

The Impact of Strategic Renewal on Startup Performance: The Role of Digital Transformation and Market Pressure in SaaS-Based Startups in Jakarta and Surabaya

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Abstract

The performance of a newly formed business is critical. This is especially true for organizations that are in fast-changing and intensely competitive markets. This study examines business performance and strategic renewal with particular emphasis on digital transformation as a mediator and market pressure as a moderator. Grounded in the Dynamic Capability Theory, the study sampled 181 Software as a Service (SaaS) startups in Jakarta and Surabaya, and the data were analyzed using PLS-SEM. The study found that strategic renewal and digital transformation ($\beta = 0.647$; $p < 0.001$) and organizational performance ($\beta = 0.874$; $p < 0.001$) are all significantly and positively correlated. The lack of evidence for the impact of strategic renewal on performance ($\beta = 0.016$; $p = 0.753$) suggests that there is no relationship, which is indicative of full mediation, with the implication that digital transformation is a full mediator. In addition, market pressure positively moderates the relationship between digital transformation and performance ($\beta = 0.120$; $p = 0.017$), underscoring the importance of industry competition. The study also contributes to dynamic capability theory by demonstrating the relationships among strategic renewal, digital transformation, and performance. The main practical implications from the research is that strategic plans should be combined with agile responsive digital market strategy plans.¹

Keywords: Organizational Performance, Strategic Renewal, Digital Transformation, Market Pressure, Dynamic Capabilities, SaaS Startups.

1. Introduction

The rapidly changing technological and competitive landscapes present challenges to the competitive positioning of start-ups, especially SaaS companies in Jakarta and Surabaya (Kharisma, 2023; Nugroho, 2023).

In the face of rapid technology development together with the dynamics of advanced consumerism, start-ups and more particularly SaaS companies, there is no alternative but to embrace strategic renewal as deep restructuring or recon-figuration of the company's strategies, business model, and pertinent organizational distinct core capabilities (S. H. Khan, Majid, & Yasir, 2020).

Strategic renewal plays a central role in this study. This process refers to the internal and external changes companies must address in how they plan and strategize. SaaS, for instance, involves strategic renewal through product and technology newness as well as changes in existing markets (Van Zeebroeck, Kretschmer, & Bughin, 2023).

In this regard, digital transformation, as a mediating variable, is conceived as the integration of contemporary

and emerging digital systems and methodologies into the company's fundamental processes to change how it offers value to customers. This includes companies' ability to respond to market changes (Sousa-Zomer, Neely, & Martinez, 2020).

Organizational performance then shows how financial results, customer satisfaction, and operational efficiency reflect it. The company's optimal performance indicates a success in managing resources and capabilities to achieve competitive advantage (Al-Momani, Haddad, Sharabati, & Abu Hashesh, 2023; Yousaf & Majid, 2018).

Market pressure, serving as a moderating variable, encompasses external factors such as intense competition, changing consumer preferences, and technological developments that compel continuous innovation (Kocak, Carsrud, & Oflazoglu, 2017; Y. Lee & Barney, 2016). Market pressure, depending on the company's responsiveness, can strengthen or weaken the connection between strategic renewal and organizational performance.

This research investigates the roles of strategic renewal, digital transformation, and market pressure in the performance of SaaS start-ups operating in Jakarta

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and Surabaya, along with prospects for business market performance. The primary research inquiries are structured as follows:

- How does strategic renewal influence the performance of SaaS start-ups?
- What is the impact of digital transformation on SaaS start-ups' performance?
- How does digital transformation mediate the relationship between strategic renewal and performance?
- In what way does market pressure moderate the relationship between strategic renewal and performance?

This research takes a quantitative approach. Data was obtained by means of a survey of 'CEO or decision-making managers' responsible for making strategic decisions for SaaS start-ups based in Jakarta and Surabaya.

Previous literature provides a foundation for this study. For example, Schmitt et al. (2018) argued that, for organizations to remain competitive and relevant in the market, strategic renewal is essential. Kocak et al. (2017) asserted that the impact of digital transformation on the efficiency and performance of organizations is significantly greater than that of organizations that do not undergo digital transformation. Y. Y. Lee & Falahat (2019) observed that pressures within a market can serve as an impetus, pushing firms to become more innovative to survive competition.

There are almost no studies that integrate strategic renewal, digital transformation, market pressure, and organizational performance in the context of SaaS start-ups in Indonesia. Most studies in the current literature only study relationships between two variables in isolation, such as digital transformation and organizational performance, or strategic renewal and innovation. This study aims to fill this gap by incorporating these four variables into a single research model, thereby adding to the strategic management literature.

This work is part of a series of longitudinal studies that provide strategic renewal to the framework by examining how start-ups in the Indonesian SaaS context use digital transformation and market pressure to bolster organizational performance (see Research Roadmap in Figure 1).

While previous research only focused on large or traditional companies in developed countries, this study provides novelty by going into the Indonesian start-up ecosystem. This study aims at SaaS start-ups in Jakarta and Surabaya as the center of economic growth in Indonesia. This provides emerging frameworks to both academic literature and practitioners to reference when developing tailored strategies and policies.

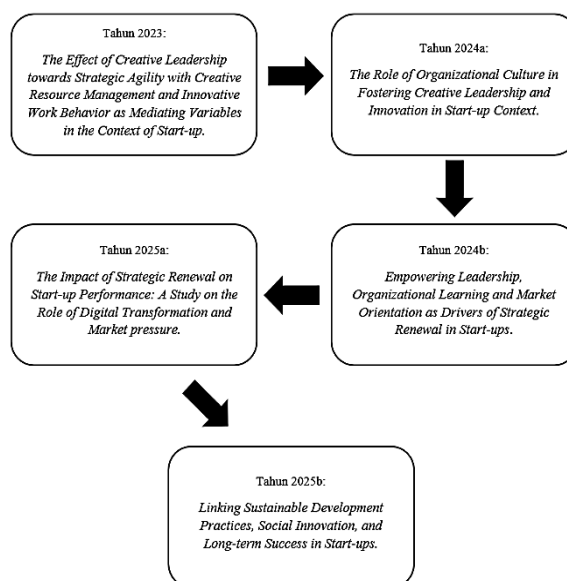


Figure 1. Research roadmap

2. Literature Review

2.1. Grand Theory

Dynamic Capability Theory explains how firms discern and evaluate opportunities and threats, and how they change internal resource configurations to stay competitive (Ferreira & Coelho, 2020; Teece, 2016). Unlike the Resource-Based View, which focuses on the static conditions of resources, dynamic capabilities focus on the adaptation processes that are critical for survival.

For SaaS start-ups, market and technological shifts, as well as pressure, are omnipresent. In this context, dynamic capabilities assist start-ups to enable, enhance, and respond to these phenomena (Duan et al., 2023). Strategic renewal captures the transformation component; digital transformation focuses on seizing opportunities; and market pressure drives the sense-making component (Polo García-Ochoa, De-Pablos-Herederó, & Blanco Jiménez, 2020).

This research, set within the context of Indonesian Software as a Service (SaaS) start-ups, integrates strategic renewal, market pressure, digital transformation, and organizational performance to construct a conceptual model. Based on the Dynamic Capabilities Theory, the model emphasizes the shifting internal resources and competencies configured to the changing, uncertain conditions that start-ups face (Teece, 2016).

