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# The Impact of Entrepreneurial Strategy on the Firm Performance of Indonesian Technology Startups

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# Abstract

Changes in the business environment, driven by technology and globalization, increase the urgency of a strategic orientation for new ventures and, conversely, an entrepreneurial orientation for established firms. Technology startups, as "innovation machines," face unique challenges related to the environment, competition, and resource limitations. Therefore, they need to be more strategic in conducting their business. Entrepreneurial strategy is a new strategic framework specifically formulated for startups. However, the effect of this strategy on firm performance has not been confirmed. This study investigates the relationship of entrepreneurial strategy on the tech startup's firm performance. A conceptual model was developed based on the strategic management framework, including strategy formulation, implementation, and evaluation. The data was collected via an online survey and was able to gather 39 respondents, dominated by the fields of SaaS, Edutech, and health tech. The data was then analyzed using SmartPLS software. The analysis showed that entrepreneurial strategy has a positive effect on firm performance, value offering (value-based strategy), and innovation ambidexterity. Further analysis found that there was no significant mediation effect or indirect relationship. Additionally, the predictability analysis found that the structural model in this study has moderate predictability power. The results of this study contribute to the strategic entrepreneurship field by providing evidence of how entrepreneurial strategy can improve tech-startup firm performance. Lastly, the limitations in this study can provide new opportunities for future research, especially related to objects, operationalization, and conceptual models.

Keywords— Entrepreneurial Strategy; Innovation Ambidexterity; Offered Value; Startup's Firm Performance; Strategic Entrepreneurship

# Abstrak

Perubahan dalam lingkungan bisnis, yang didorong oleh teknologi dan globalisasi, meningkatkan urgensi orientasi strategis bagi usaha baru dan sebaliknya, orientasi kewirausahaan bagi perusahaan mapan. Startup teknologi sebagai "mesin inovasi," menghadapi tantangan unik terkait lingkungan, persaingan, dan keterbatasan sumber daya. Oleh karena itu, mereka perlu lebih strategis dalam menjalankan bisnis mereka. Strategi kewirausahaan adalah kerangka strategis baru yang dirumuskan khusus untuk startup. Namun, efek dari strategi ini terhadap kinerja perusahaan belum terkonfirmasi. Penelitian ini menyelidiki hubungan strategi kewirausahaan terhadap kinerja perusahaan teknologi. Model konseptual dikembangkan berdasarkan kerangka manajemen strategis, termasuk formulasi, implementasi, dan evaluasi strategi. Data dikumpulkan melalui survei online dan berhasil mengumpulkan 39 responden, didominasi oleh bidang SaaS, edutech, dan healthtech. Data kemudian dianalisis menggunakan perangkat lunak SmartPLS. Analisis menunjukkan bahwa strategi kewirausahaan memiliki pengaruh positif terhadap kinerja perusahaan, penawaran nilai (strategi berbasis nilai), dan ambideksteritas inovasi. Analisis lebih lanjut menemukan bahwa tidak ada efek mediasi yang signifikan atau hubungan tidak langsung. Selain itu, analisis prediktabilitas menemukan bahwa model struktural dalam penelitian ini memiliki kekuatan prediktabilitas yang moderat. Hasil penelitian ini memberikan kontribusi pada bidang kewirausahaan strategis dengan memberikan bukti bagaimana strategi kewirausahaan dapat meningkatkan kinerja perusahaan

teknologi. Terakhir, keterbatasan dalam penelitian ini dapat memberikan peluang baru untuk penelitian masa depan, terutama terkait objek, operasionalisasi, dan model konseptual.

Kata kunci— Ambideksteritas Inovasi; Kewirausahaan Strategis; Kinerja Perusahaan Startup; Penawaran Nilai; Strategi Entrepreneurial

## I. INTRODUCTION

The global rise of the startup industry is inseparable from the various contexts that occur or underlie it. The economic context has evolved from being commodity-based to focusing on products, services, and, ultimately, value (Bolwijn & Kumpe, 1990). Then there is the development of information technology, especially digital technology, leading to the merging of physical and digital layers in human life today, which is later referred to as the Industrial Revolution 4.0. This economic trend can also be indicated by the list of the world's largest companies in 2020, dominated by technology-based companies. Indonesia is one of the countries in Asia with the largest startup investment (CBInsight, 2021).

Firm performance is a fundamental topic in strategic management (Durand et al., 2017). Firm performance is viewed as a reference or measure used in the evaluation of firm strategies (Wheelen et al., 2018). Firm performance is the end result of activities, including the actual outcomes of the strategic management process (Wheelen et al., 2018). The dimensions involved in firm performance generally include two aspects: financial and non-financial (Wheelen et al., 2018). Depending on the context, different emphases can be placed according to the prevailing circumstances. In large or established companies, financial performance may be used, but in startups or emerging companies, given their limited resources, the financial aspect is not the primary focus in terms of their performance (Caseiro & Coelho, 2019); instead, the emphasis is more on growth (Guo et al., 2020).

The primary goal of startups is to accelerate product development at the early stages and streamline the learning process (Nguyen-Duc et al., 2017). Startups must respond to rapidly changing customer needs and demands (Bosch, 2015) by accelerating decision-making and design processes (Pantiuchina et al., 2017). Startups typically do this by using an evolutionary prototyping approach, meaning they repeatedly refine initial prototypes aimed at quickly validating product/market fit. The ability of startups to enter new markets and disrupt current business models is largely related to the uniqueness of their human resources and the different approaches they use. The evolution of the digital economy and its combination with data analytics (including big data) challenges current business models, with many startups disrupting established companies (Chen et al., 2012). There is a limited understanding of how entrepreneurs and startups need to change to embrace technological innovation and generate value in the digital economy. They need to build their core resources, which include people, processes, and technology (Carlsson, 2018). An iterative and incremental approach combined with frequent releases is crucial for startups' ability to quickly accommodate frequent changes and align prototypes with business strategy (Coleman & O'Connor, 2008).

Several studies have explored various factors of startup success, including the characteristics of the entrepreneur (Baum & Locke, 2004), business strategy (Cosenz & Noto, 2018), industrial environment (Baum et al., 2001), and organizational characteristics (Birley & Stockley, 2017). Among these factors, business strategy is often proposed as a key factor in predicting the performance and success of startups (Kim et al., 2020).

The study by Kim et al. (2020) proves that focusing on high-quality products to enhance user experience is the most critical factor for the success of technology-based startups, or in other words, the strategy used must be value-based for its users. Research from Lee et al. (2014) also proves that the strategy employed by startups must be based on user value and business value (business model differentiation). Frederiksen and Brem (2017) conducted a literature review and found that in value creation, the orientation used is towards user orientation and problem orientation, meaning the created value orientation is consumer and business-oriented.

Strategic entrepreneurship is crucial for technology startups as it synergizes opportunity-seeking and advantage-seeking behaviors to foster superior performance and wealth creation. In the technology sector, where innovation and rapid change are constants, strategic entrepreneurship enables startups to navigate through the challenges of identifying and exploiting new opportunities while simultaneously developing competitive advantages essential for growth and survival. Technology startups benefit from strategic entrepreneurship through the cultivation of an entrepreneurial mindset, culture, and leadership that prioritizes innovation, strategic management of resources, and creativity. These dimensions are integrated within the strategic entrepreneurship framework to facilitate the exploration of new opportunities and the establishment of competitive advantages, critical for startups in the highly competitive and dynamic digital environment (Ketchen et al., 2007). Moreover, strategic innovation plays a pivotal role in sustaining growth and survival for startups in a turbulent market.

