

The Effect of People Agility, Organization Agility Support, Agility Process, and Working Experience to Enhance Perceived Successfulness of Agile Execution On Digital Transformation (Case Study: Astra Group of Heavy Equipment Mining, Construction & Energy)

*Shiva Rachma Permatasary¹ and Fiter Abadi²

^{1,2}Swiss German University, Tangerang, Indonesia Shiva.permatasary@student.sgu.ac.id

Abstract. Digital technology has become a part of customers' lives, causing significant disruptions across several sectors. These technologies enable enterprises to gain a growing variety of competitive advantages (Tsiavos and Kitsios, 2022). Only those firms that are flexible to digital trends will endure and thrive in this new competitive milieu (Ismail et al., 2018; Schwartz, 2001). This is also experienced for Astra Heavy Equipment company, where IT and Digital Transformation (DT) greatly influence operational effectiveness and efficiency in mines, where the HE industry requires high agility to adapt to rapidly changing global demand. This research measures the variables of People Agility, Organization Agility Support, and Agility Process. This is to understand the perceived successfulness of agile execution in Digital Transformation, and the moderating role of working experience variables which can reinforce the relationship between People Agility, Organization Agility Support, and Agility Process, and to assess the perceived success of agile execution. The methodology used by researchers is quantitative research on team members of the Astra Heavy Equipment Company digitalization project. The finding is that all variables have a strong relationship and work experience can moderate the relations with the except an OAS which cannot be intervened by work experience.

Keywords: Agile Methodology, Organization Agility, People Agility, Agility Process, Project Management, Digital Transformation.

1 Introduction

In the rapidly evolving landscape of the digital era, the necessity for organizations to undergo digital transformation (DT) is paramount to remain competitive and responsive to the dynamic changes within the market. This transformation is especially crucial within industries characterized by heavy reliance on technological advancements, such as the Heavy Equipment, Mining, Construction, and Energy (HEMCE) sectors. Among the conglomerates navigating this digital shift, the Astra Heavy Equipment Mining

^{*} Coresponding Author: Shiva Rachma Permatasary

[©] The Author(s) 2024

S. Musa et al. (eds.), Proceedings of the 5th International Conference on Global Innovation and Trends in Economy 2024 (INCOGITE 2024), Advances in Economics, Business and Management Research 302, https://doi.org/10.2991/978-94-6463-585-0_64

Construction and Energy (AHEMCE) Group stands as a case study for examining the intricacies and challenges of digital transformation. The research delves into the multi-faceted relationship between people agility, organizational support for agility, agility process and methodology, and working experience, to enhance the perceived success of agile execution in the context of digital transformation [1, 2].

The advent of Information Technology (IT) and its subsequent integration into business operations have been transformative, propelling industries towards unprecedented efficiency, innovation, and competitiveness [3]. In the face of the VUCA (volatility, uncertainty, complexity, and ambiguity) environment, organizations are compelled to adopt agile methodologies and digital technologies to swiftly respond to market demands, evolving customer expectations, and technological advancements. The embracement of digital transformation emerges as a strategic imperative to safeguard sustainability and a competitive edge in such a turbulent landscape.

For AHEMCE, the digital transformation journey is articulated through a series of strategic initiatives aimed at enhancing operational efficiency, customer satisfaction, and market responsiveness [4]. This encompasses the adoption of digital technologies that facilitate the transition from traditional to digital processes, the integration of data analytics for predictive insights, and the implementation of agile methodologies to expedite project delivery. The establishment of a dedicated IT division, the formation of digital task forces, and the launch of hundreds of DT projects underscore the group's commitment to embedding digital capabilities across its operations.

However, the path to successful digital transformation is fraught with challenges. Research indicates that many firms falter in their DT endeavors due to inadequate preparation, unclear project scopes, and a lack of understanding of the digital framework. Furthermore, the pressure to deliver rapid and substantial progress on DT projects can exacerbate these challenges, leading to project delays, increased costs, and potential investment losses. At the heart of these issues lies the critical interplay between organizational support, people agility, and process agility—factors that significantly influence the perceived success of agile execution in DT projects [5].