Within this framework, the strategic directions of Start-ups are illustrated by how they sense and seize new opportunities. Digital transformation refers to embedding new technologies into the firm's core activities to achieve greater efficiency and enhanced value. More specifically, value creation is constitutive

of the performance of the organization, which arises from the efficient utilization of these capabilities. Here, market pressure is a contextual element that depresses the strength of these ties.

This model attempts to capture the nexus between these variables. Digital transformation is influenced by strategic renewal, while performance is indirectly influenced by market pressure. The relationships between the variables are, however, shaped by market pressure.

2.2. The Influence of Strategic Renewal on Digital Transformation

Strategic renewal (Schmitt et al., 2018) refers to the adoption of a more relevant, environmentally adaptive strategy, structure, and competence configuration for an organization. This is the primary focus of SaaS start-ups given the attention to rapid and shifting technological advancement and extreme competition.

Digital transformation (Lanzolla, Pesce, & Tucci, 2021) is the adoption of new digital technologies to the activities and the business model of a firm to improve its operational efficiency, value creation, and market responsiveness. This dynamic is the organization's strategy, culture, and structure alignment with digital advancement.

Dynamic Capability Theory provides a framework for a firm to capture and discover digital opportunities and for its strategic renewal. Engagement in dynamic renewal is highly cyclical. Such firms tend to renew more, which is a strong predictor of the firm's proactiveness in adopting new technologies (Crossan & Berdrow, 2003; M. A. Khan, Ismail, Hussain, & Alghazali, 2020; Van Zeebroeck et al., 2023).

The latter within SaaS start-ups: strategic renewal, transformation, SaaS start-ups, seamless service model alignment, digital configuration, the digital transformation tier, set the stage for proactive adoption of new technologies, strong predictors, and more, tend to be firms of a cyclical nature.

H₁: Strategic renewal significantly influences digital transformation in SaaS start-ups.

2.3. The Influence of Digital Transformation on Organizational Performance

Enhancing effectiveness and fostering innovation through digital transformation involves integrating sophisticated digital technologies into an organization's structure, culture, and processes (Brunetti et al., 2020; Ying-Yu, Yi-Long, & Yu-Hsien, 2016). In the context of SaaS start-ups, this means more than just a business model pivot; it also means a reconfiguration of the business model, as well as the construction of adaptive value propositions and technology-enabled customer value systems.

In the context of organizational performance, digital transformation involves a multitude of financial and non-financial dimensions, including customer satisfaction and its correlates, as well as operational efficiency, innovation velocity, and market responsiveness (Khin & Ho, 2019). Streamlining digital information systems, decision systems, and process automation enhances the value of the firm's information assets, thereby strengthening its competitive position.

Within the context of the Dynamic Capability Theory, digital transformation pertains to seizing and transforming activities. In this case, it is the technology-fueled response to a dynamic (Teece, 2016). Multiple studies show a sector-agnostic positive relationship between organizational performance and digital transformation (Khin & Ho, 2019; Sousa-Zomer et al., 2020; Ying-Yu et al., 2016).

The backbone of differentiation of value propositions and enhanced competitive positioning in the market, in the case of SaaS start-ups, is digital transformation (with particular emphasis on the technology nexus). In light of the foundation above, the second hypothesis is proposed.

H₂: Digital transformation significantly influences organizational performance in SaaS start-ups.

2.4. The Influence of Strategic Renewal on Organizational Performance

In emergent, unpredictable conditions, strategic renewal is likely the most efficient way to maintain organizational performance over long periods. Instead of viewing strategic renewal as a reaction to something, Al Shawabkeh (2024) and Schmitt et al. (2018) view it as an actively anticipatory focus on new possible strategic projects.

In relation to the SaaS start-ups, positioned in Members S. H. Khan et al. (2020) and Schmitt et al. (2018) focus on cross-industry strategic renewal. In the complex and technology-driven ecosystems, these reports on strategic renewals help in the overarching agility of the SaaS business models due to diversification of the products and shift of the revenue models as well as forming strategic alliances for the purpose of increased value propositions and competitiveness.

Within the Theory of Dynamic Capability, strategic renewal is the organization's ability to 'sense and seize and transform' world changes together with the internal structures and the dispersed systems. In line with Organizational Performance Theory (Leih & Teece, 2012; Teece, Pisano, & Shuen, 2009), these components of agility cumulatively drive increased performance.

Supportive literature indicates the inclination of strategic renewal to bring improved innovation, market response, and operational efficiency (Clauss, Abebe, Tangpong, & Hock, 2019; S. H. Khan et al., 2020). as an example, for the Indonesian SaaS start-ups, the SaaS market poses paramount strategic renewal due to the race of digitalization and elevated customer expectations in the market. In response to the arguments above, the third hypothesis is formulated.

H₃: Strategic renewal significantly influences organizational performance in SaaS start-ups.

2.5. The Mediating Role of Digital Transformation

Digital transformation has evolved from a simple technology upgrade to a strategic change in how organizations work, innovate, and create value. In the case of SaaS start-ups, it improves operational effectiveness and other dimensions of enhancement and growth (Ying-Yu et al., 2016).

As an organization's proactive response to shifting environments, strategic renewal is accompanied by a mechanism of execution to cage in the emerging pathways. In this case, the digital transformation framework supports strategic intent and corresponding actions through digital technologies, integrated data systems, and agile workflows.

As proposed by Dynamic Capability Theory (Teece, 2016), strategic renewal is a function of sensing and seizing simultaneously, and digital transformation is the outcome of the losing end of the balancing act of transformation, ensuring alignment between user adequacy and the new strategic direction. In this sense, digital transformation is both an outcome of strategic renewal and a mediator of its impact to organizational performance.

This is also the case with other empirical studies. Sousa-Zomer et al. (2020) assessed the impact of strategic renewal in the absence of digital frameworks and found that performance improvement was not achieved, unlike cases where new strategies aligned with digital frameworks and investments that enhanced operational effectiveness, service quality, and customer satisfaction.

The digital transformation is driving enhanced personalized services, improved user experience, and faster innovation cycles, all of which are essential to SaaS start-ups' operational productivity. Hence, digital transformation operates as a mediating mechanism through which strategic renewal drives operational productivity. This brings us to the reasoning for the proposed hypothesis:

H₄: Digital transformation significantly mediates the relationship between strategic renewal and organizational performance in SaaS start-ups.

2.6. The Moderating Role of Market Pressure

Market pressure phenomena are driven by external factors, including intense rivalry, changing consumer preferences, technological evolution, and ecosystem instability (Gevorkyan, 2019). The performance of a SaaS start-up is also shown by a transformation driven by digital Market pressure (Hossfeld & Pramor, 2018).

In tandem with the increased organizational productivity that comes with digital transformation, there is also a double-edged transformational impact that lands on the other side of productivity. It is important to note that market pressure moderates the relationship between digital transformation and organizational performance (Aizenman & Binici, 2016).

In dynamic capability theory, organizations that appreciate and respond to market pressure and adapt their digital strategies (by seizing and transforming capabilities) are much better positioned to capture value from digital transformation. On the contrary, in the absence of market pressure, firms may become apathetic toward adopting digital technologies, and their performance impact will be minimal.

This perspective is empirically supported. Hossfeld & Pramor (2018) asserted that firms under high market pressure tended to be more responsive and proactive in the adoption of technological changes and in the modification of digital business models, achieving better financial and operational results.