Startups, particularly in technology, are supported by strategic innovations that enable them to remain competitive and agile in the face of evolving market demands and technological advancements. This is achieved through strategic management practices and innovation that improve the startups' stability and adaptability (Dinesh & Sushil, 2019). In essence, strategic entrepreneurship equips technology startups with the necessary tools and approaches to balance exploration and exploitation effectively, driving innovation, competitive advantage, and, ultimately, economic growth. This balance is essential for startups to leverage their unique position of agility and innovation capacity, making strategic entrepreneurship a vital component of their strategic management and operational framework.

In the various literature mentioned above, most of the strategic frameworks used in research are competitive strategies. At the same time, startups have a different business landscape from established companies, which includes challenges such as limited resources. Gans et al. (2019) considered this factor in their strategic framework and formulated an entrepreneurial strategy focused on startups. However, there has yet to be research that uses the entrepreneurial strategic framework in studies on startups, especially in developing countries. Therefore, it is not yet known whether the entrepreneurial strategy truly impacts the performance of startups. Thus, research on this subject is needed to understand the impact of entrepreneurial strategy on the performance of startups.

## II. LITERATURE REVIEW

## A. Strategic Entrepreneurship

Strategic entrepreneurship represents a synthesis of entrepreneurial opportunity-seeking and strategic advantage-seeking behaviors, aiming to achieve superior firm performance. This concept highlights the differential capabilities of small, entrepreneurial ventures in identifying new opportunities against the backdrop of larger firms' proficiency in establishing competitive advantages but their relative ineptitude at recognizing new opportunities. The development of strategic entrepreneurship as a distinct construct underscores the significance of an entrepreneurial mindset, culture, leadership, strategic resource management, and innovation in wealth creation. Integrating these dimensions within strategic entrepreneurship has emerged as a vital avenue for firms to navigate the complex landscape of opportunity and advantage-seeking for wealth generation. The essence of strategic entrepreneurship lies in its ability to blend the agility and innovativeness of entrepreneurial ventures with the strategic foresight and resource capabilities of established firms, thereby creating a powerful engine for economic growth and innovation (Ireland et al., 2003).

## B. Startup Firm Performance

The performance of startups is influenced by multiple aspects directly linked to their business operations and strategies. Research has shown that the effects of these operations can be measured in terms of performance indicators (Božič & Dimovski, 2019), competitive benefits (Duan & Cao, 2015), market competitiveness (Caseiro & Coelho, 2018), innovation capacity (Santos et al., 2020), and business expansion (Kawai et al., 2020). Dynamic Capabilities Theory suggests that these outcomes can be observed as improvements in company or organizational efficiency (Teece, 2018), a competitive edge (Teece et al., 2016), lasting competitive advantages, equivalence in competition, and even business failure (Ambrosini & Bowman, 2009).

Caseiro and Coelho (2018) describe three methods for evaluating organizational performance. The first method focuses solely on financial performance, using outcome-based metrics representing the most limited view of business success. The second method expands this view by combining financial and operational performance measures, including non-financial indicators such as market share, new product launches, marketing success, and outcomes from internal operations, all of which can enhance financial results. The most comprehensive approach to assessing performance considers organizational effectiveness, considering broader measures like the longevity of the firm, its reputation, the general perception of its performance, and the extent to which it achieves its goals. Growth is often the primary focus in the context of startups, where uncertainty and constraints are prevalent. This aligns with the shift towards a value or experience-driven economy, where financial metrics alone fall short of capturing a business's future prospects, leading venture capitalists to favor high-growth startups over their lower-growth counterparts.

# C. Entrepreneurial Strategy

At the heart of entrepreneurship lies the skill to grasp ideas (Shane, 2000), which is distinct yet equally crucial as the ability to pinpoint and employ particular strategies to generate and seize value from those ideas. To transform a specific idea into a successful enterprise foundation, entrepreneurs must (a) identify customers to whom they can offer significant value, (b) utilize and enhance technology to provide value to customers, (c) establish an organization capable of consistently delivering value, and (d) accomplish these goals amidst existing and potential competitive pressures. The bulk of independent research, grounded in the concepts of strategic

learning (Sarasvathy, 2001) and entrepreneurial action (Ravasi & Turati, 2005), underscores the significance of taking action in shaping and refining entrepreneurial strategy. This viewpoint recognizes that entrepreneurs often grapple with the challenge of scarce specific information when trying to implement a viable strategy for an idea, making traditional planning approaches less useful (McGrath & MacMillan, 2000). Attempting to devise and evaluate a business plan in the absence of actual data can lead to the costs associated with inaction (Bhide, 2003). Nevertheless, entrepreneurs can navigate these challenges through a process of ongoing experimentation, learning, and revision (Blank, 2020; McGrath & MacMillan, 2000), tailoring experiments to their instincts (Allinson et al., 2000), foundational profit assumptions (McGrath & MacMillan, 2000), the resources they have at their disposal (Sarasvathy, 2001), or by focusing on actions that build credibility (McMullen & Shepherd, 2006). Therefore, action becomes a crucial component of strategic analysis, with the decisions surrounding entrepreneurial strategy being deeply intertwined with the realities of managing a new business. This body of work, however, often overlooks the opportunity costs and strategic commitments involved in undertaking economic experiments. For instance, offering prototypes to potential customers for their feedback also marks the startup's initial engagement with these early adopters, affecting its reputation and level of customer engagement. The study from Gans et al. (2019) then provides a new strategy framework for technology startups, underscoring the importance of choosing two principles: execution and control. It follows that strategy fundamentally influences company performance, independent of the specific strategy type or framework employed. Therefore, we propose the following hypothesis:

H1: Entrepreneurial strategy can enhance the performance of startup firms.

## D. Offered Value

In the context of strategic planning, understanding and integrating value is crucial. Conceptually, a business model encompasses three core elements: the value proposition, the delivery of value, and the capture of value (Osterwalder et al., 2010). While some scholars might use 'business model' and 'strategy' as interchangeable terms, they emphasize the same principle: viewing the business model as a strategic approach. Thus, in strategy formulation, it's essential to focus on the value being provided to customers, ensuring that it not only serves as the foundation but also aligns with the prevailing conditions and the strategic direction of the company. Therefore, we propose the following hypothesis:

H2: Entrepreneurial strategy can affect the value offered by startup firms.

H3: The value offered can enhance the performance of startup firms.

