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The Ignition Model: A Roadmap for High-Tech Product Companies to Achieve Hypergrowth

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Abstract : *The study designed a strategic framework to guide high-tech companies on their journey to hypergrowth. The specific objectives are to examine the effects of innovation acceleration, market penetration, and operational scalability on hypergrowth. The study was based on quantitative research method. The cross-sectional survey research design was selected for the study. The population for this study includes staff from high-tech companies in Nigeria. To ensure the sample size is representative of the larger population, Cochran's formula was employed, resulting in a sample size of 384 participants. The judgmental sampling technique was utilized to select the participants. Data collection was carried out using a structured questionnaire with a five-point Likert scale response format. To ensure the validity and reliability of the research instrument, content validity and test-retest reliability were employed. The data acquired were analyzed using both descriptive and inferential statistical methods. Findings showed that innovation acceleration ($\beta = 0.395$, $p < 0.05$), market penetration ($\beta = 0.105$, $p < 0.05$), and operational scalability ($\beta = 0.340$, $p < 0.05$) positively affect hypergrowth. The study concluded that Ignition Model serves as a valuable roadmap for navigating the complexities of business growth, ensuring that organizations remain focused and resilient on their journey to success. Moreover, the study recommended that high-tech companies should enhance their market penetration strategies by leveraging data analytics to identify and target high-potential customer segments effectively.*

Keywords: Ignition Model, Innovation Acceleration, Market Penetration, Operational Scalability

JEL Classification: O31, O32, M37, D24

1. INTRODUCTION

In today's fast-paced technology landscape, high-tech product companies face unprecedented pressure to innovate, scale, and achieve hypergrowth. The speed at which technological advancements are made, coupled with ever-changing consumer demands, has created an environment where only the most agile and forward-thinking companies can thrive. To succeed in this competitive arena, businesses need more than just a solid product; they need a comprehensive growth strategy that accelerates their trajectory from startup to market leader. This is where the Tech Ignition Model comes into play—a strategic framework designed to guide high-tech companies on their journey to hypergrowth. To enhance their innovation, sustainability, and business performance results, companies must devise a range of strategies tailored to their resources and competencies in response to the intense competition in business ecosystems (Corcoles-Mu~noz, Parra-Requena, García-Villaverde & Ruiz-Ortega, 2022; Ruiz-Ortega et al., 2021). In this context, the ability to innovate at speed is no longer a competitive advantage; it is a necessity for survival and growth. Companies that fail to innovate risk being outpaced by more dynamic competitors, potentially leading to a swift decline in market relevance.

Innovative companies frequently adapt their internal new product development procedures in reaction to shifts in the external environment caused by emerging technologies or evolving client demands, as well as changes in resource availability (Kock & Gemünden, 2016). Moreover, the challenge of scaling operations in tandem with innovation adds another layer of complexity for high-tech companies. Scaling is not just about expanding capacity; it involves managing growth in a way that maintains or even enhances the quality of products and services. This requires robust infrastructure, efficient processes, and a scalable business model that can support rapid expansion without compromising on performance. As companies grow, they must also navigate the complexities of global markets, which demand a deep understanding of diverse consumer preferences, regulatory environments, and competitive landscapes. While firms with strong marketing capabilities can enhance their ability to innovate openly in new product development (NPD) by obtaining external knowledge (Feng, Morgan, & Rego, 2017; Lee & Yoo, 2019), an excessive level of marketing capabilities may hinder firms from discovering new, external knowledge (Yang, Li, Jiang, & Zhao, 2020). New Product Development (NPD) teams can enhance their marketing capabilities by effectively incorporating external market insights into their current knowledge bases to drive product innovation (Kyriakopoulos, Hughes, & Hughes 2015). According to Jang and Chung (2015), certain companies initiate the innovation process after the product launch by implementing product upgrades with the assistance of user communities.

Conversely, other companies employ user communities to generate new ideas before the launch or to participate in the enhancement of their current products (Miric, Boudreau, & Jeppesen, 2019; Roberts et al., 2022). In the entrepreneurship literature, the pre- and

post-launch innovation approach is frequently employed (Marvel et al., 2020). This approach emphasises that entrepreneurs engage in exploratory learning prior to initiating a new business (Cope, 2005) and in acquiring knowledge from market responses and customer input after the launch (Dencker, Gruber, & Shah, 2009). Intertemporal and entrepreneurial activities help to establish a conducive environment for incorporating external knowledge into the internal innovation process (Cheng & Huizingh, 2014). Achieving hypergrowth in such a setting is not just about increasing revenues; it is about building a resilient and adaptable organization capable of sustaining growth over the long term. In addition to the pressures of innovation and scaling, high-tech companies must contend with increasingly sophisticated consumer demands. Today's consumers are not only more informed but also more discerning, expecting high levels of customization, convenience, and value from the products they purchase. This shift in consumer expectations necessitates a more customer-centric approach to product development and marketing. Companies must leverage data analytics, artificial intelligence, and other advanced technologies to gain deeper insights into consumer behavior and preferences, enabling them to create products that truly resonate with their target audience. The ability to quickly adapt to changing consumer trends and deliver exceptional customer experiences is critical to building brand loyalty and achieving sustained growth.