Thus, in the context of SaaS start-ups, which are characterized by the presence of swift changes and fierce market competition, its market pressure is hypothesized to moderate the digital transformation–performance relationship significantly.

H₅: Market pressure significantly moderates the relationship between digital transformation and organizational performance in SaaS start-ups.

2.7. Conceptual Framework

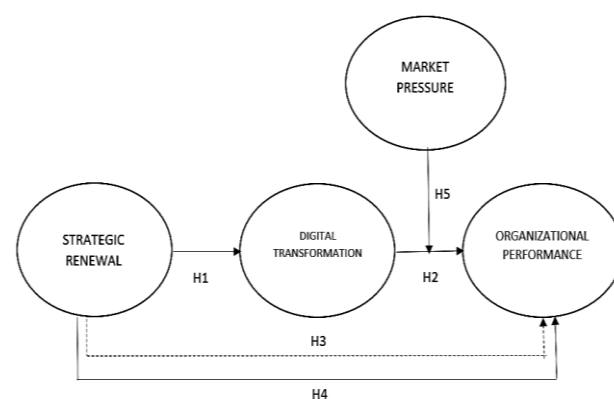


Figure 2. Conceptual framework

3. Methods

3.1. Research Design

The present study employs a quantitative survey research approach. The design is explanatory since it aims to explore and clarify the causal connections among the studied variables through the testing of hypotheses (J F Hair, Anderson, Tatham, & Black, 2019). These connections include both direct and indirect relationships (exogenous and endogenous variables) in a fully worked-out theoretical model.

The explanatory is used for this study. It allows the researcher to gather data from a large and heterogeneous respondent group in a relatively short period of time. This improves the statistical power and robustness of the analysis and allows more confidence in the research results (Memon et al., 2020).

Given the nature of the study, it is suggested that the model be tested in practice. From this, it follows the rationalistic approach. They enable the identification of what is already assumed while formulating conclusions that go beyond sophisticated praxis, with the almost unimaginable complexity of the context characteristic of SaaS start-ups.

3.2. Population and Sample

This research examines SaaS start-ups registered in Jakarta and Surabaya, cities that symbolize the emerging Indonesian digital economy. These locations were chosen for the premium SaaS start-ups and technology-driven business activities and are still considered strategic locations for innovation activities in Indonesia.

The criteria for the population in this research are as follows.

1. Registered SaaS start-ups.
2. Operational for the last 10 years.
3. In the pursuit of funding, the company has not yet been granted capital from external investors.
4. Located in Surabaya and Jakarta

The research used the Traxcn database, a renowned SaaS platform with detailed coverage of 10+ million start-ups from across the globe and various industries. Traxcn is recognized as a reputable provider of validated, tailored data on start-ups in Indonesia. Traxcn was also acknowledged in the 2015 Forbes list of top start-up data analytics platforms.

Using the defined inclusion criteria as well as the filtering functionalities of Traxcn, the research eligible population consisted of 319 SaaS start-ups in Indonesia. While there are over 216,000 SaaS start-ups internationally, Indonesia's ecosystem has around 1,271 SaaS start-ups, which demonstrates the increasing niche segment that is the focus of the present research.

The research uses a sampling rule by Joseph Franklin Hair, Ringle, Hult, & Sarstedt (2021) regarding Partial Least Squares Structural Equation Modeling (PLS-SEM). It was calculated that 138 is the minimum sample needed.

In addition, to ensure equal representation between the two main digital startup ecosystems in Jakarta and Surabaya, a stratified random sampling approach was used. Stratification was based on the firm's geographic location, ensuring that all SaaS start-ups in both cities were proportionally represented. This improves the external validity of the study and strengthens the research's relevance to Indonesia's wide-ranging digital ecosystems.

3.3. Research Instrument

The constructs and their key constructs were measured using previously validated instruments to ensure reliability and conceptual accuracy. Across all the above-described items, a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) was used to capture participants consistently.

The Strategic Renewal is defined and measured using the Schmitt et al. (2018) strategy, which is modified to assess the firm's changing strategic focus. This incorporates business model innovation, market repositioning, and capability enhancement. This is used to measure how start-ups intend to change and/or change the strategic and/or the particulars of the strategy in relation to internal and/or external demands.

The instrument scale, developed by Sousa-Zomer et al. (2020), is used to measure the degree and constructs of digital integration in the functioning of a firm. This scale supports the usage of the digital technologies that the firm employs to improve and strengthen the business processes, organizational agility, and customer experience. This is a suitable representation of the case of the SaaS start-ups.

The research used the Market Pressure attribute and its corresponding 8-item scale, developed by Gevorkyan (2019). This focuses on outside firm pressures, such as competition, customer expectations, technology, and regulatory issues. These pressures are crucial in determining radically digital marketplace firm responses and innovative efforts.

The current state of the Organizational Performance in the proposed model is captured using the instrument developed by Yousaf & Majid (2018), which employs 10 items covering both financial and non-financial performance indicators. These include, but are not limited to, increased revenue, improved profitability, attained operational efficiency, satisfied customers, and enhanced market responsiveness. These performance dimensions offer an integrated perspective on the extent

to which the organization meets its operational and strategic goals.

All instruments were adapted to capture the essence of SaaS startups in the market, ensuring linguistic precision and alignment with the surrounding business terrain. Further instrument appropriateness was established through the pilot testing phase and expert review before pursuing large-scale data collection.

3.4. Data Collection Procedure

Participants for this study will be reached by using formal questionnaires. The respondents should be either managers or founders/owners of SaaS start-up firms. These individuals were chosen to be key informants because of their position as well as their thorough knowledge of the firm's strategy, digital activities, market dynamics, and metrics around the firm's performance.

The questionnaire has been structured to enable the researcher to capture responses on the four key variables of the study, which include: Strategic Renewal, Digital Transformation, Market Pressure, and Organization Performance. Each subsection of the questionnaires includes several questions for each of the available instruments mentioned in the previous sections of this research. The closed questionnaires will be preceded by a short note stating the purpose of the research, the confidentiality of responses, and the optional nature of participation.

Data acquisition will be done both online and offline, depending on what is most suitable for respondents. In the online section, a web-based instrument will be constructed and deployed using Google Forms. The offline section includes hand-delivered copies during industry conferences, start-up meet-ups, or personal visits. A draft version of the questionnaires will be distributed to a few people who represent SaaS start-up companies to collect feedback on order, relevance, and the overall functioning of the questions before any larger-scale distribution.

Participant responses and the quality of the information provided will be maximized using in-depth reminders. Participants will also be instructed to finish the questionnaire in no more than 10 to 15 minutes. All replies will be compiled and systematically structured and subsequently analyzed using descriptive and inferential statistics. Accuracy and consistency will be maintained throughout the process.

3.5. Data Analysis Technique

This study followed a definitive research procedure, which included several stages. The first stage was a preparatory phase, which began with obtaining formal

research permissions from concerned institutions, alongside developing and administering pilot tests for the questionnaire. The enumerators are trained in order to achieve targeted outcomes in the data collection processes. The next phase involves the situational analysis of administering the questionnaire to the target sample, analysis and retrieval of the questionnaires, and the validation of the questionnaires that have been submitted in order to achieve a high level of accuracy and completeness.