### E. Innovation Ambidexterity

Innovation ambidexterity involves balancing exploratory and exploitative innovation efforts, enabling gradual and groundbreaking innovations to be introduced for enduring superior performance (He & Wong, 2004). Exploitative innovation focuses on the incremental enhancement of existing offerings for current markets and customers, while exploratory innovation seeks to make significant, novel changes through the introduction of new products for new markets and customer segments (He & Wong, 2004). While exploitative innovation aims at refining and improving efficiency, exploratory innovation is about experimenting with innovative features and embracing adaptability (Jansen et al., 2008). A study from Božič and Dimovski (2019) suggests the necessity of an orthogonal perspective, which treats both exploratory and exploitative activities as separate yet essential components. In their analysis, ambidextrous innovation is depicted as stemming from an organization's dynamic capabilities, which include the routines and processes that enable the organization to effectively distribute, mobilize, coordinate, and merge diverse and often opposing innovative endeavors. Such innovation ambidexterity represents a multifaceted, dynamic capability that not only fosters new abilities and rearrangements of resources but also serves as an extra source of enduring competitive advantage, offering benefits that surpass those attainable from each type of innovation activity on its own (Winter, 2003). It's described as a "learning-to-learn" capacity within firms, which can be harnessed to better detect and exploit new opportunities while minimizing the risk of becoming locked into a single path of development (O'Reilly & Tushman, 2008, 2013). Given the complexity and rapid pace of change in the business environment, as well as the time it takes to adjust to new market demands, it is imperative for organizations to achieve internal harmony and manage a dual structure effectively (O'Reilly & Tushman, 2008). The approach by Jansen et al. (2009) to managing the balance through structural differentiation-segregating exploratory and exploitative units and then integrating them to create value-is noteworthy. This strategy enables the simultaneous pursuit of contrasting activities while safeguarding the exploratory division from becoming mired in inertia (Jansen et al., 2009). The ability to adeptly navigate innovation ambidexterity is particularly vital in the face of environmental uncertainties and the resource limitations typical of startup ventures. As such, firms that exhibit greater ambidexterity stand to gain both the immediate rewards of exploitative innovation and the long-term advantages of exploratory innovation. Hence, we propose the following hypothesis:

H4: Innovation ambidexterity can enhance the performance of startup firms.

The value proposition put forth by startups will shape the innovations they pursue. These innovations are contingent upon or stem from the value provided by the startups. Nevertheless, not every value proposed can be successfully implemented in their innovative endeavors. Thus, it is crucial to determine the influence of the proposed value on the ability to balance exploratory and exploitative innovation activities. Thus, we propose the following hypothesis:

H5: The value offered has an influence on the innovation ambidexterity of startup firms.

In addition to the design of the value proposition, the chosen strategy will guide all aspects of a startup business, including innovation. In developing their innovations, startup firms can refer back to their business strategy. However, consistent with the previous premise, the design and implementation may differ. This means that a startup firm may have a strategy design, but its implementation in terms of innovation may vary depending on the situation, whether it needs to pursue short-term or long-term profits, even though the strategy remains the same. Therefore, we propose the following hypothesis:

H6: Entrepreneurial strategy has an influence on the innovation ambidexterity of startup firms.

Based on the hypotheses developed, we can construct a conceptual model that will be used in this research, as presented in Fig. 1.



Fig. 1. Conceptual Model

# III. RESEARCH METHODOLOGY

This study employs quantitative analysis and involves multiple variables. Measurement of entrepreneurial strategy uses four items derived from the study by Gans et al. (2019). This variable is composed of two dimensions: attitude towards competition and attitude towards innovation. From these two dimensions, four indicators are derived: collaboration with existing players, competition with existing players, tightly guarding innovation, and prioritizing speed to market. All indicators use a seven-point semantic differential scale. Entrepreneurial strategy is conceived as a formative variable. Hence, an additional global item encompassing both dimensions, competition and innovation, is added. The measurement of offered value is derived from the consumer value framework by Almquist et al. (2018), which consists of four dimensions: functional, emotional, life-changing, and transcendental. There are 17 indicators used to represent the choice of value offered. This measurement uses a seven-point semantic differential scale. Measurement of innovation ambidexterity adopts indicators from Božič and Dimovski (2019). This variable consists of two dimensions: exploitative innovation and exploratory innovation. Measurement of this variable uses 12 items with a seven-point semantic differential scale.

All items to be used in the research questionnaire are pre-tested to determine their suitability. Face validity is conducted by consulting experts in the startup field, both academics and practitioners. Afterward, a pilot test is conducted, and validity and reliability are analyzed. From a total of 46 items, all show satisfactory levels of validity and reliability thus they can be used for data collection. The operationalization of variables used in this study is presented in Table 1.

| Variable                    | Code | Indikator   |
|-----------------------------|------|---|
| Entrepreneurial Strategy    | ES1  | Collaborating/working with various existing companies in the same business sector                   |
|                             | ES2  | Competing directly with various existing companies in the same business sector                      |
|                             | ES3  | Strictly protecting innovation to prevent imitation by other companies                              |
|                             | ES4  | Accelerating time-to-market even if the innovation may be easily imitated                           |
| Firm Performance            | FP1  | Level of achievement in improving employee competency   |
|                             | FP2  | continuous improvement for employee performance   |
|                             | FP3  | operational efficiency of the firm  |
|                             | FP4  | reduction in Customer Acquisition Cost  |
|                             | FP5  | maintaining customer retention  |
|                             | FP6  | acquiring new customers   |
|                             | FP7  | increasing user growth  |
|                             | FP8  | decreasing churn rate   |
|                             | FP9  | active users  |
|                             | FP10 | customer satisfaction   |
|                             | FP11 | firm reputation   |
|                             | FP12 | revenue increase  |
|                             | FP13 | profit increase   |
|                             | FP14 | number of transactions  |
|                             | FP15 | Annual Recurring Rate   |
|                             | FP16 | decrease in Gross Merchandise Value   |
| Innovation<br>Ambidexterity | IA1  | Program or budget allocation to respond to demands that exceed the firm's current products/services |
|                             | IA2  | creating new products/services  |
|                             | IA3  | experimenting with new products/services in existing markets  |
|                             | IA4  | commercializing previously nonexistent products/services  |
|                             | IA5  | exploring new opportunities in new markets  |
|                             | IA6  | refining existing products/services   |
|                             | IA7  | light, incremental adaptation of existing products/services   |
|                             | IA8  | commercializing enhanced products/services  |
|                             | IA9  | improving the efficiency of existing products/services  |
|                             | IA10 | increasing economies of scale in existing markets   |
|                             | IA11 | adding products/services for existing markets   |
|                             | IA12 | exploiting products/services in existing markets  |
| Offered Value               | OV1  | Our product/service offers a way to save time for users   |
|                             | OV2  | simplifying work  |
|                             | OV3  | ways to make money  |
|                             | OV4  | ways to connect with other users  |
|                             | OV5  | cost reduction  |
|                             | OV6  | high quality  |
|                             | OV7  | reducing anxiety  |
|                             | OV8  | nostalgia value   |
|                             | OV9  | superior design   |
|                             | OV10 | pleasure  |
|                             | OV11 | access to services beyond reach   |
|                             | OV12 | hone/ontimism   |
|                             | OV13 | ways for self-actualization   |
|                             | OV14 | motivation  |
|                             | OV15 | spiritual   |
|                             | OV16 | becoming a social agent   |
|                             | OV17 | ways to contribute to the environment   |
|                             | 0,11 |   |

# Table 1.Operationalization of Variables

The population of this study consists of startups registered in several Indonesian startup databases, namely the Indonesian Ministry of Communication and Information Technology, Tech In Asia, and Daily Social databases. The total population, according to these three databases, is 1,985 startups. The selected respondents are those who understand the strategy and performance of startup firms, such as managers and top executives (C-level). The survey was conducted online by sending an electronic questionnaire to all of the listed startups. Several items, such as the name of the startup firm, line of business, and position in the startup firm, are also included to obtain the demographic profile of the respondents. One of the purposes of this is to determine the eligibility of respondents with the criteria set out in the study.