The Ignition Model addresses these challenges by providing a strategic framework tailored to the unique needs of high-tech companies aiming for hypergrowth. This model emphasizes the importance of aligning innovation, market strategy, and operational efficiency to create a powerful growth engine. By focusing on these core areas, the Tech Ignition Model helps companies navigate the complexities of the high-tech industry, enabling them to accelerate their growth trajectory from startup to market leader. It offers a roadmap for companies to systematically address the key drivers of hypergrowth, ensuring that they not only survive but thrive in the highly competitive and fast-evolving technology landscape. Existing literature has extensively explored various strategies that influence firm performance, particularly within SMEs and digital industries, there is a noticeable gap in the comprehensive understanding of the specific factors that drive hypergrowth in high-tech companies. Studies by Jang and von Zedtwitz (2023) and Gutierrez-Broncano et al. (2024) have provided valuable insights into innovation strategies, market performance, and firm adaptability. However, they do not explicitly address the unique challenges and strategic imperatives that high-tech firms face when striving for hypergrowth. Furthermore, while the concepts of scaling and scalability have been discussed (Palmié et al., 2023; Coviello et al., 2024), there is a lack of a strategic framework that integrates innovation acceleration, market penetration, and operational scalability specifically tailored for high-tech companies aiming to achieve rapid, exponential growth. This study aims to fill this gap by developing such a framework, offering a focused approach to hypergrowth.

The study will provide a strategic framework that high-tech companies can use to navigate the complex journey to hypergrowth. By focusing on innovation acceleration, market penetration, and operational scalability, the framework will offer actionable insights for firms looking to expand rapidly and sustainably in competitive markets. For startups and SMEs in the high-tech sector, the findings of this study will be particularly valuable. The strategic framework developed will serve as a roadmap for these companies, guiding them on how to scale effectively and achieve hypergrowth without compromising on innovation or operational efficiency. The insights gained from this study could also inform policymakers and industry regulators about the needs and challenges of high-tech firms on their growth trajectory. Understanding these dynamics could lead to more supportive policies and initiatives that foster an environment conducive to innovation and rapid growth in the technology sector. The general objective of the study is to design a strategic framework (Ignition Model) to guide high-tech companies on their journey to hypergrowth. The specific objectives are to examine the effects of innovation acceleration, market penetration, and operational scalability on hypergrowth.

2. LITERATURE REVIEW

2.1 Ignition Model

The Ignition Model serves as a comprehensive framework for guiding businesses, particularly in the realms of marketing and sales, through the intricate process of creating and sustaining momentum for their products, services, or ideas. This model delineates the critical stages required to establish a self-sustaining cycle of growth, engagement, and adoption. By breaking down this journey into four distinct stages—Spark, Fuel, Glow, and Flame—the model provides a structured approach for entrepreneurs and organizations to effectively navigate the complexities of launching and scaling their offerings. The first stage, *Spark*, represents the genesis of the journey. It encompasses the initial idea, innovation, or catalyst that ignites the entire process. This stage is crucial, as it sets the foundation for everything that follows. The Spark must resonate with the target audience, fulfilling a genuine need or addressing a specific problem. At this point, the emphasis is on creativity and vision, as entrepreneurs must identify a unique value proposition that differentiates their offering in a crowded market. Without a compelling Spark, the subsequent stages of the Ignition Model may falter, making it essential for businesses to invest time and effort in refining their core concept.

Once the Spark is established, the model transitions into the *Fuel* stage. This phase focuses on the resources, support, and energy necessary to nurture and grow the initial idea. Fuel can take many forms, including financial investment, human resources, and strategic partnerships. During this stage, organizations must be diligent in securing the right inputs to sustain momentum. Effective marketing strategies, product development, and customer engagement efforts are vital to transform the Spark into a tangible offering that attracts interest and investment. The quality and quantity of Fuel directly influence the trajectory of the growth journey, underscoring the importance of a robust support system. As the process unfolds, businesses will begin to observe the *Glow* stage,

characterized by early signs of progress, validation, and traction. This stage serves as a critical checkpoint, providing indicators that the idea is gaining momentum. Metrics such as initial sales figures, user feedback, and engagement rates become essential in assessing the effectiveness of the strategies implemented thus far. The Glow phase offers valuable insights into how the market is responding to the offering, allowing organizations to pivot or refine their approach if necessary. Successfully navigating this stage boosts confidence and reinforces the belief that the journey toward hypergrowth is attainable.

The culmination of the Ignition Model is the *Flame* stage, where the idea evolves into a self-sustaining entity. At this point, the product or service has established a strong user base, demonstrating consistent growth and a clear path forward. The Flame signifies that the business has reached a level of maturity where it can sustain itself without continuous external support. In this phase, organizations must focus on maintaining momentum by optimizing their operations, enhancing customer experiences, and exploring new market opportunities. The Flame stage also involves ongoing monitoring and adaptation to changing market conditions, ensuring that the business remains relevant and competitive. Underlying the Ignition Model are three core pillars: innovation acceleration, market penetration, and operational scalability. Innovation acceleration emphasizes the need for continuous improvement and adaptation in response to market dynamics. Businesses must cultivate a culture of innovation, encouraging teams to explore new ideas and refine existing offerings. Market penetration involves strategies to expand the user base, increase brand visibility, and strengthen customer loyalty. Finally, operational scalability ensures that the organization can handle growth effectively, with systems and processes in place to support increased demand without sacrificing quality.

2.2 Core Pillars of Ignition Model

The Ignition Model is built on three core pillars: innovation acceleration, market penetration, and operational scalability. Each pillar is designed to address a critical aspect of growth, ensuring that companies not only launch successful products but also sustain their growth momentum over time.

