Adaptive Strategy Modeling - Linking the Mechanics of Strategy, Finance, and Operations

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Abstract

In today's volatile business world, flooded with data and ever-evolving market dynamics, the process of strategic decision-making has become increasingly complex. Traditional strategy concepts often struggle to adapt to changing conditions, thus necessitating a more flexible and dynamic approach. This study introduces the *Adaptive Strategy Model*, a dynamic three-step problem-solving approach designed to link the market, business, financial, and operating models of a firm. First, *Market Modeling* involves estimating the size and growth rate of a strategically relevant market, which requires a detailed understanding of customers' preferences and willingness to pay. The model suggests a bottom-up approach that triangulates the market size and growth projections. Second, *Business Modeling*: Analyzing an organization's internal capabilities is paramount to understanding its unique value proposition and prioritizing profitable product or service portfolio offerings. This analysis is crucial for determining a firm's competitive advantage and provides a foundation for subsequent strategic decisions. Third, *Strategic and Financial Modeling*: The third step is to formulate the firm's strategic conduct and quantify it relative to its competitive edge and market opportunities. This model ensures that the strategic plan is consistent with the financial projections, thus reducing the risk of misalignment during implementation. This aligns with the logical deduction of sales and costs within the firm's profit and loss statements. The *Adaptive Strategy Model* emphasizes iterative strategic problem-solving guidance, rather than rigid one-size-fits-all game plans. This enables executive teams to focus on specific elements of value drivers and align with the market opportunities at hand. Additionally, the model introduces an iterative learning loop, allowing decision-makers to adapt and optimize strategies pragmatically. By leveraging market and financial data gathered during the first year of strategy implementation, the model empowers executive teams to make informed decisions and gain a deeper understanding of market dynamics. By bridging the gap between strategy, finance, and operations, and enabling continuous learning and adaptation, this model equips decision-makers with the tools they need to navigate the complexities of today's competitive landscapes.

JEL CODES: M1, M21

KEYWORDS: Corporate Strategy, Strategy Development and Implementation

1. Introduction

Corporate strategies often fail. Mankins and Steele (2005) find that companies only realize 63% of the financial performance of their strategic promise. Beer and Eisenstrat (2000) identify Silent Killers, such as ineffective leadership and missing clarity, to develop and implement strategies. Miller (1990) suggests the Icarus Paradox that describes a company's greatest asset leads to its demise, pointing out that taking to excess those things that drove success in the past lead often led to failure, such as organizations driven by excellent sales executives frequently turn into drifters thus becoming oppressively bureaucratic. Mintzberg (1994) argues that leaders mistake strategic planning with strategic thinking, rejecting the principal idea of calculated strategies altogether. Vermeulen finds that strategies frequently fail because executives confuse strategies with goals, pointing at the missing set of actionable measures. Leinwand and Mainardi (2010) suggest that most companies do not pass the Coherence Test, paying too much attention to external positioning and not enough to identify and strengthen their key capabilities. Given the urgent need to find solutions to increase the success rate of strategies, a rapidly growing branch of research aims to suggest frameworks and tools, such as Porter's *Five Forces*, Kim and Mauborgne's *Value Curve*, Osterwalder's *Business Model Canvas,* and Kaplan and Norton's *Balanced Score Card,* to name only a few for improved strategy development and implementation. Burgelman (2023) suggests that firms should maintain a bottom-up internal experimentation and selection process of strategic and operational measures while simultaneously using a top-down corporate strategy as a guide. Reeves, Love, and Tillmanns (2012) emphasize the need for different strategy development styles given the predictability and malleability of the market environment in which the firm is operating.