From the distribution to nearly two thousand startup firms, a total of 39 respondents filled out the survey. The majority of respondents are engaged in SaaS (15.4%) and edutech (15.4%). Meanwhile, the rest are spread across health tech, media, and agriculture, each at 10.3%, DTC brand (7.7%), e-commerce, fintech, and proptech, each at 5.1%, and in the blockchain field at 2.6%. Based on the job, the respondents are executives (66.6%) and managers (33.4%). Based on generation, the majority of respondents fall into the millennial generation (51.4%) and Generation Z (25.6%). Based on the location of their headquarters, the majority of respondents are in West Java (56.4%) and DKI Jakarta (25.6%). Based on the age of their business, the majority of respondents have been in business for 5-9 years (35.9%). Based on the number of employees, the majority of respondents have less than 10 employees (56.4%). Based on the last funding stage received, the majority of respondents received funding at the pre-seed stage (66.6%). The model in this study contains formative variables and involves a small number of respondents. Therefore, the SEM PLS method is used for data analysis. Data analysis was performed with the help of SmartPLS software (Ringle et al., 2022). The stages conducted include the evaluation of the measurement model and the structural model.

## IV. RESULT/FINDING

#### A. Descriptive Result

Descriptive analysis was conducted to observe the level of each variable. The results of the descriptive analysis are presented in Fig. 2 to 6.



Fig. 2. Descriptive Result of Entrepreneurial Strategy

Based on the obtained values, as shown in Fig. 2, it indicates that the variable of entrepreneurial strategy falls within the category of "quite considered." Based on the level, it can be said that the respondents have a fairly high strategic orientation. In the context of strategic entrepreneurship, technology startups, which are manifestations of entrepreneurship in the digital economy context, also have a strategic orientation. This means that the results obtained in this study support the urgency towards strategic entrepreneurship. In the context of entrepreneurial strategy, as expressed by Gans et al. (2019), the results of this study can be mapped based on the orientation towards competition (collaboration-competition) and innovation (tightly guarding-accelerating delivery). Mapping is done by determining the resultant of these two orientations based on the obtained scores. The results of the mapping of the types of strategies obtained are presented in the following Fig. 3.

Referring to the entrepreneurial strategy typology from Gans et al. (2019), the strategy type obtained from the results in Fig. 3 is called the Value Chain. This strategy type focuses on creating value for partners within the existing value chain and executing quickly. For example, Peapod became a leading online grocery service provider in the United States by aligning itself with the grocery supply industry and even enhancing the existing value chain. In this study, the dominant fields or sectors are SaaS, edutech, and healthtech. It is not surprising that the type of strategy often chosen is the Value Chain type, as these fields already have quite mature value chains. The SaaS field generally targets business entities or B2B (business-to-business), so they tend to secure their position by collaborating and delivering their innovations quickly (time to market). The fields of education and health are

also quite mature and have solid institutions and value chains, so in order to secure their position and ensure their business, they perform collaborative and quick delivery.



Fig. 3. Mapping of Entrepreneurial Strategy

It is important to note that this strategy typology is not rigid or has strict and independent boundaries between types of strategies. Gans et al. (2019) underline choice as the basis for determining strategy, meaning it emphasizes the importance of being flexible and adaptive in an uncertain and rapidly changing environment. Gans et al. (2019) highlight the key role of innovation, whether in products, services, or business models, as the core of entrepreneurial strategy. This approach also focuses on the importance of understanding the market and customer needs, as well as developing an attractive value proposition to retain customers. In addition, an effective business model and the use of data in strategic decision-making are highly emphasized. Furthermore, when developing a strategy, startups must balance between risk and reward, choosing between rapid growth and long-term stability, reflecting the need for a different strategy from large established firms.



Fig. 4. Descriptive Result of Offered Value

The values obtained in Fig. 4 indicate that the variable of the value offered falls within the category of being sufficiently considered. This signifies that in designing their strategies, the respondents pay significant attention to the value proposition. This means that the respondents tend to base their strategies on value or develop value-based strategies. The value as a foundation for strategy formulation has received important attention recently. Value proposition and market segments are the basis in formulating business models using the BMC (Osterwalder & Pigneur, 2010). The value proposition is a major cornerstone in creating the BMC, playing a crucial role in designing aggressive strategies to increase firm revenue and build strong customer relationships (Pratama & Wahyuningsih, 2021). Moreover, the value proposition is an important instrument in outlining the benefits that customers can anticipate from the offered services and products (Aro & Ahola, 2020). The business model as business logic, fundamentally stems from the creation, exchange, and capture of value, making the value proposition fundamental (Laasch, 2018). This means that the value proposition plays a central role in the BMC by directing strategic efforts to deliver tangible benefits to customers. From here, it is evident how value becomes the basis for the business model in the context of the business model as an embodiment of startup strategy.



Fig. 5. Descriptive Result of Innovation Ambidexterity

The values obtained in Fig. 5 indicate that the variable of innovation ambidexterity falls within the category of being sufficiently prioritized. This signifies that, in general, the respondents have a high aspiration for innovation ambidexterity in their strategy implementation. In other words, the innovation implementation they carry out is already quite balanced between exploitative innovation and exploratory innovation.



Fig. 6. Descriptive Result of Firm Performance

The values obtained in Fig. 6 indicate that the variable of firm performance falls within the category of being quite high. This signifies that, although tending to be high, the performance level of the respondents is still not maximized and needs to be improved. Amid the post-pandemic recovery, with the slowdown of global economic growth and geopolitical situations, the technology industry sector, in general, is experiencing a difficult period or what is termed as tech winter, presenting challenges for startup performance. Some of the most impacted sectors or fields include the travel, e-commerce, and logistics sectors. In this study, the majority of respondents have their core business in the SaaS field, which might be the reason for the high level of performance even amid the current tech winter. As projections from Statista in report of DSInnovate (2023) indicate, the SaaS sector is projected to have high revenue growth. Moreover, respondents in this study are also dominated by startups in the Edutech and Healthtech fields, which sectorally are included in the growing sectors (Google et al., 2022).

#### B. Measurement Model Evaluation

Evaluation of the measurement model is conducted before evaluating the structural model. In the research model, two types of variables are used: reflective variables and formative variables. First, the reflective measurement model is evaluated. This evaluation is conducted using four stages: indicator reliability, internal consistency, convergent validity, and discriminant validity. The research model was calculated using the PLS algorithm. The assessment of indicator reliability is done by looking at the outer loading values (Table 2). In this first stage, it was found that the outer loading of indicator OV8 was less than 0.4, so it was removed from the model. After removing indicator OV8, the model was retested and produced outer loading values above 0.4, thus meeting the requirements for indicator reliability (Hair et al., 2021, p.118). Next, internal consistency is assessed by looking at the values of Cronbach's Alpha and composite reliability (Table 3). All variables have Cronbach's Alpha and composite reliability is conducted by considering the AVE values (Table 3). All variables produce AVE values greater than 0.5, thus being satisfactory in terms of convergent validity (Hair et al., 2021, p.120). The last assessment for the reflective measurement model evaluation is assessing discriminant validity. This assessment is done using the HTMT criterion (Table 4). All variables produce HTMT values below 0.9, thus meeting the requirements for discriminant validity (Hair et al., 2021, p.123).