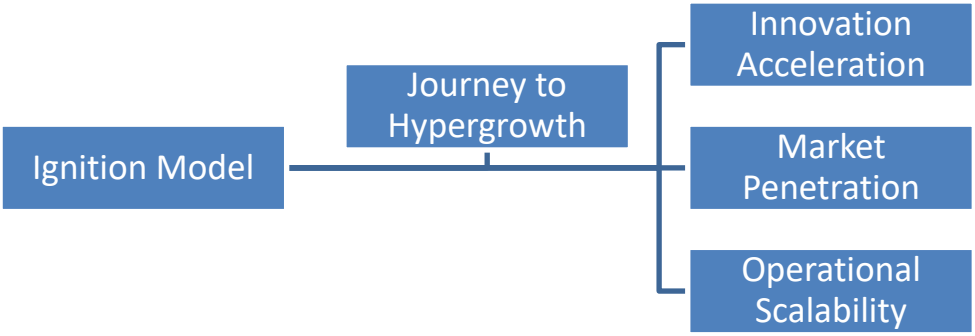

Figure 1. Core pillars of Ignition Model

2.3 Innovation Acceleration

Innovation Acceleration is the first pillar, emphasizing the need for continuous product development and rapid iteration. In the high-tech industry, staying ahead of the curve is essential. Companies must foster a culture of innovation, encouraging teams to explore new ideas, experiment with emerging technologies, and pivot quickly when market conditions change. This pillar also highlights the importance of aligning product development with customer needs, ensuring that each iteration brings added value to the end-user. In organisations that establish competitive advantages, innovation is a strategic imperative (Hutomo & Pudjiarti, 2021). Nevertheless, the limited resource capacity of organisations in terms of innovation (AlQershi et al., 2020) imposes greater constraints on them compared to larger firms in attaining superior performance (Lin et al., 2014; Zamani, 2022). In the realm of company growth, innovation emerges as a crucial strategic instrument that empowers entrepreneurs to generate competitive advantages and market prospects, thereby facilitating the differentiation of their enterprises from their rivals (Febrianti & Herbert, 2022). Therefore, innovation is crucial for enhancing the business performance of SMEs, particularly in intricate and unpredictable business landscapes (Centobelli et al., 2019). Within an organisational setting, innovation is most commonly categorised into two main types: product innovation and process innovation (Bayraktar, 2017). Process innovation enhances internal business efficiency and effectiveness inside the organisation (Centobelli et al., 2019). Process innovation, as defined by Das (2018), include the elimination of non-value-adding operations, cost reduction, and enhancement of corporate competitiveness. In order to introduce new or enhanced items into the market, product innovation necessitates the prior identification of new client requirements and the enhancement of product quality (Febrianti & Herbert, 2022). Establishing a competitive edge for market survival is facilitated by the introduction of novel products that incorporate new or enhanced features and capabilities (Munck et al., 2020). The study conducted by Ramadini et al. (2019) revealed a favourable influence of product innovation on the performance of firms. Additionally, the researchers emphasised the substantial influence of company size as a control variable. Agustia et al. (2022) empirical findings demonstrated the positive impact of product innovations on the success of enterprises.

The conclusion reached by multiple authors aligns with the performance indicators examined in the study conducted by Piening and Salge (2015), which indicate a favourable correlation between product innovation and sales growth. Suwignjo et al. (2022) state that the primary goal of process innovation is to enhance process efficiency via cost reduction and productivity and competitiveness improvement, thereby leading to a favourable impact on operational performance. Previous empirical research has determined that the main factor influencing a company's long-term viability and ability to compete is its level of business innovation (Clauss et al., 2021; Ruiz-Ortega et al., 2021). Moreover, Hilman and Kaliappen (2014) provide empirical evidence showing there is a positive correlation between process innovation and organisational performance. The implementation of a hybrid strategy enables companies to enhance their capacity to respond to environmental fluctuations (Sofia & Augustine, 2019), hence inherently motivating them to pursue product and process innovation (Suoniemi et al., 2020). Innovation, in both processes and products, is a valuable asset that a company can employ to drive growth, development, and effective adaptation to market changes (Jaruzelski et al., 2011). These factors are crucial for enhancing firm performance (Rubio-Andres et al., 2022b).

In their study, Gutierrez-Broncano, Linuesa-Langreo, Rubio-Andres, and Sastre-Castillo (2024) investigated the influence of hybrid strategy on the performance of firms by analysing its expected beneficial outcomes on system and product innovation. Furthermore, they investigated how adaptive capacity moderates the direct dynamics between hybrid strategy and both process and product innovation. The study employed structural equation modelling to examine 1,842 Spanish companies that had less than 250 employees. A sample of small and medium-sized firms (SMEs) operating in Spain was randomly chosen from the Spanish Central Business Directory (2021) database. A stratified sampling approach was used for the overall sample design. Analysis revealed a positive correlation between hybrid strategy and both firm performance and process and product innovation. Moreover, in companies that adopt hybrid methods, the implementation of process innovation contributed to the improvement of company performance. Ultimately, the adaptive capability enhanced the connections between hybrid strategy and both process and product design innovation. This elucidates the optimal timing and effectiveness of hybrid approach in promoting the performance of SMEs.