This research aims to unravel the complexities of digital transformation within AHEMCE by exploring the pivotal role of people agility, organizational agility support, agility process and methodology, and working experience. By examining how these elements collectively contribute to the perceived success of agile execution, the study seeks to identify the levers and barriers to effective digital transformation. Through this inquiry, insights will be garnered on the optimal alignment of strategy, technology, and human capital to navigate the digital transformation journey successfully [6].

2 Review of Related Literature

2.1 Agile Project Management and Digital Transformation

Agile Project Management (APM) has become an essential framework for Digital Transformation (DT), particularly within the dynamic realm of heavy industries. It offers a flexible, iterative approach that embraces change, a stark contrast to traditional methodologies such as Waterfall. This adaptability is crucial as industries pivot towards digitalization, which is more than converting information to digital formats; it's a

transformative process that redefines business models and operations to harness the power of new technologies for competitive advantage [7]. In heavy industries, characterized by complex, technology-driven environments, APM facilitates responsive and customer-centric project management, aligning with the Digital Transformation Framework that highlights the integration of technology, strategy, and cultural shifts towards a digital-first business ethos [8].

2.2 Organizational Support and Cultures in Agile Execution

Organizational support and cultures play a pivotal role in the success of Agile execution, where adaptability and responsiveness are at the core. Agile methodologies emphasize iterative development, customer involvement, collaboration, adaptive planning, and continuous improvement. Key characteristics include dividing work into sprints. fostering team and customer collaboration, and using feedback loops for refinement [9]. Organizational Agility Support (OAS) is critical, demanding a culture that senses opportunities, a commitment to decision-making agility, and collaborative actions to reorganize in response to change. This is supported by a system of rewards, management styles that encourage agility, and an environment conducive to agile practices. Personnel factors are equally influential, with team competence, motivation, and customer relationships playing significant roles in agile project success [10]. The Agile Manifesto's principles further bolster this framework, underscoring customer satisfaction, embracing change, and delivering functional software as measures of progress. In essence, Agile execution thrives in organizations that blend flexible structures with a culture of continuous learning and responsiveness to both internal and external shifts [11].

2.3 The Human Element: People Agility and Working Experience

The agility of an organization's people and their cumulative working experience are crucial determinants in the successful execution of digital transformation projects. Agile process systems mark a transition from rigid, sequential methods to adaptive, iterative approaches that value individual capability and encourage an openness to change. This shift requires personnel to not only have the necessary skills but also to possess a mindset that embraces the principles of the Agile Manifesto, prioritizing customer satisfaction and contribute to a rich reservoir of knowledge, yet it may also present challenges in adaptability among seasoned professionals accustomed to traditional methodologies [12]. The expertise gathered over years can be invaluable; however, it is the agility in applying this knowledge that can either accelerate or hinder the progress of digital transformation efforts. Consequently, projects in the digital arena benefit from teams that strike a balance between experienced insight and agile adaptability, ensuring that the human element within the process is both a driver and enabler of transformation.

2.4 Metrics of Success: Perceived Successfulness of Agile Execution

Evaluating the success of agile projects hinges on discerning the perceived effectiveness of their execution, a measure pivotal to outcomes analysis within any organization, including Astra Group. Agile project success transcends traditional metrics, such as adherence to schedules and budgets, and encompasses dimensions of customer satisfaction, responsiveness to changing requirements, and the delivery of functional software. Following the precepts of the Agile Manifesto, success is gauged through continuous delivery of value to customers, embracing changes even in late stages, and fostering a collaborative environment where business stakeholders and developers work in unison. This perception of success is significantly impacted by the agility in the project management process—how well it accommodates change—and in the project definition process, which involves setting clear objectives early on. Thus, in an agile context, success is multidimensional, involving not just the final product but also the dynamic process and human elements that drive the project towards its goals [13].

3 Method

This research adopts a descriptive approach, aiming to delineate the statistical interactions among various components within the context of Digital Transformation (DT) project management. Embracing a positivist philosophy, it systematically synthesizes extant literature to construct a hypothesis that delineates the relationships among these components. The methodology unfolds through a deductive lens, initially engaging with relevant theoretical underpinnings and thereafter postulating hypotheses aligned with the research inquiries. Verification follows, employing a quantitative research strategy where primary data is garnered via questionnaires in a two-phase process: a preliminary pilot study to refine the survey instrument, followed by a comprehensive data collection phase using the refined questionnaire, exclusive of the pilot participants [14].