| Table 2.Outer Loa | ading |
|-------------------|-------|
|-------------------|-------|

|     | ES    | FP | IA | OV |
|-----|-------|----|----|----|
| ES1 | 0,802 |    |    |    |
| ES2 | 0,675 |    |    |    |

| ES3  | 0,818 |       |       |       |
|------|-------|-------|-------|-------|
| ES4  | 0,696 |       |       |       |
| FP1  |       | 0,893 |       |       |
| FP10 |       | 0,843 |       |       |
| FP11 |       | 0,896 |       |       |
| FP12 |       | 0,878 |       |       |
| FP13 |       | 0,885 |       |       |
| FP14 |       | 0,866 |       |       |
| FP15 |       | 0,882 |       |       |
| FP16 |       | 0,841 |       |       |
| FP2  |       | 0,917 |       |       |
| FP3  |       | 0,896 |       |       |
| FP4  |       | 0,823 |       |       |
| FP5  |       | 0,778 |       |       |
| FP6  |       | 0,847 |       |       |
| FP7  |       | 0,855 |       |       |
| FP8  |       | 0,611 |       |       |
| FP9  |       | 0,867 |       |       |
| IA1  |       |       | 0,853 |       |
| IA10 |       |       | 0,923 |       |
| IA11 |       |       | 0,919 |       |
| IA12 |       |       | 0,896 |       |
| IA2  |       |       | 0,926 |       |
| IA3  |       |       | 0,916 |       |
| IA4  |       |       | 0,805 |       |
| IA5  |       |       | 0,825 |       |
| IA6  |       |       | 0,925 |       |
| IA7  |       |       | 0,874 |       |
| IA8  |       |       | 0,878 |       |
| IA9  |       |       | 0,842 |       |
| OV1  |       |       |       | 0,832 |
| OV10 |       |       |       | 0,678 |
| OV11 |       |       |       | 0,594 |
| OV12 |       |       |       | 0,910 |
| OV13 |       |       |       | 0,868 |
| OV14 |       |       |       | 0,809 |
| OV15 |       |       |       | 0,653 |
| OV16 |       |       |       | 0,733 |
| OV17 |       |       |       | 0,669 |
| OV2  |       |       |       | 0,872 |
| OV3  |       |       |       | 0,882 |
| OV4  |       |       |       | 0,757 |
| OV5  |       |       |       | 0,855 |
| OV6  |       |       |       | 0,856 |
| OV7  |       |       |       | 0,893 |
| OV8  |       |       |       | 0,379 |
| OV9  |       |       |       | 0,719 |

Source: SmartPLS Calculation

| Table 3. | Construct | Reliability | and ' | Validity |
|----------|-----------|-------------|-------|----------|
|          |           |             |       |          |

|    | Cronbach's alpha | Composite reliability<br>(rho_a) | Composite reliability (rho_c) | Average variance<br>extracted (AVE) |
|----|------------------|----------------------------------|-------------------------------|-------------------------------------|
| FP | 0,974            | 0,978                            | 0,977                         | 0,725                               |

ov

| IA            | 0,974            | 0,975        | 0,977   | 0,779 |  |
|---------------|------------------|--------------|---------|-------|--|
| OV            | 0,959            | 0,971        | 0,964   | 0,627 |  |
| Source: Smart | tPLS Calculation |              |         |       |  |
|               |                  | Table 4.HTM7 | [ Value |       |  |
|               | FP               | IA           |         | OV    |  |
| FP            |                  |              |         |       |  |
| IA            | 0,636            |              |         |       |  |

0,596

Source: SmartPLS Calculation

# C. Formative Measurement Evaluation

0,697

The evaluation of the formative measurement model is conducted through three steps: assessment of convergent validity, collinearity issues, and the significance and relevance of indicators. The assessment of convergent validity for the formative measurement model is performed by conducting a redundancy analysis. To develop the redundancy model, a global indicator previously included in the data collection survey is used. To assess convergent validity, the redundancy model (Fig. 8.) is calculated using the PLS algorithm and then the resulting  $R^2$  value is evaluated. The  $R^2$  value of the redundancy model (Table 5) is 0.954, which is greater than 0.8, thus considered satisfactory or meeting the requirements for the convergent validity of the formative measurement model (Hair et al., 2021, p.143). Next, an evaluation is conducted to determine if there are collinearity issues in the formative measurement model by considering the VIF value (Table 6). All indicators produce VIF values less than 5, indicating that there are no collinearity issues in the formative measurement model (Hair et al., 2021, p.148). The final step in evaluating the formative measurement model involves assessing the significance and relevance of indicators. Using the bootstrapping method, the assessment of the significance of formative indicator weights can be conducted. The results of the significance of weights are presented in Table 7, and it was found that indicator ES2 has an insignificant weight, leading to an analysis of indicator relevance (Hair et al., 2021, p.152). The assessment of indicator relevance is conducted by looking at the outer loading values (Table 8), and it was found that all indicators have outer loading values greater than 0.5, thus all indicators are included to estimate the structural model (Hair et al., 2021, p.152).



| Fig. | 7.  | Redundancy        | Model   |
|------|-----|-------------------|---------|
| 8-   | · · | 1 to a an a an of | 1.10000 |

| radic J.Convergent vandity of ronnative Mo | e Model | ormative | of Fo | Validity | onvergent | ble 5.C | Γal |
|--|---------|----------|-------|----------|-----------|---------|-----|
|--|---------|----------|-------|----------|-----------|---------|-----|

|           | R-square | R-square adjusted |
|-----------|----------|-------------------|
| ES-GLOBAL | 0,954    | 0,952             |

Source: SmartPLS Calculation

Table 6.Outer VIF Value

|      | VIF   |
|------|-------|
| F01  | 1 200 |
| ESI  | 1,328 |
| ES2  | 1 400 |
| E32  | 1,490 |
| F\$3 | 1 586 |
| E03  | 1,580 |

| ES4                          | 1,442 |  |
|------------------------------|-------|--|
| Source: SmartPLS Calculation |       |  |

|           | Original sample<br>(O) | Sample mean (M) | Standard deviation<br>(STDEV) | T statistics ( O/STDEV ) | P values |
|-----------|------------------------|-----------------|-------------------------------|--------------------------|----------|
| ES1 -> ES | 0,472                  | 0,447           | 0,134                         | 3,527                    | 0,000    |
| ES2 -> ES | 0,179                  | 0,196           | 0,132                         | 1,355                    | 0,088    |
| ES3 -> ES | 0,395                  | 0,397           | 0,127                         | 3,101                    | 0,001    |
| ES4 -> ES | 0,256                  | 0,255           | 0,143                         | 1,794                    | 0,036    |

# Table 7.Formative Indicator's Significance

Source: SmartPLS Calculation

| Table 8.Formative | Indicator's Releva | nce |
|-------------------|--------------------|-----|
|-------------------|--------------------|-----|

|           | Original sample<br>(O) | Sample mean (M) | Standard deviation<br>(STDEV) | T statistics ( O/STDEV ) | P values |
|-----------|------------------------|-----------------|-------------------------------|--------------------------|----------|
| ES1 -> ES | 0,807                  | 0,775           | 0,134                         | 6,021                    | 0,000    |
| ES2 -> ES | 0,673                  | 0,668           | 0,116                         | 5,827                    | 0,000    |
| ES3 -> ES | 0,814                  | 0,810           | 0,062                         | 13,115                   | 0,000    |
| ES4 -> ES | 0,693                  | 0,663           | 0,177                         | 3,915                    | 0,000    |

Source: SmartPLS Calculation

# D. Structural Model Evaluation

After the measurement models, both reflective and formative, are evaluated and the results are satisfactory, an evaluation of the structural model is conducted to estimate relationships, analyze explanatory capability, and assess predictability. The evaluation of the structural model is carried out through four stages: examination of collinearity issues, assessment of the significance and relevance of structural relationships, evaluation of the model's explanatory power, and assessment of the model's predictability. To check for collinearity issues in the structural model, the inner VIF values are examined (Table 9). It was found that all variables have VIF values less than 5, indicating that the structural model is free from collinearity issues (Hair et al., 2021, p.191).