The study conducted by Carrasco-Carvajala, García-Pérez-de-Lema, and Castillo-Vergara (2023) investigated the influence of innovation strategy, absorptive capacity, and open innovation on the performance of SMEs in Chile. The study used partial least squares structural equation modelling (PLS-SEM) and empirical data collected from interviews with 194 managers of Chilean manufacturing SMEs with 10 to 250 employees. The findings of this study provide a valuable addition to the existing body of knowledge in two key areas: (1) the impact of absorptive capacity on firms' strategies and outbound innovation practices is substantial and positive; and (2) firm strategies serve as a complete mediator between absorptive capacity and inbound open innovation practices, as well as a complementary mediator between absorptive capacity and outbound open innovation practices. Further, the findings indicate that open innovation enhances the performance of SMEs. A study conducted by Hurtado-Palomino, De la Gala-Velasquez, and Ccorisapra-Quintana (2022) investigated the combined impact of innovation competence and prospective absorptive capacity on the innovation performance of a company. A rigorous empirical study was carried out on a sample of 238 companies located in cultural tourism sites in Peru. The hypotheses were evaluated by the application of the partial least squares statistical technology. A beneficial impact of the interplay between innovation competence and prospective absorptive capacity on innovation performance is shown by the results.

2.4 Market Penetration

The second pillar, Market Penetration**,** focuses on the strategies necessary to capture and expand market share. High-tech companies must identify their target markets with precision, leveraging data analytics and customer insights to tailor their marketing efforts. The Tech Ignition Model advocates for a multi-channel approach, combining digital marketing, partnerships, and strategic alliances to reach a broader audience. Moreover, companies should prioritize customer engagement, building strong relationships that drive brand loyalty and advocacy. The marketing competencies of an organisation are seen as influential factors in its global marketing performance (Sheth, 2020; Samiee, & Chirapanda, 2019). Enhancing marketing capabilities enables the establishment of a robust market position and the provision of value to customers, therefore ensuring their loyalty. These aspects are crucial in determining the performance of the organisation (Joensuu-Salo, Sorama, Viljamaa, & Varamäki, 2018). The increasing phenomenon of market globalisation and the resulting rise in competitive intensity has prompted firms to develop new strategies to achieve consistency in their performance in international trade (Acikdilli, Mintu-Wimsatt, Kara, & Spillan, 2020). To fully leverage the anticipated advantages of the new market, the organisation must possess robust internal resources, including assets, capabilities, organisational processes, attributes, information, and knowledge (Gnizy, 2019; Barney, 1991), which are continuously acquired and enhanced throughout its lifespan. The existence of these resources is crucial for the successful execution of internationalisation in firms. Organisations must possess the ability to distribute these resources to foreign markets, particularly when dealing with SMEs that, due to their unique characteristics and size, typically have a smaller share of resources, skills, and capabilities. Consequently, they often fail to assess the market as a whole and fail to fully explore international prospects. Simultaneously, SMEs possesses the potential to contribute to the development of their competitive advantage in the market. This may be achieved through their flexibility and their ability to promptly adapt to market changes (Lekmat, Selvarajah, & Hewege, 2018).

The continuous enhancement of the company's attributes is crucial for establishing a competitive advantage, whether through its products, processes, or adaptability to the market (Kot & Brzezinski, 2015). This pursuit aims to achieve a favourable integration between the internal and external business environments (Beck & Demirguc-Kunt, 2006). Acikdilli, Mintu-Wimsatt, Kara, & Spillan (2020) argue that in order to establish a lasting competitive advantage and outperform intense competition, firms must possess resources that align with the demands of the global environment. This can be achieved by actively seeking new business prospects, exploring new markets, adapting to new consumers, and developing products tailored to these unique markets. The influence of the dynamics of these capabilities on the organisation, thus establishing a competitive edge in the global market (Ambrosini & Bowman, 2009), is essential for enhancing the favourable benefits in international marketing performance (Zou, Fang, & Zhao, 2003). By leveraging external resources and capabilities, the organisation can achieve integration and cooperation between its integrated contact network and internal resources, so converting its capabilities into adaptable elements (Gnizy & Shoham, 2018).

By adhering to the three elements of adaptive marketing capabilities, an organisation can effectively monitor the market, anticipate potential opportunities, adjust its strategy, and proactively adjust to future market development. This leads to a superior performance compared to competitors and reduces the discrepancies between the company's response and market changes (Guo, Xu, Tang, Liu-Thompkins, Guo, & Dong, 2018). Furthermore, the flexibility of marketing capabilities enables the procurement of necessary resources for learning and experimenting, whether by acquiring information or by developing the market itself (Day, 2011). The third component facilitates the establishment of more enduring relationships by means of more transparent marketing strategies, that are actively engaged in the various social networks that firms regular. The presence of open networks of contacts enhances the company's access to resources by facilitating the integration of talents such as the development of long-term partnerships, thereby leading to the attainment of desired outcomes (Dyer & Singh, 1998). This capability is distinct from dynamics, although both operate in relation to market fluctuations, there is a time lag in recognising the shift and in appropriately responding to such a transformation (Fang & Zou, 2009). In comparison to dynamic marketing capabilities, adaptive marketing capabilities exhibit a quicker response to market changes (Hunt & Madhavaram, 2020; Day, 2011).