Corporate strategies represent hypotheses based on a complex set of assumptions. They are typically based on assumptions about market opportunities, such as market size and growth, consumers' willingness to pay, and the expected volumes of a product to be sold at that price, generating an ideal growing revenue stream for the firm. At the same time, these revenue projections are used as a reference point to derive cost estimates, such as the costs of goods sold (COGS), personnel expenses, and operational expenses. (Armstrong, 1983) Synthesizing these assumptions, business leaders typically derive a program of operational measures for implementation from this set of assumptions. In a slow-paced industry and business environment, such a top-down approach, often defined as a five-year strategy, might have a robust half-life. But how about an environment in which market variables, consumer preferences, and material prices are highly volatile? The sensitivity of corporate strategy to market size estimates and growth rates is often substantial. Frequently this is the reason why originally well-prepared strategies and business cases fail, sometimes within the first year of implementation.

Strategies are expected to be reliable maps for navigating through a labyrinth of businesses. A labyrinth is a complex problem to solve. Adding a dynamic character to it gives an idea of which complex decision-setting executives aim to maneuver their teams. Evidently, all too often, business leaders are overwhelmed by the complexity it entails to develop and implement strategies and therefore frequently try to reduce complexity by focusing on only one element of strategy, such as identifying a golden market opportunity or building advantages that competitors lack. By doing so, we ignore the other variables of strategy and, foremost, the interdependencies of all elements of strategy development and execution. (Collis, 2021)

Considering the laid out set of assumptions to derive a corporate strategy, it is important to understand the strategic relevant market (SRM), not the total market opportunity. (Kate and Niels, 2009). With SRM, the market opportunity is defined, which can be addressed and realized with the firm's existing business model advantage, resources, and capabilities at plausible likelihood and timeframe, differentiating it from the total addressable market (TAM), which implies the possibility of conquering the entire market potential regardless of the firm's current business model, resources, and capabilities. Industry reports and market analyses from agencies or internal teams of analysts are the only starting points, based on their assumptions on the best knowledge available. At the same time, market reports only partially consider the variety of each business model of competitors within a sector. Shiavi and Behr (2018) find that external reports only partially account for the multifaceted strategies that competitors in their respective industries pursue, suggesting that while market reports provide useful baseline information, they often lack firm-specific analysis. For example, the market opportunity might be $ 2bn for the average business model of competitors and their offerings, but it might be substantially different for individual players in the industry. It boils down to the question of which revenue is achievable with a firm's specific business model and accessible resources. A strategy that neglects this difference might be a fundamental risk to extrapolating revenue projections. Since cost estimates are often, on the other hand, also derived from revenue projections, it might explain why so many strategies fail. Clearly, the logical links between the realistically addressable market size and its respective growth rates, with the financial projections of the selected strategic and operational measures, are key for the successful implementation of business strategies. This is underlined by findings from Mahoney and McGahan (2007), Hoskisson, Hitt, and Yiu (1999), and Durand, Grand, and Madsen (2017) for a more integrative approach to strategic management, emphasizing the importance of aligning strategic initiatives with

the emergent nature of organizational capabilities and market dynamics. In the literature view, the root causes for the failure of strategies are analyzed, considering findings from both academic and practitioner research. The objective is to first understand the observed factors that drive strategy failure to establish the reasoning for the need for the *Adaptive Strategy Model* as a dynamic navigation system for strategy executives. The literature review will give an overview of the most important strategy tools and concepts, as they are not only highly valuable for strategic decision-making; they will be seamlessly integrated into the Adaptive Strategy Model as elements to structure different analytical dimensions, such as the external analysis of macroeconomics, market, competitors, customers, business model, and value chain, all of which are key variables needed to establish a harmonious symphony of strategy development and execution.

2. Literature Review

2.1 Classic Strategic Decision-Making Concepts and Theories and Their Limitations

Strategy development and strategic decision-making in corporations have attracted a wide range of researchers and practitioners, contributing an enormous set of both highly relevant and pragmatic frameworks and tools that helped improve strategic decision-making and implementation. The classic frameworks primarily address the analysis of external factors, such as macroeconomics, market dynamics, customers, and competitors, or the analysis of internal factors, such as the business model, product portfolio, value chain, organization, and managerial control.