Further, the gathered data will be documented and processed using the latest version of Partial Least Squares (PLS) statistical software. The analysis will begin with the application of descriptive statistics in order to structure an understanding of the demographic aspects of the respondents and the SaaS start-ups. From the descriptive phase of the analysis, the analysis shifts to the rest of the data for an inferential computerized analysis. This will be done using the software, SmartPLS 4, Structural Equation Modeling (SEM) techniques, and the relevant add-on packages. SmartPLS 4 is one of the more powerful statistical software packages available, allowing for complex analyses including direct, indirect, mediated analysis, and moderation analyses for various pathways and influences of the variables concerned.

4. Result

4.1. Descriptive Analysis

To provide an understanding of the essential attributes of the collected data, descriptive analysis acts as a preliminary step in this study. The data must fulfill research aims in addition to being representative of the target population (Melasari & Sujana, 2018).

Among 200 questionnaires, 181 responses were received and were usable for the study. The responses were thoroughly examined for any discrepancies, and all responses were included for further analysis. The responses were of high quality, and no discrepancies were found. This number meets the minimum sample size of 178, as derived through the Slovin formula.

The research variable descriptions provide a statistical distribution of the key constructs which include strategic renewal and advanced technologies, digital transformation and market pressure and organizational performance. This information serves to prepare the researchers prior to the measurement and structural model assessment.

4.2. Respondent Profile

The respondents' profile analysis attempts to validate that the data are collected from people who

have the power and capability to make strategic decisions for SaaS start-ups. The respondents are from the top digital hubs in Indonesia, Jakarta and Surabaya, signifying the technological development of the western and eastern parts of the country.

Most respondents were from Surabaya, 54.1%, which illustrates that the city is becoming more and more important as an emerging center for technology-based start-ups. Conversely, 45.9% were from Jakarta, which continues to confirm the city's position as the center of the digital economy in Indonesia.

Looking at the position of the respondents, the majority were in middle management positions 50.3%, followed by senior managers 29.8%, and CEO/Managing Directors 19.9%. This indicates a relatively high representation of decision-makers who work at both the operational and strategic levels.

In relation to age, respondents between 30 and 40 years were the most represented, 48.6% which indicates that they are at the peak of their career. There were also younger respondents, who were under 30 years, and their representation was 26.0% as SaaS builders. Respondents who were over 40 years of age, 25.4% had the country with experience in strategic leadership.

The range of professional experiences was also broad. 45.3% had between 5 and 10 years of experience, 28.7% had less than 5 years, and 26.0% had more than 10 years of experience, which reveals a healthy balance of newcomers and veteran professionals.

This varied demographic profile strengthens the external credibility of the findings, particularly concerning the digital transformation and strategic development of SaaS start-ups.

Table 1. Respondent demographics

	Parameter	Frequency	%
Company	Jakarta	83	45.9
Location	Surabaya	98	54.1
Position	Mid-level	91	50.3
	Manager		
	Senior Manager	54	29.8
Age	CEO/Director	36	19.9
	<30 years	47	26
	30-40 years	88	48.6
Work	>40 years	46	25.4
	<5 years	52	28.7
	Experience	5-10 years	82
	>10 years	47	26

Source: Research Data, Processed (2025)

4.3. Description of Research Variables

This research investigates four essential aspects needed for start-ups operating on SaaS to achieve sustainability and competitive advantage, which are:

Strategic Renewal, Digital Transformation, Market Pressure, and Organizational Performance. These constructs were chosen based on how well they encapsulate the phenomenon with respect to the nexus between the internal and external organization and the constantly evolving digital world.

Data in respect to each of the variables were obtained through a structured questionnaire with a 5-point Likert scale, which evaluated the attitudinal spectrum from 1 "strongly disagree" to 5 "strongly agree". The measures for each variable are based on the recent literature on strategic management and information systems. The measures have been treated with reliability and validation so as to ensure their accuracy.

Table 2. Descriptive statistics of research variables

Variable	Mean	Standar Deviation (SD)	Minimum	Maximum
Strategic Renewal (SR)	4,14	0,66	3	5
Digital Transformation (DT)	4,10	0,71	2	5
Market Pressure (MP)	4,08	0,69	3	5
Organizational Performance (OP)	4,12	0,67	3	5

Source: Research Data, Processed (2025)

The analysis indicates that every element in the survey received an average score above 4.00, confirming the high level of consensus among respondents with the statements attached to each construct.

The mean was 4.14, with a standard deviation of 0.66, suggesting that the majority of respondents agree with the statements regarding their organization's proactive revision and adaptation of strategic directions in alignment with and in response to external dynamics and opportunities. We can prove this with a high mean of 4.10 and a standard deviation of 0.71, indicating that a substantial proportion of respondents believe the organization has a dominant strategic focus on the digitalization of its systems, structures, and services. Though the minimum score of 2 signifies that digital maturity is unevenly distributed across the firms in the sample.

The mean score of 4.08 with a standard deviation of 0.69 reflects external pressure that stems from customer preference shifts, technological advances and competition to enhance one's products or services and to innovate.

The mean score of 4.12 with a standard deviation of 0.67 underscores the respondents' high regard for the organization's performance in terms of financial and non-financial outcomes such as customer satisfaction, innovation, and long-term resilience.

The survey participants' perceptions are consistent, as indicated by the survey indicator on overall perceptions. The means are all high and the deviations modest. The deduction in the previous sentences will now provide a basis for measurement and structural model analysis to establish the measurement model and the causal linkage between the measurement and factor models.

4.4. Measurement Model Test

4.4.1. Stage 1–Convergent Validity at the Second-Order Construct Level (Indicators)

4.4.1.1. Convergent Validity Test

Convergent validity assesses the degree to which a set of indicators reflects a common underlying construct. This study employed outer loadings and Average Variance Extracted (AVE) as the primary evaluation criteria following the recommendations of Hair et al. (2019). An indicator loading above 0.70 indicates a strong correlation with its latent construct. In contrast, AVE values equal to or greater than 0.50 indicate that the construct explains at least half of the variance in its indicators.

Table 3. Convergent validity – first-order constructs (indicators)

Variable	Dimension	Indicator	Loading Factor	AVE	Results
SR	PS 1	PS 1.1	0,824	0,725	valid
		PS 1.2	0,878		
	PS 2	PS 2.1	0,865	0,731	valid
		PS 2.2	0,844		
	PS 3	PS 3.1	0,817	0,724	valid
		PS 3.2	0,884		
DT	TD 1	TD 1.1	0,877	0,777	valid
		TD 1.2	0,886		
	TD 2	TD 2.1	0,886	0,770	valid
		TD 2.2	0,869		
	TD 3	TD 3.1	0,909	0,799	valid
		TD 3.2	0,878		
MP	TP 1	TP 1.1	0,807	0,683	valid
		TP 1.2	0,845		
	TP 2	TP 2.1	0,771	0,644	valid
		TP 2.2	0,832		
	TP 3	TP 3.1	0,798	0,670	valid
		TP 3.2	0,839		
	TP 4	TP 4.1	0,772	0,607	valid
		TP 4.2	0,736		
OP	PO 1	PO 1.1	0,869	0,783	valid
		PO 1.2	0,900		
	PO 2	PO 2.1	0,907	0,811	valid
		PO 2.2	0,894		
	PO 3	PO 3.1	0,901	0,693	valid
		PO 3.2	0,758		
	PO 4	PO 4.1	0,910	0,818	valid
		PO 4.2	0,899		

Source: Research Data, Processed (2025)

As presented in Table 3, all indicator loadings exceed the 0.70 threshold, and all constructs achieve

AVE values above 0.50, demonstrating strong convergent validity. This confirms that each indicator consistently represents its intended construct, thus supporting the adequacy of the measurement model at the indicator level.