This technology enables a company to identify, analyse, and respond to these crucial signals in its business environment more quickly than its competitors, resulting in a substantial competitive edge (Ma, Yao, & Xi, 2009) and having a considerable impact on worldwide marketing success. Jang and von Zedtwitz (2023) examined the efficacy of initiating new product development (NPD) projects at different time points, either early or late, or before or after the introduction of a product. This investigation resulted in the identification of four intertemporal NPD strategies: closed-closed, closed-open, open-closed, and open-open. Using fresh data on product innovation and market performance from 536 digital games, the authors examine how intertemporal NPD techniques impact the market performance of new products. They also consider how technological competence, marketing capability, and project complexity moderate this relationship. The results suggest that the efficiency of the early open (open-closed) NPD approach surpasses that of the late open (closed-open) strategy. Moreover, the beneficial impact of open new product development (NPD) strategies is more pronounced in situations when there is a high level of technical skill, but less apparent when there is a high level of marketing capability and when projects are intricate.

The study conducted by Reimann, Carvalho, and Duarte (2021) examined the sustainability of the business model of Portuguese SMEs in the B2B International market. The researchers analysed the impact of dynamic marketing capabilities and adaptive marketing capabilities on the multinational marketing performance of these SMEs. Furthermore, it will examine the moderating influence of Competitive Intensity in this complex global context. An empirical investigation was conducted, employing a questionnaire as the chosen research instrument. 335 genuine replies were obtained from Portuguese SMEs in June 2020. The hypotheses were tested using multiple hierarchical regressions. Regarding the analyses of competitive intensity environments, namely low and high intensity, statistical models were created to assess the distinct impacts generated by the capabilities on the worldwide marketing performance. This study demonstrates the beneficial influence of dynamic marketing capabilities and adaptive marketing capabilities on the international marketing performance of the companies surveyed. These capabilities primarily stem from excellence in product development management, supply chain management, diligent market learning, and open marketing. The beneficial impact of performance was shown only in dynamic marketing capabilities in a low competitive intensity environment. However, in a high competitive intensity environment, both dynamic marketing capabilities and adaptive marketing capabilities had favourable effects on performance. This paper presents a novel approach to international marketing by examining two marketing capabilities from the viewpoint of SMEs engaged in business-to-business (B2B) operations.

The study conducted by Lee, Shim, Kim, and Nam (2021) examined the mechanisms by which product innovation contents (namely, performance improvements and price reductions), reference time points (namely, in the past and in the near future), and purchase intentions establish their interactions. A series of three tests were carried out in South Korea in 2018 and 2019, focussing on electric vehicles (tests 1 and 2) and domestic solar panels (Experiment 3). Comparing prevention-focused messaging to promotion-focused messages, the results suggest that prevention-oriented individuals had weaker intentions to acquire incumbent items when exposed to prevention-focused messages. Nevertheless, persons who prioritise promotion do not display similar variations in their intents to make a purchase. Promotion-oriented participants exhibit greater purchase intentions when they are exposed to promotion-focused communications that are presented as a benefit rather than a non-benefit. Nevertheless, when participants who prioritise prevention

are presented with messages that emphasise prevention, their intentions to make a purchase decrease when the message is presented as a loss rather than a non-loss. This research facilitates the theoretical comprehension of the reasons and mechanisms behind the varying responses of consumers to product innovation messaging. Furthermore, it illuminates the need for marketers to carefully control the communication of the results of innovating activities.

2.5 Operational Scalability

Operational Scalability is the third pillar and is crucial for sustaining hypergrowth. As companies expand, they must scale their operations without sacrificing efficiency or quality. This requires robust infrastructure, streamlined processes, and a scalable business model that can handle increased demand. The Tech Ignition Model encourages companies to invest in automation, cloud computing, and data-driven decision-making to enhance their operational capabilities. Additionally, it underscores the importance of a flexible organizational structure that can adapt to growth and change. Carucci (2016) defines scaling as the process of increasing revenue at a significantly higher pace than the incremental cost. Conversely, Sullivan's (2016) interview with Reid Hoffman, the co-founder of LinkedIn and former CEO of PayPal, centres around the notion of 'blitzscaling.' They, together with Kuratko et al. (2020) and Büge and Ozcan (2021), distinguish blitzscaling from 'traditional scaling' by emphasising speed above conservation of resources. Although Hoffman's perspective on scaling focusses on expansion and magnitude rather than returns to scale (Carucci, 2016), it emphasises the requirement of prioritising the organisation while increasing the client base and revenues. DeSantola and Gulati (2017) contend that the task of aligning internal structural organisation and expansion is commonly referred to as the issue of scaling. An alternative possible feature of scaling is shown in Huang et al. (2017), who provide a definition of scaling as a generative process in which the user base of a business experiences a substantial growth between two specific time periods through digital innovation. This concept indicates that scaling may be a gradual process, yet, similar to DeSantola and Gulati (2017), an emphasis is placed on increase. Huang et al.'s (2017) definition distinguishes itself from previous attempts by its direct focus on digitalisation. Picken (2017) defines scaling as a stage in which the entrepreneur must allocate substantial resources and exploit processes and partnerships to expand the business while adhering to the proven business concept and a viable business model. In their study, Coviello, Autio, Nambisan, Patzelt, and Thomas (2024) contend that scaling is a strategic process in which managers swiftly enhance a company's production by modifying the internal structure and using digital resources without a proportional increase in inputs. These four components collectively result in a form of growth that is distinct both qualitatively and quantitatively from the definitions provided by previous viewpoints.

