 278-289.

Cummings, T. G., & Worley, C. G. (2014). *Organization development and change*. Cengage Learning.

Diener, E., & Seligman, M. E. P. (2019). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest, 5*(1), 1-31. https://doi.org/10.1111/j.0963-7214.2004.00501001.x

Dobre, O. I., & Diaconu, L. (2014). Employee involvement in change management process. *Procedia - Social and Behavioral Sciences, 124*, 105-113.

Eze, U. C., Nzelibe, H. C., & Ezenwaji, E. E. (2018). Continuous learning and the performance of oil and gas projects in Nigeria. *Journal of Engineering, Design and Technology, 16*(3), 385-402.

Gao, Y., Bai, X., & Feng, T. (2020). An empirical study on the impact of agile project management on project success. *IEEE Access, 8*, 61052-61063.

Kask, U., & Loomets, J. (2017). Impact of stakeholder communication on project success. *Journal of Business Research*, 70, 391-398.

Liubchenko, V. (2016, September). A review of agile practices for project management. In *2016 XIth International Scientific and Technical Conference Computer Sciences and Information Technologies (CSIT)* (pp. 168-170). IEEE. https://doi.org/10.1109/STC-CSIT.2016.7589897

Mayer, R. E. (2017). *Learning and instruction* (2nd ed.). Routledge.

Njeru, D. K., & Kimutai, G. (2018). *Participatory project management and success of slum upgrading projects in Korogocho informal settlements Nairobi City County, Kenya* (Doctoral dissertation, master's dissertation). Kenyatta University, Kenya).

Project Management Institute (2017). *A Guide to the Project Management Body of Knowledge* (6th ed.). Newtown Square, PA: Project Management Institute.

Project Management Institute. (2017). *Pulse of the Profession 2019: Learning thought leadership*. Retrieved from https://www.pmi.org/-/media/pmi/documents/public/pdf/learning/thought-leadership/pulse/pulse-of-the-profession-2017.pdf

RDB. (2019). *National skills development and employment promotion strategy 2019-2024*. Retrieved from https://rdb.rw/wp-content/uploads/2019/07/NSDEPS.pdf

Savage, G. T., Bunn, M. D., Gray, B., Xiao, Q., Wang, S., Wilson, E. J., & Williams, E. S. (2010). Stakeholder collaboration: Implications for stakeholder theory and practice. *Journal of business ethics*, *96*, 21-26. https://doi.org/10.1007/s10551-011-0939-1

Smith, A., Raghunathan, S., & Victorino, L. (2019). Continuous improvement in project management: A literature review and qualitative analysis. *International Journal of Operations & Production Management*, *39*(3), 304-334.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and micro-foundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319-1350. https://doi.org/10.1002/smj.640

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z

Trif, S., Boboc, C., & Luminosu, I. (2016). The impact of communication in change management process. *Procedia - Social and Behavioral Sciences*, *221*, 275-282.

Tynjala, P. (2013). Toward a 21st century learning system. *Educational Researcher*, *42*(1), 44-55.

Wang, Y., & Guo, H. (2017). The impact of stakeholder communication on project success: Evidence from China. *Journal of Business Research*, *75*, 80-89.

World Bank. (2018). *Priority Skills for Growth in Rwanda*. Washington, DC: World Bank.

Zuzek, T., Gosar, Z., Kusar, J., & Berlec, T. (2020). Adopting agile project management practices in non-software SMEs: A case study of a Slovenian medium-sized manufacturing company. *Sustainability*, *12*(21), 9245. https://doi.org/10.3390/su12219245