Then, three main procedures were employed: (1) Cross Loading Analysis, (2) Fornell–Larcker Criterion, and (3) Heterotrait–Monotrait Ratio (HTMT).

Cross Loadings

Each indicator is expected to load highest on its corresponding construct compared to other constructs. As shown in Table 4, all indicators meet this criterion, with each indicator displaying the strongest loading on its designated construct, confirming satisfactory discriminant validity.

Table 4. Cross loading of indicators

Indicator	DT	MP	OP	SR
DT1	0.875	0.352	0.744	0.603
DT2	0.861	0.371	0.729	0.598
DT3	0.882	0.413	0.761	0.622
MP1	0.254	0.807	0.219	0.338
MP2	0.310	0.831	0.265	0.359
MP3	0.345	0.842	0.289	0.387
MP4	0.365	0.843	0.311	0.415
OP1	0.701	0.284	0.869	0.551
OP2	0.726	0.298	0.907	0.566
OP3	0.688	0.261	0.901	0.534
OP4	0.714	0.286	0.910	0.544
SR1	0.614	0.491	0.568	0.828
SR2	0.523	0.456	0.499	0.711
SR3	0.639	0.477	0.585	0.831

Source: Research Data, Processed (2025)

Fornell–Larcker Criterion

Discriminant validity is established when the square root of AVE (diagonal elements) is greater than the correlations among constructs. As shown in **Table 5**, all constructs satisfy this criterion.

Table 5. Fornell-Larcker criterion

Variable	DT	MP	OP	SR
DT	0.798			
MP	0.580	0.754		
OP	0.740	0.401	0.819	
SR	0.682	0.574	0.656	0.792

Source: Research Data, Processed (2025)

HTMT Criterion

To complement Fornell–Larcker, the Heterotrait–Monotrait Ratio (HTMT) was computed. Values below 0.85 indicate strong discriminant validity (Henseler et al., 2015). As presented in **Table 6**, all HTMT values fall below the 0.85 threshold, confirming adequate discriminant validity across constructs.

Table 6. HTMT criterion

Variable	DT	MP	OP	SR
DT	–			
MP	0.742	–		
OP	0.801	0.483	–	
SR	0.693	0.621	0.711	–

Source: Research Data, Processed (2025)

The results of the convergent and discriminant validity tests confirm that all constructs in the measurement model meet the validity and reliability criteria. The inclusion of both Fornell–Larcker and HTMT analyses strengthens confidence in the model’s discriminant validity. Accordingly, the measurement model is deemed robust and suitable for subsequent structural model analysis.

4.4.1.2. Reliability Assessment

After confirming the convergent validity of the indicators, internal consistency reliability was evaluated for each second-order construct — Strategic Renewal (SR), Digital Transformation (DT), Market Pressure (MP), and Organizational Performance (OP). Reliability ensures that the indicators consistently measure their intended latent constructs and that the results are reproducible under similar conditions (Hair et al., 2019).

Three reliability indicators were assessed: Cronbach’s Alpha (α), rho_A, and Composite Reliability (CR). Following established thresholds, all three coefficients should exceed 0.70 to indicate acceptable internal consistency (Hair et al., 2021).

Table 7. Construct reliability

Variable	Cronbach’s Alpha	rho_A	CR	Results
SR	0.871	0.882	0.915	Reliable
DT	0.883	0.896	0.922	Reliable
MP	0.857	0.869	0.901	Reliable
OP	0.891	0.903	0.930	Reliable

Source: Research Data, Processed (2025)

All constructs exhibit Cronbach’s Alpha, rho_A, and Composite Reliability values well above the 0.70 threshold, confirming strong internal consistency. These results indicate that the measurement items are homogeneous and stable in representing their respective constructs.

4.4.2. Stage 2–Latent Variable Extraction

4.4.2.1. Convergent Validity Test

Following validation of indicator-level measurement properties, the next step was to extract latent-variable

scores from the first-order constructs. This process was necessary to operationalize the second-order (higher-order) constructs, namely Strategic Renewal (SR), Digital Transformation (DT), Market Pressure (MP), and Organizational Performance (OP).

The extraction of latent-variable scores enables the transformation of each dimension’s composite score into reflective indicators for its respective higher-order construct. This hierarchical modeling approach is particularly relevant for complex constructs that represent multidimensional phenomena, such as strategic renewal and digital transformation, which encompass multiple interrelated sub-dimensions (Hair, Hult, Ringle, & Sarstedt, 2017).

In this study, the Repeated Indicator Approach (RIA) was applied, a method widely used in Partial Least Squares Structural Equation Modeling (PLS-SEM) for higher-order modeling. Under this approach, all first-order indicators are assigned to their corresponding higher-order construct, enabling the estimation of relationships between higher-order and lower-order dimensions simultaneously. The resulting latent variable scores reflect the shared variance among the underlying dimensions and serve as weighted composite measures for subsequent analysis. After the extraction process, the latent variable scores were used as input for the Stage 3 measurement validity and reliability tests at the dimension level. This step aimed to confirm that each second-order construct maintains adequate convergent and discriminant validity when represented by its first-order components.

This procedure ensures that each higher-order construct—such as *Strategic Renewal* (capturing multiple strategic change dimensions), *Digital Transformation* (encompassing technological and process reconfiguration aspects), *Market Pressure* (reflecting competitive and environmental turbulence), and *Organizational Performance* (covering both operational and strategic outcomes)—is empirically represented by its validated lower-order dimensions.

4.4.3. Stage 2–Convergent Validity at the First-Order Construct Level (Dimensions)

Following the extraction of latent variable scores, the next step assessed the validity and reliability of the first-order dimensions that form the higher-order constructs: *Strategic Renewal (SR)*, *Digital Transformation (DT)*, *Market Pressure (MP)*, and *Organizational Performance (OP)*. This stage ensures that each dimension meaningfully contributes to its higher-order construct and demonstrates adequate convergent, discriminant, and internal consistency reliability.

4.4.3.1. Convergent Validity Test

Convergent validity was assessed through the loading factor and the Average Variance Extracted (AVE). A loading factor value above 0.7 indicates a strong relationship between the dimension and its corresponding construct. In contrast, AVE values ≥ 0.5 suggest that more than half of the variance in the dimension is explained by the construct (Hair et al., 2019).

Table 8. Convergent validity – first order constructs (dimensions)

Variable	Dimension	Loading Factor	AVE	Results
SR	PS 1	0,828	0,627	valid
	PS 2	0,711		valid
	PS 3	0,831		valid
DT	TD 1	0,875	0,638	valid
	TD 2	0,861		valid
	TD 3	0,637		valid
MP	TP 1	0,621	0,568	valid
	TP 2	0,731		valid
	TP 3	0,747		valid
	TP 4	0,843		valid
OP	PO 1	0,816	0,670	valid
	PO 2	0,857		valid
	PO 3	0,792		valid
	PO 4	0,808		valid

Source: Research Data, Processed (2025)

Cross Loadings

The cross-loading matrix was examined to verify discriminant validity across dimensions. Each dimension should load highest on its intended construct compared to others (Hair et al., 2021). Each dimension demonstrated its highest loading on its respective construct, confirming discriminant validity through cross-loading analysis.