Jansen et al. (2023) contend that scaling manifests as exponential expansion, while Tippmann et al. (2023a) perceive it as the continuous and swift duplication of the company's business model. The concept provided by Coviello et al. (2024) emphasises internal transformation and digital automation. Crucially, it also underscores the fact that scaling produces'returns to scale.' Palmi´e et al. (2023) contend that scaling is the process of increasing the size of a focal subject, which leads to a greater-than-proportional increase in the performance resulting from that subject. They further establish that a business is scaling if the ratio of performance (t1) to performance (t0) divided by the ratio of size (t1) to size (t0) exceeds 1. While this formula has the advantage of accuracy, it also implies that scaling can result in 'negative growth' if the size of the subject decreases at a faster rate than its performance. Scalability, as defined by Coviello et al. (2024), is a fundamental organisational competency that is established via the effective management and alignment of a company's technology architecture, organisational architecture, and business model. Scalability enables the process of scaling and is considered a normative organisational competence since it closely corresponds to Teece's (2014) perspective on ordinary capabilities compared to dynamic capabilities. Just as scaling encompasses more than simply increasing speed, scalability pertains to the ability of the organisation to vary its operational methods. Therefore, Tippmann et al. (2023a) contend that scaling effectively implements the business model. Effective management of the business model, in conjunction with modifications to both the organisational and technology architectures of the firm, can facilitate scalability. The scale-up phase of organisational development refers to the active involvement of a corporation in the process of expanding its operations (Coviello et al., 2024). Firms at this phase are classified as scale-ups. Economics of scale are interconnected with, but separate from, the concept of returns to scale. The latter refers to the correlation between such an increase in output (e.g., income) and the corresponding increases in inputs (e.g., costs). Greater positive returns to scale indicate that a rise in production does not result in a proportional rise in manufacturing expenses. As proposed by Palmi´e et al. (2023), the concept of returns to scale differentiates scaling from growth, as growth specifically refers to the independent increase of a target indicator. While Coviello (2019) acknowledges that a scale-up cannot exist without growth, it is possible to have growth without being classified as a scale-up.

2.6 Implementing the Tech Ignition Model

For high-tech companies looking to implement the Tech Ignition Model, the journey begins with a thorough assessment of their current position. This includes evaluating the maturity of their innovation processes, the effectiveness of their market strategies, and the scalability of their operations. Based on this assessment, companies can identify areas for improvement and develop a customized roadmap to achieve hypergrowth. Leadership plays a crucial role in the successful implementation of the Tech Ignition Model. Leaders must champion the model, fostering a growth-oriented mindset across the organization. This involves setting clear goals, empowering teams to take calculated risks, and ensuring that all departments are aligned with the company's growth objectives.

Moreover, companies must remain agile and responsive to external changes. The Tech Ignition Model is not a one-time initiative but an ongoing process of adaptation and optimization. High-tech companies must continuously monitor industry trends, competitor activities, and customer feedback to refine their strategies and maintain their growth momentum.

2.7 The Path to Hypergrowth

Achieving hypergrowth is a challenging but attainable goal for high-tech product companies that embrace the Ignition Model. By focusing on innovation acceleration, market penetration, and operational scalability, companies can unlock new opportunities, overcome growth barriers, and establish themselves as industry leaders. The Ignition Model provides a structured yet flexible framework that guides companies through the complexities of rapid expansion, ensuring that they not only grow quickly but also sustain their success over the long term. The Ignition Model offers a powerful roadmap for high-tech companies aiming to achieve hypergrowth. By strategically aligning their innovation, market, and operational efforts, companies can ignite their growth engines and accelerate their journey to becoming dominant players in the technology industry.

3. METHODOLOGY

Research Approach

The positivism approach was chosen for this study due to its emphasis on objective measurement and the use of quantitative research methods to analyze data, allowing for a systematic examination of the relationships between innovation acceleration, market penetration, operational scalability, and hypergrowth. By utilizing quantitative techniques, the study can produce statistically significant results that contribute to the generalizability of findings across high-tech companies. This approach aligns with the research objectives, as it facilitates the collection of numerical data that can be rigorously analyzed to identify patterns and correlations, ultimately enhancing the reliability of the conclusions drawn regarding the impact of these strategic factors on hypergrowth. The cross-sectional survey research design was selected to explore the factors that drive rapid growth in the high-tech industry. This design is particularly well-suited for capturing data at a single point in time, enabling the researcher to analyze the current state of various high-growth strategies among high-tech companies. By using this approach, the study aims to identify critical factors that contribute to achieving hypergrowth and providing a snapshot of the industry's dynamics.

Population of the Study

The population for this study includes staff from high-tech companies in Nigeria, selected for their direct involvement in driving growth and innovation within their organizations. These individuals are at the forefront of implementing strategies that lead to hypergrowth, making their insights invaluable to the study. Focusing on this population allows the research to gather data from those who are most knowledgeable about the challenges and opportunities in achieving rapid growth in the high-tech sector, ensuring that the findings are both relevant and actionable.

Sample and Sampling Technique

To ensure the sample size is representative of the larger population, Cochran's (1977) formula was employed, resulting in a sample size of 384 participants. This formula is mostly used in research when the population is large or its exact size is unknown, ensuring that the sample is statistically significant. A sample of this size allows the study to draw reliable conclusions about the key factors that contribute to hypergrowth in high-tech companies, providing a robust foundation for the Ignition Model.