The study scrutinizes independent variables—people agility, organizational agility support, and process agility—to evaluate their influence on the dependent variable: the perceived success of agile execution in DT projects. The gathered data is subsequently subjected to rigorous statistical examination using Structural Equation Modeling (SEM) [15], applying SPSS Version 25 for the analytical process [16], and utilizing SMARTPLS to validate the reliability of findings and test hypotheses. The overarching research design is succinctly encapsulated in the accompanying table.

The empirical investigation will concentrate on the IT Division and DT taskforces within Astra Heavy Equipment, Mining, Construction, and Energy Group companies, including United Tractors and Global Services Indonesia, as the locus of study. It will deploy a set of 25 main questionnaires, meticulously crafted to survey and accrue data from project team members pertinent to their experiences and perceptions within agile DT project environments.



Figure 1 Research Model

The conceptual framework in figure 1 depicted illustrates the hypothesized relationships between the constructs of People Agility, Organizational Agility Support, Agile Process, and Working Experience as they relate to the Perceived Successfulness of Agile Execution. People Agility is broken down into components such as team capability and customer involvement. Organizational Agility Support encompasses management commitment, organizational culture, and the team environment. Agile Process is further divided into project management process and project definition process. Central to this framework is Working Experience, which is posited as a moderating variable that potentially influences the effectiveness of the aforementioned constructs on the Perceived Successfulness of Agile Execution, which itself is assessed by metrics such as Quality, Scope, Timeline, and Cost. Each pathway indicates a direct or moderated influence, suggesting a complex interplay that this study aims to empirically investigate [14].

4 Results

4.1 **Baseline Characteristics**

The demographics of the survey respondents provide insights into the composition of participants in the study, revealing patterns across several characteristics such as age, gender, education, workplace location, and length of employment. The survey was predominantly completed by male respondents, constituting 71%, reflecting the digital project requirements often demanding on-site presence, which in this sector, tends to be male-dominated. Age distribution skewed towards the younger demographics, with 71% of respondents falling within the 26-35 age bracket, indicative of the sector's recent hiring trends amidst a global crisis that saw an influx of the millennial and Gen Z workforce. The educational background showed a majority holding Bachelor's degrees, aligning with the company's standard for basic manpower qualifications. The workplace location was overwhelmingly at the Head Office, where 93% of respondents were based, underscoring the centralization of IT and digital project teams, while the remainder included remote developers and IT support officers at branches and sites. Length of work experience was varied, but the largest segment had less than three years of service, suggesting a recent expansion or turnover in the workforce, consistent with strategic cadres development to replace retiring staff and those transitioning to different roles or resigning.

4.2 Classical Assumption

The statistical integrity of the regression model utilized in this study was scrutinized for normality and collinearity. The normality test, aimed at ensuring the data's distribution aligns with the assumed normality of the regression model, was validated by the normality plot and histogram. The plot points adhered closely to the diagonal line, and the histogram of the data aligned with the normal curve, collectively indicating a normal distribution of the dataset. On the front of collinearity, the multicollinearity test, which detects undue interrelations among independent variables, was performed using Tolerance and Variance Inflation Factor (VIF) methods. The results revealed that all variables had a Tolerance value greater than 0.1 and a VIF value less than 10, confirming the absence of multicollinearity within the model. Thus, the regression model was deemed statistically robust, with normally distributed data and free of problematic multicollinearity, as supported by the histograms and collinearity statistics presented in the respective figures and tables.

The reliability test in this study assessed internal consistency using Cronbach's Alpha, with a Likert scale employed to gather data. For reliable measurement, a Cronbach's Alpha value above 0.70 was deemed acceptable, with the constructs of People Agility, Organizational Agility Support, Process Agility, and Perceived Successfulness of Agile Execution all showing high reliability, with Alpha values ranging from 0.890 to 0.923. This reliability underpins the subsequent descriptive statistical analysis, which gauged various attributes of the data such as mean and standard deviation. The variable 'Perceived Successfulness of Agile Execution' emerged with the highest mean score, indicating it as a significant area of focus within the respondents' feedback. The 'Agility Process' variable scored lower on average, suggesting a potential area for improvement. Each data point was coded and analyzed to ensure precision in interpreting the interactions between the survey items and the broader constructs they represent, thereby solidifying the study's empirical foundations.