Table 9. Cross loading of dimensions

Dimension	SR	DT	MP	OP
PS1	0.828	0.562	0.474	0.601
PS2	0.711	0.522	0.429	0.550
PS3	0.831	0.594	0.498	0.622
TD1	0.613	0.875	0.556	0.707
TD2	0.648	0.861	0.571	0.721
TD3	0.495	0.637	0.471	0.565
TP1	0.463	0.531	0.621	0.437
TP2	0.514	0.560	0.731	0.470
TP3	0.496	0.575	0.747	0.481
TP4	0.557	0.601	0.843	0.529
PO1	0.583	0.721	0.510	0.816
PO2	0.610	0.742	0.526	0.857
PO3	0.528	0.683	0.495	0.792
PO4	0.544	0.704	0.519	0.808

Source: Research Data, Processed (2025)

Fornell–Larcker Criterion

According to Fornell and Larcker (1981), discriminant validity is established when the square root of AVE for each construct exceeds its correlations with other constructs. The diagonal elements (\sqrt{AVE}) are all higher than their corresponding off-diagonal correlations, confirming satisfactory discriminant validity.

Table 10. Fornell-Larcker criterion

Variable	SR	DT	MP	OP
SR	0.792			
DT	0.695	0.798		
MP	0.573	0.559	0.754	
OP	0.656	0.732	0.498	0.819

Source: Research Data, Processed (2025)

HTMT Criterion

To further validate discriminant validity, the HTMT ratio was assessed. A value below 0.85 (strict criterion) or 0.90 (liberal criterion) indicates adequate discriminant validity (Henseler, Ringle, & Sarstedt, 2015). All HTMT ratios fall below the 0.85 threshold, reinforcing the discriminant validity established by the Fornell–Larcker analysis.

Table 11. HTMT criterion

Variable	SR	DT	MP	OP
SR	—			
DT	0.738	—		
MP	0.611	0.563	—	
OP	0.702	0.769	0.586	—

Source: Research Data, Processed (2025)

4.4.3.2. Reliability Assessment

Reliability was confirmed using Cronbach’s Alpha, rho_A, and Composite Reliability (CR), with acceptable thresholds of ≥ 0.7 for all measures. All constructs meet the recommended reliability thresholds, indicating strong internal consistency across the first-order dimensions.

Table 12. Construct reliability

Variable	Cronbach’s Alpha	rho_A	CR	Results
SR	0.782	0.801	0.853	Reliable
DT	0.816	0.828	0.871	Reliable
MP	0.835	0.857	0.883	Reliable
OP	0.848	0.860	0.892	Reliable

Source: Research Data, Processed (2025)

The results confirm that all first-order constructs exhibit satisfactory convergent validity, discriminant validity, and reliability. The inclusion of both the Fornell–Larcker and HTMT criteria enhances the robustness of the discriminant validity testing and

addresses the reviewers' recommendations. Thus, the measurement model at the dimension level is statistically sound and suitable for subsequent structural model analysis.

4.5. Structural Model Test

The structural model test aims to examine the validity of the causal relationships among latent constructs as formulated in the research hypotheses. This test was conducted using a bootstrapping approach with 5000 subsamples and a 5% significance level (one-tailed). The analysis produced path coefficients, t-statistics, and p-values, which were used to determine the statistical significance of each hypothesized relationship.

The model's overall fit and robustness were assessed using SRMR, VIF, R²/Adjusted R², f², and Q² (PLSpredict) indices to ensure comprehensive model validation.

4.5.1. Model Fit and Collinearity Assessment

The Standardized Root Mean Square Residual (SRMR) was 0.056, below the recommended threshold of 0.08 (Hu & Bentler, 1999), indicating an acceptable model fit. Collinearity diagnostics confirmed that all Variance Inflation Factor (VIF) values ranged from 1.21 to 3.42, well below the conservative threshold of 5.0 (Hair et al., 2021), signifying the absence of multicollinearity.

Table 13. Model fit assessment

Construct	Inner VIF	Range	SRMR	Interpretation
SR → DT	1.37		0.056	Good fit
DT → OP	2.94			No collinearity
MP (Moderator)	3.42			No collinearity
OP	1.21			

Source: Research Data, Processed (2025)

4.5.2. Coefficient of Determination (R²)

Table 14. Model fit assessment

Endogenous Variable	R ²	Adjusted R ²	Interpretation
Digital Transformation (DT)	0.42	0.41	Moderate explanatory power
Organizational Performance (PO)	0.79	0.78	Substantial explanatory power

Source: Research Data, Processed (2025)

The model explains a substantial portion of the variance in the endogenous constructs. The R² value for Digital Transformation (DT) is 0.42, indicating that 42% of its variance is explained by Strategic Renewal (SR). Meanwhile, R² for Organizational Performance (OP) is 0.79, showing that SR, DT, and MP collectively

explain 79% of the variance in organizational performance. The Adjusted R² values of 0.41 (DT) and 0.78 (OP) confirm the model's stability.

4.5.3. Effect Size (f²) and Predictive Relevance (Q² / PLSpredict)

Effect size (f²) was used to determine the relative contribution of each exogenous construct to its respective endogenous variable. Following Cohen's (1988) benchmarks (0.02 = small, 0.15 = medium, 0.35 = large), results indicate that Strategic Renewal → Digital Transformation exerts a significant effect (f² = 0.42), Digital Transformation → Organizational Performance has a substantial effect (f² = 0.67), and Market Pressure's moderation shows a small-to-medium effect (f² = 0.12).

Table 15. Effect size and predictive relevance

Relationship	f ²	Interpretation
SR → DT	0.42	Large
DT → OP	0.67	Very large
SR → OP	0.01	Negligible
MP (Moderation)	0.12	Small-medium

Source: Research Data, Processed (2025)

The model's predictive relevance (Q²) was assessed using the blindfolding procedure (omission distance = 7). All Q² values were greater than zero—Q² (DT) = 0.27 and Q² (OP) = 0.51—indicating moderate-to-strong predictive capability. The PLSpredict analysis further confirmed that all Q² predict values were positive and that the Root Mean Square Error (RMSE) for PLS predictions was lower than the linear model (LM) benchmark, supporting the model's predictive robustness (Shmueli et al., 2019).

Table 16. Results of structural model testing

Path	T-Statistic	P-Values	Hypothesis	
SR → DT	0,647	11,162	0,000	Accepted
DT → OP	0,874	20,861	0,000	Accepted
SR → OP	0,016	0,315	0,753	Rejected
SR → DT → OP	0,105	2,352	0,019	Accepted
Moderasi MP terhadap DT → OP	0,120	2,392	0,017	Accepted

Source: Research Data, Processed (2025)

The results of the structural model assessment indicate that the proposed model performs well overall and supports most of the hypothesized relationships. Detailed results are presented in Table 16.

The analysis reveals that Strategic Renewal (SR) exerts a positive and significant effect on Digital Transformation (DT) (β = 0.647, t = 11.162, p < 0.001). This finding demonstrates that organizations engaging

in continuous strategic renewal—through innovation, restructuring, and strategic reorientation—are more likely to adopt and implement digital technologies effectively. It underscores that adaptive strategic practices form a critical foundation for successful digital transformation initiatives (Van Zeebroeck et al., 2023).