To grasp macroeconomic trends, Aguilar (1968) suggests the *PEST Analysis*, structuring political, economic, social, and technological drivers. The *SWOT Analysis* (Humphrey, 1960) serves as a concept to capture a firm's strengths and weaknesses relative

to its market opportunities and business threats, aiming to narrow down strategic measures to exploit business potential effectively and efficiently. In his seminal work, Porter (1980) introduced the *Five Forces Framework*, which identifies the competitive dynamics that shape industry structures and impact market participants' profitability. He argued that understanding the bargaining power of suppliers and customers along with anticipating the threats of new entrants or new substitute products in the context of the existing competitive rivalry is fundamental to developing effective strategies against competitive pressures. Adding another perspective to competitive analysis, Barney's resource-based view of a firm (1991) suggests that competitive advantage is best achieved by establishing a set of valuable, rare, and non-substitutable firm resources. Additionally, Porter's work on competitive analysis is complemented powerfully by his contribution to the analysis of value chains (Porter, 1985). In this study, he elaborates on strategies to achieve cost leadership or strategic differentiation by optimizing the value chain. This concept allows organizations to analyze their internal processes and establish a link to their competitive advantage. Overall, his frameworks have become foundational tools in strategic management for both academic researchers and practitioners and are still highly relevant.

Henderson's *Growth-Share Matrix* (1970) introduced a method for plotting products or business segments based on revenue growth rates and relative market share, to help executives make strategic capital allocation decisions. Later famous as *BCG Matrix*, it laid an important groundwork for subsequent theories on strategic decision-making and resource allocation. Similarly, Kim and Mauborgne's (2004) concept of Blue Ocean Strategy advocates creating uncontested market spaces to reduce the relevance of competition. Their theory argues that companies should focus on value innovation, simultaneously pursuing differentiation and a low-cost position to establish new, untapped market potential. The strategy emphasizes that businesses should innovate and create new demand for innovative

products rather than compete in existing markets (red oceans). Overall, the *Value Curve* is an excellent tool for decision-makers to innovate and renovate their offering portfolio along different product and service properties, such as price and quality. *Ansoff's matrix* (Ansoff, 1965) is another fundamental tool for planning growth strategies. His work laid the basis for later strategy concepts by suggesting four types of growth that firms can strive for. First, *Market Penetration* focuses on increasing the revenue of the existing product portfolio within the current market in which the firm operates. Typical instruments to implement this strategy include competitive pricing, promotional activities, and optimizing a firm's value chain. Second, *Market Development* involves entering new markets with existing product portfolios and addressing new customer segments in new geographies. Third, *Product Development* emphasizes the development of new products for existing customer groups in the current geographies, fostering innovation to meet changing customer preferences. Fourth, *Diversification* constitutes the riskiest strategic mode, implying the introduction of new products and services in new markets and geographies. Ansoff's contribution has helped immensely in structuring the problem of decisions regarding the most effective and efficient strategic paths, given the current market situation in which a firm operates.

For practitioners, a few problems pose such a challenge as coherently structuring the problem of a firm's value proposition, as it is influenced by numerous variables, including the product and service portfolio, the firm's key activities, resources, and capabilities, strategic partnerships, customer contracts, and market access. To solve this problem, Osterwalder and Pigneur (2010) contribute a valuable framework to structure this problem with their *Business Model Canvas*. The concept consists of nine building blocks that cover the key sources of a value proposition, incorporating customer segments, customer relationships, sales channels, key partners, key activities, key resources, and the firm's cost structure and revenue streams, synthesizing them into the firm's unique value proposition at

the heart of the concept. Complementing Osterwalder and Pigneur's work, Demil and Lecocq (2010) provide insights into the dynamic nature of business models and their role in strategic management. They suggest that business models are dynamic and should adapt continuously to changing market conditions and technological innovations. Their research underscores the importance of understanding the interplay between business models and competitive strategies for sustained success. Many derivations of these frameworks have been developed, each presenting novel approaches to define, structure, and analyze the strategic decision problems facing corporate leaders. These challenges include growing businesses, driving market capitalization, reducing costs, streamlining organizational structure, and engaging in mergers and acquisition processes, as well as other strategic and financial investments. However, a key missing element in these models is sufficient to account for the dynamic nature of external and internal factors, which is particularly relevant for fast-paced industries and rapidly moving consumer demand.