4.3 Structural Equation Model Analysis

In this study, Structural Equation Modeling (SEM) served as the core statistical technique for assessing the interrelationships among multiple variables. Adhering to Hair's (2018) guidelines, SEM enabled simultaneous hypothesis testing and factor confirmatory analysis of the research model, necessitating a three-stage evaluation process to ensure model validity and reliability. Initially, the measurement model's fit was scrutinized for construct validity through standardized factor loadings and T values, and for reliability via construct reliability (CR) and average variance extracted (AVE) metrics. This stage affirmed the constructs' internal consistency and convergent validity with AVE values exceeding the minimum threshold of 0.5. The subsequent stage focused on the structural model's fit, utilizing T values and coefficients. Finally, an overall model fit was evaluated, considering multiple parameters to ascertain the study's robustness. The measurement model's analysis demonstrated strong links between constructs and indicators, satisfying criteria for both convergent and discriminant validity, with all constructs meeting the requisite Cronbach's Alpha and CR thresholds, thereby reinforcing the study's integrity and laying a solid foundation for structural model examination.

4.4 Inner Model

The structural analysis model, or inner model, focuses on delineating the predictive relationships between the constructs within the conceptual framework of the study. It does so by examining the collinearity among variables, determining the R-square value for endogenous constructs to assess their explanatory power, calculating the F-square to gauge the impact significance, and evaluating the Q-square for predictive relevance. Additionally, it utilizes bootstrapping as a resampling technique to test the hypothesized relationships. This multifaceted assessment provides a robust examination of the model's predictive capabilities and the strength of the inter-construct relationships, which are crucial for validating the study's theoretical propositions.

	VIF
Process Agility	2,689
Organizational Agility Support	3,579
People Agility	2,413

Га	ble	1	Col	lineari	ity 🛛	Γest
----	-----	---	-----	---------	-------	------

Collinearity testing ensures that the predictive variables are not excessively interrelated, maintaining the model's integrity. The Variance Inflation Factor (VIF) is employed for this purpose, with acceptable values ranging from 0.2 to 5.

Tab	le 2	R-	Square	(R^2)
-----	------	----	--------	---------

Model	R Square	Adjusted R Square
Perceived Successfulness of Agile Execu- tion	0.767	0.759

The R-square (R^2) value reflects the proportion of variance in the dependent variable that can be predicted from the independent variables, where a value closer to 1 indicates stronger predictive capability.

Table 3 F-Square

	Perceived Successfulness of Agile Execution
Process Agility	0.104
Organizational Agility Support	0.062
People Agility	0.408

The F-square (effect size) measure indicates the magnitude of each independent variable's impact on the dependent variable, with values greater than zero signifying a sufficient effect.

	SSO	SSE	'Q ²
Process Agility	612,000	612,000	
Organizational Agility Support	816,000	816,000	
People Agility	714,000	714,000	
Perceived Successfulness of Agile Execution	408,000	176,810	0.567

Table 4 Q-Square

Finally, the Q-square (Predictive Relevance) value, obtained through the blindfolding procedure, confirms the model's predictive accuracy for the endogenous constructs. Collectively, these statistical tools contribute to a comprehensive understanding of the model's effectiveness and the validity of the research findings.

4.5 Results of hypothesis testing

This study rigorously tests six hypotheses centered on assessing the effectiveness and impact of People Agility, Organizational Agility Support, and Agile Process Methodology on the Perceived Successfulness of Agile Execution, with Working Experience acting as a moderating variable in these relationships. The first phase of hypothesis testing examines the direct effects to ascertain the existence of impacts from independent to dependent variables. The second phase delves into the moderating influence of Working Experience, seeking to establish whether it significantly alters the strength of the direct relationships. Utilizing the bootstrapping method for hypothesis testing, decisions for acceptance or rejection hinge on P-values and T-statistics, where a hypothesis is upheld if the T-value is greater than 1.96 and/or the P-value is less than 0.05, indicating significance at the 5% level. Additionally, the directionality of relationships is inferred from the sign of the beta coefficient, with positive values indicating positive influence and vice versa.