Furthermore, Digital Transformation (DT) shows a substantial and statistically significant positive effect on Organizational Performance (OP) ($\beta = 0.874$, $t = 20.861$, $p < 0.001$). This relationship indicates that organizations with higher digital maturity tend to achieve superior performance outcomes, including improved operational efficiency, customer responsiveness, and innovation capability. These results corroborate previous studies emphasizing the role of digital transformation as a strategic enabler of competitiveness and long-term value creation (Wang et al., 2020).

Conversely, the direct path between SR and OP is not statistically significant ($\beta = 0.016$, $t = 0.315$, $p = 0.753$), suggesting that strategic renewal's influence on performance does not operate directly. Instead, its impact is transmitted entirely through digital transformation. The mediation analysis confirms a full mediation effect, with the indirect path $SR \rightarrow DT \rightarrow OP$ significant ($\beta = 0.105$, $t = 2.352$, $p = 0.019$). This indicates that SR enhances OP exclusively via the mediating mechanism of DT. In other words, strategic renewal contributes to better performance only when it is operationalized through digital transformation initiatives that realign organizational processes, culture, and technologies.

Additionally, the moderating analysis reveals that Market Pressure (MP) significantly strengthens the relationship between DT and OP ($\beta = 0.120$, $t = 2.392$, $p = 0.017$). This suggests that in highly competitive environments—characterized by rapid technological change, shifting customer preferences, and emerging competitors—the positive impact of digital transformation on performance becomes more pronounced. This finding aligns with Contingency Theory and Dynamic Capability Theory, which argue that the effectiveness of internal capabilities depends on the alignment between organizational actions and external environmental conditions (Teece, 2016; Hossfeld & Pramor, 2018).

The model provides robust empirical support for the central proposition that digital transformation acts as the primary mechanism linking strategic renewal to organizational performance. At the same time, market pressure serves as a contextual amplifier, enhancing the effectiveness of digital initiatives. This combination of internal adaptability and external responsiveness forms the foundation for sustainable performance among SaaS-based start-ups operating in dynamic digital

ecosystems. (Gevorkyan, 2019; Hossfeld & Pramor, 2018).

5. Discussion

5.1 The Effect of Strategic Renewal on Digital Transformation

The results from the structural model analysis depict a powerful, statistically significant positive effect between Strategic Renewal (SR) and Digital Transformation (TD) (Path Coefficient = 0.647; $t = 11.162$; $p = 0.000$). This means that the more organizations strategically renew themselves, the more profound and widespread their digital transformation becomes.

This finding aligns with Van Zeebroeck et al. (2023), who argue that any digital transformation goes hand in hand with a change in strategy. This shows that digital transformation is not an isolated activity, but rather an outcome of positive, proactive strategic planning. In the same way, Al Taweel & Al-Hawary (2021) contend that more agile and proactive strategists are more likely to broaden the scope of digital technology usage in operations and value-adding processes.

This connection is to be expected from the perspective of Dynamic Capability Theory (Teece, 2016): the more efficiently a firm identifies, captures, and reconfigures resources, the better the stability and change. In this case, strategic renewal is the part of the process that captures and configures resources, and digital transformation is the part that reconfigures them.

The relationship is exemplified in the Software as a Service (SaaS) industry, where firms find themselves in a hyper-velocity environment and are forced to make constant strategic changes. Changes such as moving from a licensing to a subscription model, incorporating AI, or diversifying into new verticals demand powerful digital transformation capabilities. In the absence of such capabilities, there is a strong likelihood of conflict between the strategic and digital efforts, leading to the waste of valuable resources. This is why, in the context of the SaaS industry, strategic renewal is the foundation of an energetic, responsive digital transformation.

In the Indonesian SaaS market, the value of 0.647 obtained for Strategic Renewal shows a positive relationship with other Digital Transformation Strategies and Renewal Measures. Mekari, Jurnal.id, and Majoo are prime examples of strategic renewal driven by product diversification, market repositioning, and vertical expansion, and the simultaneous implementation of digital transformation initiatives. Mekari's expansion from a stand-alone accounting application to an integrated cloud-based human resource and financial

platform is a case of strategic reorientation and the emergence of digital infrastructure. In the same way, Majoo's advancement to omnichannel systems for micro merchants, driven predominantly by the need to scale and improve system interoperability, required extensive refinements and enhancements to the digital infrastructure and core and support systems. These illustrations showcase how SaaS firms in Indonesia leverage strategic renewal to initiate digital transformation, in line with the other empirical findings of the current study.

In addition, technology adaptability is one of the many reasons why Indonesian start-up companies are winning over inflexible business models, as Kharisma (2023), has pointed out, due to their digital proactivity and strategic renewal. The same goes for Nugroho, Ferdinan, & Rosyadi (2024), who elaborate on the role of SaaS firms in investment renewal and the transformation of reclamation and digital infrastructure, and in validating the research outcomes.

5.2 The Effect of Digital Transformation on Start-up Performance

The analyses of the structural models confirm a strong, statistically significant correlation between Digital Transformation (TD) and Organizational Performance (PO) (path coefficient = 0.874; $t = 20.861$; $p = 0.000$). This coefficient suggests that the most digitally transformed organizations also perform best in terms of productivity, efficiency, and innovation.

First defined as the deliberate use of digital technologies to modernize core business processes, digital transformation embodies the use of innovation to generate customer value and enhance an organization's agility in a competitive market. The increased organizational performance resulting from digital transformation demonstrates the value of digital technologies such as cloud computing, big data, AI, and process automation for operational, customer, and market agility.

The finding restates the views advocated by Nugroho (2021), in which digital transformation is perceived as more than technology acquisition but a fundamental change in a business's strategy, culture, and processes to create sustained value. This is also supported by Wang, Feng, Zhang, & Li (2020), who noted that digital transformation done right results to better financial performance, greater customer satisfaction, and enhanced innovation in new and existing products and services.

From a theoretical perspective, the outcomes remain consistent with Dynamic Capability Theory and its emphasis on a firm's ability to sense and seize, and then reorganize, resources through a reframing of the

firm's environment. Thus, a firm's ability to perform digital transformation can also be considered a manifestation of dynamic capabilities, enabling it to change its processes and competencies to ensure competitive advantage. In this perspective, digital transformation is not simply an enabling capability but also a primary capability that amplifies an organization's ability to respond to external pressures (Polo García-Ochoa et al., 2020).

No less important, though, is the case of Software-as-a-Service (SaaS) Startups, for which digital transformation is even more critical. Their entire business model is built on a digital infrastructure to market, sell, interact with, manage, and even automate customer billing. The degree to which such firms can scale, augment, and perpetually optimize their digital systems determines their success.

For instance, machine learning-based recommendation engines boost retention, and real-time analytics dashboards improve decision speed and accuracy. Cloud-native architecture also provides greater scalability and cost efficiency, making SaaS firms more agile and responsive to client-determined parameters.

A nation like Indonesia will find that SaaS, having adopted digital solutions such as real-time analytics, AI-driven segmentation, and cloud-native architecture, can really boost organizational performance by enhancing customer retention, rapid deployment, and customer value, as demonstrated by the high coefficient value. For instance, Journal. ID's automation of financial reporting and data synchronization with SMEs has improved customer retention and service reliability. Similarly, Mekari's machine learning and predictive analytics have enhanced operational decision-making and improved client onboarding.