After ensuring that there are no collinearity issues in the structural model, the next step involves assessing the significance and relevance of structural relationships. The significance assessment is conducted through the p-value of the structural relationships (Table 10). Out of six structural relationships, only three have a p-value less than 0.05, namely the relationships from ES to FP, ES to IA, and ES to OV. Meanwhile, the rest (OV to IA, OV to FP, and IA to FP) are proven not significant because they have a p-value greater than 0.05 (Hair et al., 2021, p.192). For further analysis on indirect or mediation relationships, the significance of the relationships in the indirect relationship results is examined (Table 11). Based on the calculation results, it was found that all indirect relationships in this study are not significant (p-value > 0.05) (Hair et al., 2021, p.192).

The next assessment related to explanatory power is conducted by evaluating the  $R^2$  values (Table 12). The R2 values obtained from the calculation of this model are 0.605 for the FP variable, 0.409 for the IA variable, and 0.722 for the OV variable. This means that the contribution of the ES, OV, and IA variables is 60.5% in explaining FP. Whereas the ES and OV variables are capable of explaining the IA variable by 40.9%. Then, the ES variable is able to explain the OV variable by 72.2%. In addition to using the R<sup>2</sup> values as consideration, the explanatory capability is also evaluated from the f<sup>2</sup> values that illustrate the effect size. Effect size describes the magnitude of change in R<sup>2</sup> if a variable is removed from the model and is classified by Cohen (1988) into categories of no impact (<0.02), small impact (<0.15), medium impact (<0.35), and large impact (>0.35). Based on the f<sup>2</sup> values obtained from the calculation (Table 13), it is known that the ES and IA variables have a small impact on FP, while the OV variable has no impact on FP. The ES and OV variables have a small impact on the IA variable. Whereas the ES variable has a large impact on the OV variable.

The next assessment, related to predictive power, is conducted using the PLS<sub>PREDICT</sub> method, the results of which are presented in Table 14. The criteria used follow the guidelines from Hair et al. (2021, p.203), which involve comparing the PLS-SEM values with the LM values. Based on the PLS<sub>PREDICT</sub> calculation results, it was found that most of the LM values (both RMSE and MAE) are larger than their PLS counterparts. Therefore, it can be stated that the model in this study has a moderate predictability power (Hair et al., 2021, p.203).

#### Table 9.Inner VIF Value

|          | ¥ 117 |  |
|----------|-------|--|
|          | VIF   |  |
| ES -> FP | 3,824 |  |
| ES -> IA | 3,595 |  |
| ES -> OV | 1,000 |  |
| IA -> FP | 1,693 |  |
| OV -> FP | 3,744 |  |
| OV -> IA | 3,595 |  |
|          |       |  |

Source: SmartPLS Calculation

| Table 10.Path Significance and Hypotheses Testing |
|---|
|---|

| Hypotheses |                     | Original<br>sample (O) | Sample<br>mean (M) | Standard<br>deviation<br>(STDEV) | T statistics<br>( O/STDEV ) | P values | Conclusion |
|------------|---------------------|------------------------|--------------------|----------------------------------|-----------------------------|----------|------------|
| H1         | ES -> FP            | 0,744                  | 0,743              | 0,097                            | 7,641                       | 0,000    | Supported  |
| H2         | $ES \rightarrow OV$ | 0,850                  | 0,858              | 0,059                            | 14,357                      | 0,000    | Supported  |
| H3         | $OV \rightarrow FP$ | 0,221                  | 0,233              | 0,226                            | 0,977                       | 0,164    | Rejected   |
| H4         | $IA \rightarrow FP$ | 0,253                  | 0,383              | 0,348                            | 0,726                       | 0,234    | Rejected   |
| H5         | OV -> IA            | 0,297                  | 0,277              | 0,257                            | 1,154                       | 0,124    | Rejected   |
| H6         | ES -> IA            | 0,620                  | 0,626              | 0,198                            | 3,128                       | 0,001    | Supported  |

Source: SmartPLS Calculation

## Table 11.Indirect Effect

|                                    | Original sample<br>(O) | Sample mean (M) | Standard deviation<br>(STDEV) | T statistics ( O/STDEV ) | P values |
|------------------------------------|------------------------|-----------------|-------------------------------|--------------------------|----------|
| OV -> IA -> FP                     | 0,075                  | 0,161           | 0,195                         | 0,385                    | 0,350    |
| $ES \rightarrow OV \rightarrow FP$ | 0,124                  | 0,066           | 0,242                         | 0,514                    | 0,303    |
| ES -> OV -> IA -><br>FP            | 0,064                  | 0,137           | 0,167                         | 0,381                    | 0,351    |
| $ES \rightarrow IA \rightarrow FP$ | 0,093                  | 0,141           | 0,170                         | 0,547                    | 0,292    |
| $ES \rightarrow OV \rightarrow IA$ | 0,252                  | 0,234           | 0,224                         | 1,128                    | 0,130    |

Source: SmartPLS Calculation

Table 12.R-square

|    | R-square | R-square adjusted |
|----|----------|-------------------|
| FP | 0,605    | 0,571             |
| IA | 0,409    | 0,376             |
| OV | 0,722    | 0,714             |

Source: SmartPLS Calculation

### Table 13.f-square

|    | ES | FP    | IA    | OV    |  |
|----|----|-------|-------|-------|--|
| ES |    | 0,142 | 0,064 | 2,595 |  |
| FP |    |       |       |       |  |
| IA |    | 0,096 |       |       |  |