Figure 2 Full Model

The direct effects testing in this study examined the influence of People Agility, Organizational Agility Support, and Agility Process on the Perceived Successfulness of Agile Execution. The results, as depicted in Table 4.17, show that all three independent variables have a statistically significant positive impact on the dependent variable. Specifically, People Agility exhibited the strongest effect with an original sample value of 0.479, a T statistic of 5.254, and a P-value of 0.000, leading to the acceptance of the hypothesis. Similarly, Organizational Agility Support, with an original sample value of 0.228, a T statistic of 2.075, and a P-value of 0.038, and Agility Process, with an original sample value of 0.256, a T statistic of 2.930, and a P-value of 0.004, both had positive effects and their respective hypotheses were also accepted. These findings confirm that each construct positively contributes to the perceived success of agile execution within the context of Digital Transformation, reinforcing the conceptual framework established for this study.

Hypothesis	'Original Sample	'T Statistics	'P-Value	'Information
H1	0.479	5,254	0,000	Accepted
H2	0.228	2,075	0.038	Accepted
H3	0.256	2,930	0.004	Accepted

Table 5 Direct Hypothesis Testing

The direct effects testing in this study examined the influence of People Agility, Organizational Agility Support, and Agility Process on the Perceived Successfulness of Agile Execution. The results, as depicted in Table 4.17, show that all three independent variables have a statistically significant positive impact on the dependent variable. Specifically, People Agility exhibited the strongest effect with an original sample value of 0.479, a T statistic of 5.254, and a P-value of 0.000, leading to the acceptance of the hypothesis. Similarly, Organizational Agility Support, with an original sample value of 0.228, a T statistic of 2.075, and a P-value of 0.038, and Agility Process, with an original sample value of 0.256, a T statistic of 2.930, and a P-value of 0.004, both had positive effects and their respective hypotheses were also accepted. These findings confirm that each construct positively contributes to the perceived success of agile execution within the context of Digital Transformation, reinforcing the conceptual framework established for this study.

Hypothesis 4 in the study examines the moderating effect of Working Experience on the relationship between People Agility and Perceived Successfulness of Agile Execution. The analysis segmented working experience into four categories: less than 3 years, 3 to less than 6 years, 6 to less than 10 years, and more than 10 years. The results, presented in Table 4.18, reveal varied impacts across these experience levels. For individuals with less than 3 years of experience, a significant positive moderating effect was observed with an original sample value of 0.565, a T statistic of 4.444, and a P-value of 0.000, leading to the acceptance of the hypothesis for this group. The group with 3 to less than 6 years also showed a positive moderating effect with a 0.698 original sample value, a T statistic of 2.449, and a P-value of 0.015. However, for those with 6 to less than 10 years and more than 10 years of experience, the moderating effect was not significant, as indicated by higher P-values (0.539 and 0.369, respectively) and lower T statistics, suggesting that the length of working experience significantly influences the extent to which People Agility affects the Perceived Successfulness of Agile Execution, but this influence wanes with greater amounts of experience.

Table 6 Hypothesis 4						
Work	'Original	'P Values	'Results			
Experience	Sample (O)	(O/STDEV)				
<3 years	0.565	4,444	0,000			
3-<6 years	0.698	2,449	0.015	Assantad		
6-<10 years	0.209	0.614	0.539	Accepted		
>10 years	0.251	0.899	0.369			

Hypothesis 5 focused on the moderating role of Working Experience in the relationship between Organizational Agility Support and Perceived Successfulness of Agile Execution. The analysis broke down Working Experience into four categories: less than 3 years, 3 to less than 6 years, 6 to less than 10 years, and more than 10 years. The findings from this examination indicate that none of the working experience categories significantly moderates this relationship to a level that meets conventional criteria for acceptance. For employees with less than 3 years of experience, the effect was minimal with an original sample value of 0.151, a T statistic of 1.071, and a P-value of 0.285, leading to the non-acceptance of the hypothesis for this group. Similarly, for the other experience ranges—3 to less than 6 years, 6 to less than 10 years, and more than 10 years—the P-values were 0.304, 0.196, and 0.470, respectively, all of which fall short of demonstrating a statistically significant moderating effect. These outcomes suggest that Working Experience does not significantly alter the impact of Organizational Agility Support on the Perceived Successfulness of Agile Execution within the ranges of working experience considered in this study.