The formula for the Cochran sample size calculation is as follows:

$n = z\text{^}2(PQ) / e\text{^}2$ ……(1)

The judgmental sampling technique was utilized to select participants, focusing on individuals who are most likely to provide relevant and insightful data. This method allows the researcher to target specific subgroups within the high-tech industry, such as executives, product managers, and innovation leaders, who are directly responsible for driving growth. By choosing participants based on their expertise and experience, the study ensures that the data collected is of high quality and directly applicable to the objectives of the Ignition Model.

Method of Data Collection

Data collection was carried out using a structured questionnaire with a five-point Likert scale response format. This method was chosen to capture the nuanced opinions and attitudes of respondents regarding the factors that drive hypergrowth. The Likert scale is effective in quantifying subjective responses, allowing the study to measure the importance of different growth strategies and their perceived effectiveness in achieving rapid expansion. This approach provides a comprehensive view of how various growth factors are valued by those within the high-tech industry. To ensure the validity and reliability of the research instrument, content validity and test-retest reliability were employed. Content validity was used to confirm that the questionnaire accurately captures the critical factors related to hypergrowth, while test-retest reliability ensures that the instrument produces consistent results over time. These

methods are essential for verifying that the data collected is both accurate and reflective of the real-world experiences of high-tech professionals, strengthening the credibility of the study's findings.

Table 1 Reliability coefficients of study constructs

Pilars of Ignition Model	Items	Cronbach's Alpha
Innovation Acceleration	4	0.765
Market Penetration	4	0.754
Operational Scalability	4	0.743
Hyper growth	4	0.767

Source: Field Survey, 2024.

Based on the data shown in Table 1, it can be inferred that the Cronbach's alpha for each variable is greater than 0.7. Based on these results, it can be inferred that each of the variables has satisfied the necessary criteria, leading to the conclusion that all indicators employed to measure the variables are deemed reliable. Ghozali (2011) asserted that a variable can be said to be reliable if its Cronbach's alpha value is greater than 0.7.

Method of Data Analysis

The data acquired were analyzed using both descriptive and inferential statistical methods. Descriptive statistics provide a clear summary of the respondents' characteristics and their perspectives on growth strategies, while inferential statistics allow the study to identify relationships between key variables and draw broader conclusions about the factors driving hypergrowth in high-tech companies. This combination of analytical methods ensures that the Ignition Model is grounded in robust data, offering a reliable roadmap for high-tech companies aiming to achieve hypergrowth. The analysis was conducted using the SPSS for Windows software, namely version 25.

Model Specification

The following model specification was developed for the study:

$$HG = F(IM) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$
$$\mathrm{HG} = F(\mathrm{IACC}, \mathrm{MPEN}, \mathrm{OSCA}) \dots\dots\dots\dots\dots\dots\dots\dots\dots (3)$$
$$\mathrm{HG} = \beta o + \beta 1\mathrm{IACC} + \beta 2\mathrm{MPEN} + \beta 3\mathrm{OSCA} + \varepsilon \dots\dots\dots\dots\dots (4)$$

Where:

β_o = Constant Coefficient

β_1- β_3 = Coefficients

HG = Hypergrowth

IACC = Innovation Acceleration

MPEN = Market Penetration

OSCA = Operational Scalability

4. RESULTS OF DATA ANALYSIS

This section is dedicated to the analysis of the data obtained from the participants.

Table 2 Response rate

S/N	Description of Response	Number	Ratio (%)
1	Total questionnaires administered	384	100
2	Questionnaires retrieved and analyzed	379	99

Source: Field Survey (2024)

Table 2 displayed a response rate of 99%. The researcher considered a 99% response rate sufficient to continue with the analysis.

Table 3 Sample demographics (N=379).

Variable	Category	Number	Ratio (%)

Gender	Male	231	61
	Female	148	39
Age	18-25	53	14
	26-32	83	22
	33-39	129	34
	40-46	61	16
	47-53	53	14
Marital status	Single	159	42
	Married	193	51
	Divorced	27	7
Education level	SSCE	34	9
	OND	106	28
	HND/ B.Sc.	155	41
	Postgraduate degree	83	22
Categories of professionals	Executives	133	35
	Product managers	129	34
	Innovation leaders	117	31

Source: Field Survey, 2024.

Table 3 shows that 61% of the samples were male, whereas 39% were female. The survey found that 14% of the participants were between the ages of 18 and 25, 22% were between the ages of 26 and 32, 34% were between the ages of 33 and 39, 16% were between the ages of 40 and 46, and 14% were between the ages of 47 and 53. The survey found that 42% of the participants were unmarried, 51% were married, and 7% were divorcees. 41% of the respondents possess an educational background consisting of either a Higher National Diploma (HND) or a Bachelor of Science (B.Sc.) degree. Majority (35%) of the respondents were executive members in their companies.