0,041

ov

0,014

Table 14.PLS Predict Result

Source: SmartPLS Calculation

|      | Q <sup>2</sup> predict | PLS-SEM_RMSE | PLS-SEM_MAE | LM_RMSE | LM_MAE |
|------|------------------------|--------------|-------------|---------|--------|
| FP1  | 0,366                  | 1,110        | 0,916       | 1,200   | 0,992  |
| FP10 | 0,445                  | 0,984        | 0,807       | 1,016   | 0,825  |
| FP11 | 0,428                  | 0,922        | 0,727       | 0,958   | 0,750  |
| FP12 | 0,366                  | 1,098        | 0,921       | 1,134   | 0,944  |
| FP13 | 0,494                  | 0,949        | 0,742       | 0,887   | 0,708  |
| FP14 | 0,396                  | 1,084        | 0,878       | 1,200   | 0,957  |
| FP15 | 0,299                  | 1,263        | 1,013       | 1,303   | 1,021  |
| FP16 | 0,353                  | 1,290        | 1,058       | 1,379   | 1,102  |
| FP2  | 0,452                  | 1,128        | 0,856       | 1,160   | 0,975  |
| FP3  | 0,448                  | 1,130        | 0,891       | 1,183   | 0,944  |
| FP4  | 0,304                  | 1,371        | 1,142       | 1,593   | 1,272  |
| FP5  | 0,282                  | 1,284        | 1,072       | 1,358   | 1,086  |
| FP6  | 0,302                  | 1,218        | 0,955       | 1,194   | 0,916  |
| FP7  | 0,274                  | 1,212        | 1,032       | 1,154   | 0,952  |
| FP8  | 0,059                  | 1,707        | 1,392       | 1,771   | 1,520  |
| FP9  | 0,289                  | 1,187        | 0,934       | 1,158   | 0,917  |
| IA1  | 0,250                  | 1,485        | 1,113       | 1,448   | 1,033  |
| IA10 | 0,258                  | 1,503        | 1,131       | 1,712   | 1,220  |
| IA11 | 0,222                  | 1,390        | 0,947       | 1,483   | 0,998  |
| IA12 | 0,233                  | 1,500        | 1,031       | 1,615   | 1,121  |
| IA2  | 0,193                  | 1,500        | 1,105       | 1,669   | 1,173  |
| IA3  | 0,169                  | 1,532        | 1,131       | 1,670   | 1,206  |
| IA4  | 0,213                  | 1,787        | 1,404       | 1,836   | 1,375  |
| IA5  | 0,232                  | 1,569        | 1,177       | 1,584   | 1,136  |
| IA6  | 0,265                  | 1,493        | 1,108       | 1,697   | 1,223  |
| IA7  | 0,206                  | 1,475        | 1,127       | 1,602   | 1,190  |
| IA8  | 0,273                  | 1,608        | 1,234       | 1,565   | 1,112  |
| IA9  | 0,281                  | 1,520        | 1,139       | 1,767   | 1,219  |
| OV1  | 0,580                  | 0,969        | 0,750       | 0,811   | 0,623  |
| OV10 | 0,173                  | 1,965        | 1,684       | 1,988   | 1,534  |
| OV11 | 0,181                  | 1,745        | 1,338       | 2,015   | 1,504  |
| OV12 | 0,526                  | 1,183        | 0,723       | 1,237   | 0,832  |
| OV13 | 0,331                  | 1,461        | 1,077       | 1,423   | 1,004  |
| OV14 | 0,376                  | 1,500        | 1,126       | 1,441   | 1,053  |
| OV15 | 0,266                  | 1,729        | 1,508       | 1,874   | 1,507  |
| OV16 | 0,384                  | 1,542        | 1,185       | 1,645   | 1,216  |
| OV17 | 0,259                  | 1,795        | 1,468       | 1,968   | 1,522  |
| OV2  | 0,629                  | 0,967        | 0,743       | 0,869   | 0,674  |
| OV3  | 0,342                  | 1,511        | 1,076       | 1,525   | 1,079  |
| OV4  | 0,285                  | 1,497        | 1,014       | 1,475   | 1,041  |
| OV5  | 0,543                  | 1,093        | 0,874       | 1,138   | 0,872  |
| OV6  | 0,662                  | 0,884        | 0,720       | 0,907   | 0,701  |
| OV7  | 0,647                  | 0,956        | 0,662       | 0,996   | 0,679  |
| OV9  | 0,279                  | 1,486        | 1,117       | 1,506   | 1,152  |

Source: SmartPLS Calculation

# V. DISCUSSION

Various literatures in the field of strategic entrepreneurship highlight the importance of integrating entrepreneurial aspects (opportunity seeking and creation) and strategic management (competitive advantage)

(Schröder, 2021) in facing turbulent environments and resource constraints, making strategy an integral and inseparable part of research on strategic entrepreneurship. Entrepreneurial strategy is a strategy framework formulated by Gans et al. (2019) focusing on technology startups. Technology startup entities are often also referred to as startups, new technology-based ventures, and born globals. Technology startups grow alongside opportunities provided by technological advancements, especially digital technologies such as cloud computing, artificial intelligence, virtual reality/augmented reality, big data, and blockchain. The business basis of startups is centered on the creation of technology-based innovations. The rapid development of technology itself and the changes it causes demand high skills from startups to respond accurately. In other words, startups need to have a strategic orientation to be able to survive in the face of environmental turbulence. The entrepreneurial strategy conceived by Gans et al. (2019) offers a strategic framework to support the performance of startup firms. The entrepreneurial strategy framework contains four strategic choices based on two factors: attitude towards competitors and attitude towards their innovation. However, there is no research available that provides empirical evidence on whether entrepreneurial strategy impacts the performance of startup firms.

In this study, a model composed of three predictor variables to predict the performance of startup firms is formulated, namely entrepreneurial strategy, offered value, and innovation ambidexterity. Following the strategic management framework from Wheelen et al. (2018), which consists of environmental scanning, strategy formulation, strategy implementation, and strategy evaluation; this study constructs entrepreneurial strategy and offered value as stages of strategy formulation. Meanwhile, the implementation of the strategy requires the skill to balance the executed innovation, between exploitative innovation or exploratory innovation, or innovation ambidexterity. These three variables are used to predict the performance of startup firms.

The results of this study provide evidence regarding the relationship between entrepreneurial strategy and firm performance. The data analysis supports the first hypothesis, proving that entrepreneurial strategy can enhance the performance of startup firms. These findings support study by Kim et al. (2021) and Slávik et al. (2022). Strategy in several other studies affects the performance of technology startup firms in various contexts. For the strategy to have an impact on improving the performance of startup firms, alignment between strategic behavior and market selection is required (Applegate, 2016). Moreover, the relationship of strategy to the performance of technology startup firms is also influenced by strategic factors within it, such as flexibility, cost, quality, innovation (Theodorou & Florou, 2008), as well as experimentation, such as A/B testing for example (Koning et al., 2019). In general, various strategic elements, including technology focus, market alignment, information technology integration, and innovative experimentation, are key determinants for the performance of technology startup firms.

Regarding the second hypothesis, the results of this study support the hypothesis, proving that entrepreneurial strategy can influence the value offered by startup firms. The findings of this study support the research from Zollo et al. (2018) and Rodrigues et al. (2021). A similar finding was also observed in the study by Clauss et al. (2019), although in their study, strategy influenced business model innovation, one dimension of which is the value proposition. In general, organizational strategy affects the value offering, covering aspects such as competitive positioning, customer value perception, strategic alignment, and the ability to innovate and respond to market opportunities. All these strategic aspects contribute to enhancing the value offering.