Table / Hypothesis 5						
Work	'Original	'T Statistics	'P-Values	'Results		
Experience	Sample (O)	(O/STDEV)				
<3 years	0.151	1,071	0.285			
3-<6 years	0.281	1,030	0.304	Not		
6-<10 years	0.510	1,295	0.196	Accepted		
>10 years	0.298	0.723	0.470	-		

Hypothesis 6 investigates the moderating effect of Working Experience on the relationship between Agility Process and Perceived Successfulness of Agile Execution. The analysis segments Working Experience into four categories: less than 3 years, 3 to less than 6 years, 6 to less than 10 years, and more than 10 years. The results demonstrate that only the group with less than 3 years of experience shows a significant positive moderating effect, with an original sample value of 0.282, a T statistic of 2.760, and a P-value of 0.006, leading to the acceptance of the hypothesis for this group. Conversely, for those with 3 to less than 6 years of experience, the effect was negative and not significant, as indicated by a P-value of 0.905. Similarly, the groups with 6 to less than 10 years and more than 10 years of experience did not exhibit significant moderating effects, with P-values of 0.494 and 0.076, respectively. These findings suggest that within the earliest stage of career experience (<3 years), Working Experience significantly enhances the positive impact of the Agility Process on the Perceived Successfulness of Agile Execution, whereas for more experienced groups, this moderating effect is not evident.

Table 8 Hypothesis 6						
Work Experience	'Original	Ύ	Statistics	'P-Values	'Results	
	Sample (O)	(O/STE	DEV)			
<3 years	0.282	2,760		0.006		
3-<6 years	-0.037	0.119		0.905	Assertad	
6-<10 years	0.144	0.685		0.494	Accepted	
>10 years	0.454	1,778		0.076		

Testing influence moderation done for prove whether there is or not role Work Experience variable as a moderator variable, which is shown in the table above.

5 Discussion

5.1 People Agility can be effective to increase perceived successfulness of Agile Execution

Testing hypothesis 1 on influence variable People Agility against Perceived Successfulness of Agile Execution own mark coefficient path (original sample) of 0.479. On testing significance show that the T statistic value on this construct relationship is 5.254 > 1.96, and the p-value is 0,000 < 0, 05 which means significant. Indicates that this hypothesis is supported by the outcomes of this study and can concluded that the first hypothesis which states "There is a significant relationship between People Agility and Perceived Successfulness of agile execution " is accepted [17].

5.2 Organization Agility Support can have a positive effect of increasing Perceived Successfulness Agile Execution on DT

Testing hypothesis 2 on influence variable Organizational Agility Support for Perceived Successfulness of Agile Execution own mark coefficient path (original sample) of 0.228. On testing significance shows that the T statistical value of this construct relationship is 2.075 > 1.96, and the p-value is 0.038 < 0.05 which means significant. Indicates that this hypothesis is supported by the outcomes of this study and can conclude that the second hypothesis which states " There is a significant relationship between Organization Agility and Perceived Successfulness of agile execution" accepted [18].

5.3 Agility Process can be effective to boost Perceived Successfulness Agile Execution on DT

The analysis of Hypothesis 3 revealed that the Agility Process positively impacts the Perceived Successfulness of Agile Execution in Digital Transformation, with a path coefficient (original sample) of 0.256. Significance testing indicated a T statistic value of 2.930, exceeding the threshold of 1.96, and a p-value of 0.004, below the 0.05 mark, affirming the hypothesis's validity. This outcome substantiates the assertion that there is a significant relationship between Agile Process Methodology and the Perceived Successfulness of agile execution, thereby accepting the third hypothesis. The confirmation of all hypotheses indicates a significant correlation among the constructs towards enhancing perceived success in agile execution within digital transformation projects. Notably, People Agility emerged as the most influential factor, underscoring the critical role of team capability and user involvement in accelerating project delivery and enhancing project utility, which in turn augments stakeholder satisfaction. Thus, prioritizing People's Agility, alongside the development of Agility Process and Organizational Agility Support, is essential for fostering overall project success [19].