Table 4 Pillars of Ignition Model

Predictors	Standardized Coefficients			Collinearity Statistics		ANOVA[a]		Model Summary	
	Beta	T	Sig.	Tolerance	VIF	F	Sig.	R Square	Adjusted R Square
						143.143	.000[b]	.534	.530
1(Constant)		2.220	.027						
Innovation Acceleration	.395	8.443	.000	.567	1.762				
Market Penetration	.105	2.375	.018	.638	1.568				
Operational Scalability	.340	7.048	.000	.534	1.873				

a. Dependent Variable: Hypergrowth
b. Predictors: (Constant), Innovation Acceleration, Market Penetration, Operational Scalability,

Source: Field Survey (2024)

Table 4 shows that innovation acceleration ($\beta = 0.395$, $p < 0.05$), market penetration ($\beta = 0.105$, $p < 0.05$), and operational scalability ($\beta = 0.340$, $p < 0.05$) positively affect hypergrowth. The VIF for innovation acceleration (1.762), market penetration (1.568), and operational scalability (1.873) in relation to hypergrowth are all below 10. This means there is no multicollinearity. Innovation acceleration has a tolerance of 0.567, market penetration is 0.638, and operational scalability is 0.534, all of which are greater than 0.1. However, the pillars of ignition model accurately measured hypergrowth. This was supported by the F value of 143.143 ($p < 0.05$). The model was statistically significant. An adjusted R square value of 0.530 showed that the pillars of ignition model explained hypergrowth variances. Therefore, the pillars of ignition model explained 53% of hypergrowth variances.

Table 5 Relationship between the variables N=379

S/N	Predictors	IACC	MPEN	OSCA	HG
1	Innovation Acceleration	1			
2	Market Penetration	0.521**	1		

3	Operational Scalability	0.624**	0.561**	1	
4	Hypergrowth	0.662**	0.501**	0.646**	1

*. Correlation is significant at the 0.05 level (2-tailed).

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

Table 5 indicated that innovation acceleration has a strong positive correlation with hypergrowth (r=0.662). However, market penetration has a strong positive correlation with hypergrowth (r=0.501). Furthermore, the result indicated that operational scalability has a strong positive correlation with hypergrowth (r=0.646).

4.1 Discussion of Findings

The findings presented in Table 4 indicate that innovation acceleration ($\beta = 0.395$, $p < 0.05$), market penetration ($\beta = 0.105$, $p < 0.05$), and operational scalability ($\beta = 0.340$, $p < 0.05$) positively affect hypergrowth. These findings suggest that all three factors have a significant positive effect on hypergrowth, with innovation acceleration having the strongest effect, followed by operational scalability and then market penetration. Moreover, Table 5 shows that the correlations between these variables and hypergrowth are strong: innovation acceleration has a correlation coefficient of ($r = 0.662$), market penetration has ($r = 0.501$), and operational scalability has ($r = 0.646$). These correlation values reinforce the findings from Table 4, indicating that higher levels of innovation acceleration, market penetration, and operational scalability are associated with increased levels of hypergrowth. Overall, both tables provide robust evidence that these strategic factors are critical for driving hypergrowth in high-tech companies.

Establishing a competitive edge for market survival is facilitated by the introduction of novel products that incorporate new or enhanced features and capabilities (Munck et al., 2020). The study conducted by Ramadini et al. (2019) revealed a favourable influence of product innovation on the performance of firms. Additionally, the researchers emphasised the substantial influence of company size as a control variable. Agustia et al. (2022) empirical findings demonstrated positive impact of product innovations on the success of enterprises. The conclusion reached by multiple authors aligns with the performance indicators examined in the study conducted by Piening and Salge (2015), which indicate a favourable correlation between product innovation and sales growth. Acikdilli et al. (2020) argue that in order to establish a lasting competitive advantage and outperform intense competition, firms must possess resources that align with the demands of the global environment. This can be achieved by actively seeking new business prospects, exploring new markets, adapting to new consumers, and developing products tailored to these unique markets. In their study, Coviello et al. (2024) contend that scaling is a strategic process in which managers swiftly enhance a company's production by modifying the internal structure and using digital resources without a proportional increase in inputs.

The findings of this study reveal significant implications for high-tech companies seeking to achieve hypergrowth. The positive effects of innovation acceleration, market penetration, and operational scalability on hypergrowth indicate that organizations must prioritize these elements in their strategic planning. By focusing on innovation acceleration, companies can enhance their ability to adapt to market changes and introduce cutting-edge products or services, thus maintaining a competitive edge. Furthermore, the strong correlation between these factors and hypergrowth underscores the importance of effectively penetrating target markets to expand the customer base and drive revenue growth.

5. Conclusion

In conclusion, the Ignition Model provides a structured and insightful framework for businesses aiming to achieve hypergrowth. By understanding and implementing the stages of Spark, Fuel, Glow, and Flame, companies can create a self-sustaining cycle of growth that propels their products or services into the market successfully. The emphasis on the core pillars of innovation acceleration, market penetration, and operational scalability further enhances the model's effectiveness, equipping organizations with the necessary tools to thrive in competitive landscapes. Ultimately, the Ignition Model serves as a valuable roadmap for navigating the complexities of business growth, ensuring that organizations remain focused and resilient on their journey to success.

6. Recommendations

Based on these insights, the study recommends that high-tech firms invest in robust innovation management processes. This includes fostering a culture of creativity and collaboration that encourages employees to contribute new ideas and solutions. Additionally, organizations should allocate resources to research and development initiatives that facilitate the rapid development of innovative products and services. By prioritizing innovation, companies can create a dynamic environment that supports continuous growth and responsiveness to evolving market demands.

Moreover, high-tech companies should enhance their market penetration strategies by leveraging data analytics to identify and target high-potential customer segments effectively. Implementing targeted marketing campaigns and improving customer engagement can increase brand awareness and loyalty, ultimately leading to higher sales. Finally, to ensure operational scalability, firms must invest in scalable technology infrastructure and efficient processes that can accommodate growth without sacrificing quality. By

addressing these recommendations, high-tech companies can better position themselves for sustainable hypergrowth in competitive markets.

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