Regarding the third hypothesis about the relationship between the value offered and the performance of startup firms, it is not supported by the results of this study. This means that the offered value does not positively impact the performance of startup firms. The findings of this study differ from several other studies such as Kirchberger et al. (2020), Mishra et al. (2020), Ilyas & Osiyevskyy (2022), Zhang et al. (2023), and Clauss et al. (2019). However, various studies suggest that for the value proposition to impact firm performance, several factors are needed. Bandera & Thomas (2019) also show that the amount or frequency of strategic re-orientation (pivot), meaning changing the firm's value proposition, and if this is often done, can hinder firm performance. The relationship between the value proposition and firm performance is greatly influenced by relationships among employees, R&D capabilities, and marketing communication capabilities (Ilyas & Osiyevskyy, 2022), as well as technological innovation capabilities and cooperation capabilities (Zhang et al., 2023). The impact of the value proposition on firm performance has been extensively researched in various contexts. In the context of learning and adapting to market offerings, Kirchberger et al. (2020) show that technology startups learn about the market, adapt their market offerings, and acquire their early customers, thus they can modify their value offering and support firm performance. With an emphasis on offering value, startups are directed towards increased sales (Mishra et al., 2020). Clauss, et al. (2019) also proved that the value proposition and value creation in business model innovation positively influence firm performance. The study by Guo et al. (2019) indicates that the value offering influences firm performance, and this relationship is strengthened by exploratory innovation, while exploitative innovation weakens it. These various studies suggest an influence of the value proposition on firm performance by promoting sales, creating competitive advantages, enhancing customer value, helping firms understand market needs, adapting offerings, supporting growth, and enabling more effective collaboration and innovation.

The fourth hypothesis regarding the relationship between innovation ambidexterity and the performance of startup firms is not supported by the results of this study. This means that innovation ambidexterity does not enhance the performance of startup firms. The findings of this study differ from several other studies such as Božič & Dimovski (2019), Tian et al. (2020), Asiaei et al. (2023), Liao et al. (2018) and Lu et al. (2023). However, findings from other studies like the study by Yan et al. (2021) found that innovation ambidexterity negatively affects the export performance of firms. The same relationship was found in the study by Wu et al. (2020) that innovation ambidexterity negatively affects firm performance. Innovation ambidexterity has an indirect influence through the mediation of knowledge assets such as structural and relational capital (Asiaei et al. 2023). In the study by Liao et al. (2018), the relationship between innovation ambidexterity and firm performance is mediated by business model ambidexterity. This means that the influence of innovation ambidexterity and firm performance is mediated by due to an another studies work, affected by other factors such as strategic orientation, human resource management practices, and environmental dynamics.

The fifth hypothesis is not supported by the results of this study. This means that the value offered by startup firms does not influence their innovation ambidexterity. The findings of this study differ from those found in study by Tian et al. (2020). The concept of innovation ambidexterity, referring to an organization's ability to explore new opportunities while exploiting existing competencies, is crucial for the sustained success of technology startups and new technology-based ventures. However, the direct impact of a tech startup's proposed value on innovation ambidexterity may not always be straightforward or significant due to several factors. Firstly, innovation ambidexterity involves balancing two inherently different processes: exploration, which is about searching for new knowledge, technologies, and markets, and exploitation, which focuses on refining and extending existing competencies, technologies, and markets. Secondly, achieving innovation ambidexterity is not merely a function of the venture's proposed value but also depends on the organization's internal capabilities, such as leadership, culture, and resource allocation, as well as external factors like market dynamics and technological advancements (Aldianto et al., 2021). These factors collectively influence a startup's ability to innovate ambidextrously more than its proposed value alone. Moreover, empirical research suggests that the timing of innovation projects, the experience-based human capital of the founders, and the strategic management of organizational ambidexterity play significant roles in determining the success of technology-oriented ventures in leveraging innovation ambidexterity (Noguti et al., 2021). These aspects underscore the complexity of achieving innovation ambidexterity, which extends beyond the proposed value of the startup. In essence, while the proposed value of a tech startup or new technology-based venture is an important strategic asset, it does not directly dictate the firm's ability to manage innovation ambidexterity. Instead, innovation ambidexterity is influenced by a multitude of factors, including but not limited to strategic management practices, organizational capabilities, founder experience, and external environmental conditions.

The last hypothesis, regarding the relationship between entrepreneurial strategy and innovation ambidexterity, is supported by the results of this study. This means that entrepreneurial strategy can enhance the innovation ambidexterity of startup firms. The findings of this study support the study by Gans et al. (2021) which show that business strategy has a positive influence on innovation ambidexterity. A different relationship is found in the study by Islam & Munir (2022), which shows that strategy influences innovation ambidexterity influences strategy which then impacts firm performance, is shown in Liao et al. (2018). A different relationship is also found in the study by Clauss et al. (2021), where strategy acts as a moderator in the relationship between ambidexterity and firm performance. Business strategy plays a crucial role in supporting innovation ambidexterity in various contexts. In summary, business strategy, including practices of organizational learning, strategic entrepreneurship, and business model approaches, significantly influences innovation ambidexterity, enhancing performance and competitive advantage of firms across various sectors.

Overall, the results of this study contribute to the literature on strategic entrepreneurship by providing evidence that entrepreneurial strategy can enhance the performance of startup firms. On one hand, these findings prove that strategy plays a significant role in improving the performance of startups as entrepreneurial entities. On the other hand, it proves that entrepreneurial strategy can impact firm performance. The positive influence of entrepreneurial strategy on firm performance occurs directly as no significant mediating relationships were found. Despite the achieved results, this study still has several limitations that open opportunities for future research. First, the number of respondents gathered in this study is small, only 39

respondents (response rate of 1.96%). Future research could aim for a higher response rate to obtain results that more representatively reflect the population. The second limitation is related to the distribution of business fields or startup verticals, which in this study concentrated on SaaS, edutech, and healthtech startups. Future research could use sampling methods like stratified or clustered sampling to, once again, obtain a more representative picture of the entire population. The third limitation relates to the operationalization of the entrepreneurial strategy variable, which has not been used in other studies, thus this could be further developed to achieve better operationalization. The fourth limitation concerns the type of industry, as this study investigates technology startups. Future research could consider conducting studies on other types of industries, given that new business entities are not limited to the technology sector alone. Additionally, future studies could research non-SME entities, considering that the study of strategic entrepreneurship does not only discuss SMEs but also examines entrepreneurial behavior or the search and creation of opportunities in established businesses. The next limitation certainly relates to the research model used. In this study, it was found that the influence of entrepreneurial strategy on the performance of startup firms is direct, while the influence mediated by innovation ambidexterity or value offering is not significant. This opens opportunities for new research to develop different models, either using the same variables with different relationships (e.g., moderation relationships) or incorporating other variables such as absorptive capacity, dynamic capability (sensing, seizing, reconfiguring/transforming), BMI (business model innovation), and so forth. This is in order to examine how entrepreneurial strategy can affect firm performance.

## VI. CONCLUSION AND RECOMMENDATION

Strategic entrepreneurship is a fascinating field, a new phenomenon in response to environmental changes driven by technology and globalization, thus highlighting the urgency of a strategic orientation for new ventures and conversely, an entrepreneurial orientation for established firms. Technology startups, as "innovation engines," face unique challenges related to the environment, competition, and resource limitations, necessitating a more strategic approach to conducting their business. Entrepreneurial strategy is a new strategic framework specifically formulated for startups. However, the effectiveness of this strategy typology in enhancing firm performance has not been extensively researched. Therefore, this study investigates the relationship of entrepreneurial strategy in improving the performance of startup firms. The analysis found that entrepreneurial strategy and innovation ambidexterity. However, no significant moderating relationships were found through either value strategy or innovation ambidexterity. Therefore, future research could develop other models by modifying relationships or incorporating other factors, especially related to the literature on dynamic capability and business models. Overall, this study contributes to the field of startup firms.

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