5.4 Working Experience can moderate the relationship between Agility of People and the Perceived Successfulness of Agile Execution

The finding shows People Agility influenced the Perceived Successfulness of Agile Execution with moderated Work Experience. This matter is shown by the p-value in the Work Experience category <3 years equal to 0.000 < 0.05 and is mark significance smallest between category other. This matter shows the influence of People Agility on the most powerful Perceived Successfulness of Agile Execution occurs in the Work Experience <3 years category. Thereby, it can be concluded that the fourth hypothesis which states that "There are significant moderating roles between working experience and Agility of People to influence Perceived Successfulness of agile execution" is accepted.

Working Experience Moderate Positively the relationship between People's Agility and Perceived Successfulness of Agile Execution on DT means that the longer their work experience, the less ability to moderate the relationship between variables, on the other hand, the fresh worker, the level of people agility are also higher, and this affects strengthening team capability, collaborative teamwork, as well as customer involvement for agile execution [20].

5.5 Working Experience which can moderate the relationship between Organization Agility Support and Perceived Successfulness of agile execution

Based on the finding shows that there no is influence of Organizational Agility Support on the Perceived Successfulness of Agile Execution with moderated Work Experience. This matter is shown by the p- value in the Work Experience category > 0.05. This matter shows the influence of Organizational Agility Support on the Perceived Successfulness of Agile Execution is not moderated by Work Experience. Thereby can concluded that the fifth hypothesis which states "There is a significant moderating role between working experience and Organization Agility to influence Perceived Successfulness of agile execution" is rejected [21].

Working Experience Not Moderate Positively the Relationship between Organization Agility Support and Perceived Successfulness of Agile Execution. It means that the longer work experience cannot moderate this relation because Work Experience is more related to personal experience. However, OAS relates more to the policy and regulation of the company that does not relate to tenor or employee experience. If we return to previous studies' indicators of WE: They have the Ability to work independently, the Ability to work in a team, the Ability to solve the problems, the Ability to make decisions, the Ability to communicate effectively, the Ability to influence others. They are not related to the OAS indicator (management support, organization culture, and support environment.

5.6 Working Experience can moderate the relationship between the Agility Process and of Perceived Successfulness of Agile Execution

The analysis in this study reveals a significant moderating effect of Working Experience on the relationship between the Agility Process and the Perceived Successfulness of Agile Execution in Digital Transformation. Specifically, this effect is most pronounced in individuals with less than 3 years of work experience, as evidenced by a Pvalue of 0.006, indicating the strongest influence in this subgroup. This suggests that newer employees, who are still acclimatizing to the company's project climate and lack significant resistance to adopting agile methodologies, demonstrate the highest agility and adaptability in executing projects. This contrasts with more experienced employees, who, despite their expertise, shows a preference for the predictability of traditional methodologies over agile processes. The propensity of newer team members to readily embrace agile practices and respond to dynamic project requirements underscores the pivotal role of fresh talent in driving the successful implementation of agile projects. Their flexibility, openness to learning, and lack of entrenched work habits position them as valuable assets in the rapidly evolving landscape of digital transformation, highlighting the nuanced impact of Working Experience as a moderator in the agility-successfulness nexus [7].

6 Conclusion

The research finds that digital project teams with less than 10 years of work experience, notably those under three years, are the most agile and adaptable. This agility is linked to their flexibility and the learning phase within the company's environment, despite potential gaps in competence and maturity. In contrast, team members with over 10 years of experience show less agility due to their established work habits and resistance to rapid changes, highlighting a reluctance to adopt new methodologies. However, Organizational Agility Support (OAS) is unaffected by working experience, as it is more associated with overarching company policies. The study underscores the importance of nurturing an understanding of agile benefits across team members and fostering leadership that supports agile methodologies to boost project success in the heavy equipment industry, suggesting that while experience influences individual and process agility, organizational support for agility transcends individual work experience.