These results mirror those from Southeast Asia. For example, in their 2022 paper, Sreenivasan, Ma, Rehman, & Muthuswamy (2023) showed the extent of the digital economy in Southeast Asia. Collectively, this evidence indicates that the digital transformation of the western part of Indonesia's SaaS quadrant also corroborates the correlational findings of this study. Furthermore, this evidence strengthens the theoretical relationship between technological innovation and competitive advantage.

5.3 Direct Effect of Strategic Renewal on Organizational Performance

The path coefficient of 0.016, the t -statistic of 0.315 and the p -value of 0.753 do indicate, 'Strategic Renewal does not have a statistically direct impact on Organizational Performance' The efficient direct steps taken on strategic renewal like 'Market Reorientation, Business Model Redesign, Repositioning of products'

does not seem to improve ‘Organizational Performance’ as no value was set on the last result.

This suggests that there are likely other factors, such as ‘Digital Transformation, Organizational Capabilities, Cultural Adaptation,’ that could enhance a firm’s performance through forward-looking strategic shifts. In other words, strategic renewal does not suffice. It requires appropriate, powerful internal mechanisms capable of implementing the desired changes.

Unlike Amankwah-Amoah, Khan, & Osabutey (2021) and S. H. Khan et al. (2020), who argue that proactive, well-structured strategic renewal improves the firm’s competitiveness and operational effectiveness, these results do not align with theirs. However, they agree with Crossan & Berdrow (2003), who noted that the effectiveness of strategic renewal depends on the organization’s ability to assimilate, internalize, and operationalize the new strategy across systems, culture, and appropriate technologies.

The lack of significance also highlights that, in the context of the Dynamic Capability Theory, organizational change is more concerned with how to change than with what to change. In the absence of internal structural changes and enabling technologies, strategic renewal is bound to create a gap between vision and execution.

In the case of SaaS (Software as a Service) startups, this is particularly relevant. A strategy that has been newly formulated—like repositioning to serve enterprise customers—will not improve performance without concomitant investments in digital functionality, platform scalability, security, and backend agility. This underscores the need to realign strategic renewal with digital capabilities to achieve performance results.

Consequently, a systemic approach is required that weaves strategic intent with the structuring of tactical, technological, and organizational capabilities. Only through this approach can greater-than-normal improvement and sustainable competitive advantage be achieved.

5.4 Mediating Effect of Digital Transformation

All structural model analyses indicate that DT significantly mediates the relationship between SR and OP. This further implies that strategic actions like repositioning the market or reconfiguring the business model do not act as performance boosters in their own right, but rather as performance boosters within a more holistic and balanced digital transformation approach. Digital transformation provides the much-needed infrastructure to close the gap between intended strategy and outcomes. It enables the implementation of technology, the digitization of business processes, data-driven decision-making, and improvements to the digital ecosystem.

This discovery is consistent with earlier work, such as that of Ying-Yu et al. (2016), which highlights the instrumental importance of digital transformation as an enabler that links strategic renewal with enhanced performance. In rapidly evolving digital settings, it is insufficient for companies to develop new plans; they must integrate them into effective digital frameworks to unlock operational agility, efficiency, and sustainable competitive edge.

From the Dynamic Capability Theory’s perspective, this strengthens the theoretical premise that firms need the capacity to integrate, construct, and reconfigure internal and external resources and competences in response to environmental changes (Teece, 2007). Transforming and digitizing business processes is a capability that enables self-evident strategy execution, enhanced by scalable, adaptable technology resources.

This context of Software-as-a-Service (SaaS) startups is critical with the full mediation effect. SaaS startups are usually strategically agile and driven by innovation; however, their performance improvements depend on simultaneous advancements in digital systems, such as enhanced modular cloud scalability, seamless API integration, and AI/ML-driven core services. If the strategic purpose is not aligned with digital transformation, strategic renewal becomes obsolete, devoid of performance improvement.

This outcome highlights the need to combine every strategy with a detailed digital transformation blueprint. In the digital economy, digital transformation is not a support function—it is an imperative. The extent to which strategies can achieve organizational impact depends on how an organization approaches digital transformation. It should be treated as a core capability, not an ancillary project, if any efforts at strategic renewal are to achieve peak performance.

5.5 Moderating Effect of Market Pressure

The MP-DT-OP relations carry considerable weight in the structural model analysis of market pressure. The impact of digital transformation on organizational performance is noted to increase as market pressure increases.

Market pressure is a measure of competition within the organization, evolving customer interests, and the likelihood that market leaders will develop novel technologies and prioritize rapid market response to emerging trends. Organizations encountering higher levels of market pressure are more inclined to deploy digitalization as a response to these malicious external forces. In such incidents, the digital transformation is initially approached as an internal goal rather than a marketing tactic, at the expense of the competition.

The outcomes resonate well with Dynamic Capability Theory, which focuses on strategy responses

to internal and external inconsistencies (Hossfeld & Pramor, 2018; Teece, 2016). Lack of competition in the market is an observation that highlights diminished outcomes after the application of digital transformation, signaling the absence of any significant drivers that warrant change. Boost pressure within that market, however, and any initiatives to apply digital technology can improve overall organizational efficiency, satisfaction, and market innovation.

In SaaS startups, the moderating influence of market pressure becomes increasingly crucial amid the accelerating pace of technological change and evolving user expectations. SaaS startups face greater competitive pressure, the emergence of AI solutions, shifting data privacy regulations, and a more acute need for responsive digital transformations, including scaling cloud infrastructure, automating customer service, enhancing cybersecurity, and improving user interface design.

Consequently, the focus of this research is to indicate the imperative for organizations—SaaS startups in particular—to not only market and double down on digital transformation as a strategic imperative, and even more importantly, track and act on market pressure. The role of market pressure is not only a threat scenario. It is also a trigger for DI and highlights the reinforcement of the transformational nature of digitalization on the organization's performance.

6. Conclusions

This study examined the interplay between Strategic Renewal (SR), Digital Transformation (DT), and Organizational Performance (OP) within Indonesian SaaS startups, emphasizing DT's mediating role and the moderating effect of Market Pressure (MP). Using PLS-SEM, the findings confirm that SR significantly drives DT, which in turn substantially enhances OP. However, SR does not directly affect OP, highlighting DT as a full mediator. Moreover, MP strengthens the DT–OP relationship, indicating that competitive pressure amplifies the benefits of digital initiatives.

Theoretically, the findings contribute to the Dynamic Capability Theory by positioning DT as a critical enactment mechanism through which strategic intent materializes into performance outcomes. Additionally, the study enriches contingency theory by revealing how environmental pressure conditions the effectiveness of organizational capabilities.

Practically, this research highlights the necessity for SaaS startups to view digital transformation not as a stand-alone project, but as a strategic vehicle for renewal. Leaders must integrate digital initiatives into core strategic agendas, develop internal digital competencies, and respond proactively to external pressures to achieve performance gains.

Despite its contributions, the study has limitations. The cross-sectional design restricts causal inference and dynamic observation over time. The focus on SaaS firms in Jakarta and Surabaya limits generalizability, and reliance on self-reported measures introduces potential bias.

Future research should adopt longitudinal or mixed-method approaches to capture the evolution of strategy and technology over time. Expanding to other sectors and regions, incorporating objective performance indicators, and exploring additional moderators—such as organizational culture or digital leadership—would enhance theoretical depth and practical relevance.

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