References

- Wageeh NA (2016) Organizational Agility: The Key to Organizational Success. International Journal of Business and Management 11:296. https://doi.org/10.5539/ijbm.v11n5p296
- Sheffield J, Lemétayer J (2013) Factors associated with the software development agility of successful projects. International Journal of Project Management 31:459–472. https://doi.org/10.1016/j.ijproman.2012.09.011
- Sheffield J, Lemétayer J (2013) Factors associated with the software development agility of successful projects. International Journal of Project Management 31:459–472. https://doi.org/10.1016/j.ijproman.2012.09.011

- 4. Roshan R, Santhosh A (2021) Adoption of agile methodology for improving IT project performance. Serbian Journal of Management 16:301–320. https://doi.org/10.5937/sjm16-26854
- Pietrzak P, Cieciora M, Klimaszewski K (2022) The use of traditional and agile Project Management methodologies in ICT. Journal of Modern Science 49:509–528. https://doi.org/10.13166/jms/156463
- Patrucco AS, Canterino F, Minelgaite I (2022) How do Scrum Methodologies Influence the Team's Cultural Values? A Multiple Case Study on Agile Teams in Nonsoftware Industries. IEEE Trans Eng Manag 69:3503–3513. https://doi.org/10.1109/TEM.2022.3146717
- Hamsal M, Ichsan M, Utomo AR, et al (2021) The Relationship Analysis Between Knowledge & amp; Skills, Organizational Drivers, and Perceived Success in Implementation of Agile Project Management: Case Study of PT XYZ. International Journal of Operations and Quantitative Management 27:111. https://doi.org/10.46970/2021.27.2.2
- Pietrzak P, Cieciora M, Klimaszewski K (2022) The use of traditional and agile Project Management methodologies in ICT. Journal of Modern Science 49:509–528. https://doi.org/10.13166/jms/156463
- 9. Roshan R, Santhosh A (2021) Adoption of agile methodology for improving IT project performance. Serbian Journal of Management 16:301–320. https://doi.org/10.5937/sjm16-26854
- Petrescu M, Sterca A (2022) Agile Methodology in Online Learning and How It Can Improve Communication: A Case Study. In: Proceedings of the 17th International Conference on Software Technologies. SCITEPRESS - Science and Technology Publications, pp 542–549
- Patrucco AS, Canterino F, Minelgaite I (2022) How do Scrum Methodologies Influence the Team's Cultural Values? A Multiple Case Study on Agile Teams in Nonsoftware Industries. IEEE Trans Eng Manag 69:3503–3513. https://doi.org/10.1109/TEM.2022.3146717
- Ghimire D, Charters S (2022) The Impact of Agile Development Practices on Project Outcomes. Software 1:265–275. https://doi.org/10.3390/software1030012
- Alzeyani EMM, Szabó C (2023) A Study on the Effectiveness of Agile Methodology Using a Dataset. Acta Electrotechnica et Informatica 23:3–10. https://doi.org/10.2478/aei-2023-0001
- 14. Bougie R, Sekaran U (2019) Research methods for business: A skill building approach. John Wiley & Sons
- 15. Hair JF, Hult GTM, Ringle CM, et al (2021) An Introduction to Structural Equation Modeling. pp 1–29
- Verma JP, Verma P (2024) Introduction to SPSS and AMOS Software. pp 13– 34
- 17. Ahmed A, Ahmad S, Ehsan N, et al (2010) Agile software development: Impact on productivity and quality. In: 2010 IEEE International Conference on Management of Innovation & Technology. IEEE, pp 287–291
- 18. Altameem E (2015) Impact of Agile Methodology on Software Development. Computer and Information Science 8:. https://doi.org/10.5539/cis.v8n2p9

- 962 S. R. Permatasary and F. Abadi
- 19. Altameem E (2015) Impact of Agile Methodology on Software Development. Computer and Information Science 8:. https://doi.org/10.5539/cis.v8n2p9
- Alzeyani EMM, Szabó C (2023) A Study on the Effectiveness of Agile Methodology Using a Dataset. Acta Electrotechnica et Informatica 23:3–10. https://doi.org/10.2478/aei-2023-0001
- Chow T, Cao D-B (2008) A survey study of critical success factors in agile software projects. Journal of Systems and Software 81:961–971. https://doi.org/10.1016/j.jss.2007.08.020

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