Valentin (2005) criticizes that some of these concepts do not meet the requirements of the rapidly changing macroeconomic environment that most firms face today. However, the unbroken popularity of these concepts, especially among executives, corporate strategists, and their strategic advisors, underscores the need for analytical guidance with simplistic frameworks that define and structure strategic problems using them as a map to create useful evidence for business decisions. While Porter's *Five Forces* may not capture the dynamic character of competition, it represents a great starting point for the investigation of competitive environments for business analysts. Osterwalder's Business Model Canvas might not fit all types of businesses, but it certainly allows for structuring a discussion about the unique value proposition that the firm might have, or more importantly, might not have yet. The *SWOT* analysis might not capture all of a firm's strengths, weaknesses, business threats, and opportunities, but it enables a fast-paced executive decision process to orchestrate

the business leaders' thoughts and minimize biases frequently observed in decision-making (Kahneman and Tversky, 1979; Kahneman, 2003; Kahneman, Slovic, and Tversky, 1982; Simon, 1959; Tversky and Kahneman, 1992) while triangulating assumptions about a firm's competitive edge relative to business opportunities and risks. All of these ideas and theories contribute to the advancement of solutions for improving strategic decision-making in corporations, but they still lack important features, given the numerous strategies that fail in practice. Therefore, the next section presents a detailed analysis of the factors causing strategies to fail to derive the set of structural elements needed in a new problem-solving approach: the *Adaptive Strategy Model*, which is presented in Section 3.

2.2 Why do Strategies Fail?

In this section, important studies and theories that investigate the reasoning behind strategy failure and suggest solutions are examined. The focus is on understanding the observed roots of failure based on case studies or surveys of executives and employees conducted by both academic researchers and business practitioners to synthesize a full range of perspectives.

Vermeulen (2017) argues that strategies frequently fail because executives confuse strategies with goals, pointing at the missing set of actionable measures and, foremost, those activities the firm rejects. Leinwand and Mainardi (2010) find that most companies do not pass the *Coherence Test*, paying too much attention to external positioning and not enough to identify and strengthen their key capabilities. They define capability as an activity that a firm's customer value and competitors cannot beat. According to these authors, most strategies fail to pay sufficient attention to their capabilities. Burgelman (2023) finds that successful firms maintain a bottom-up internal experimentation and selection process of strategic and operational measures while simultaneously using a top-down corporate strategy as a guide. In other words, a firm's market, business, and strategic and financial models need

to be established as a logically connected system that iteratively and intrinsically tests market hypotheses and allows it to maneuver financially and operationally. There are two major challenges to deriving such systems. First, we identify the logical links and mechanics between the market, business, and strategic and financial models of a firm and connect them quantitatively. Second, it simplifies the strategy-making process and reallocates time and resources to the most important phases of strategy development and implementation. However, the question of how to implement a solution to these problems is not provided by the author and motivated, among other valuable studies, the writing of this article to suggest the *Adaptive Strategy Model* as a solution to solve both problems for implementation.

Beer and Eisenstrat (2000) identified six barriers to effective and efficient strategy implementation that they frame as *Silent Killers*. Based on a study of more than 150 firms across sectors such as high-tech, pharmaceutical, medical, banking, hotels, and industries, they found a recurring pattern for factors that are closely linked to failed strategy implementation. These include observations of (1) unclear strategies, (2) conflicting priorities, (3) an ineffective leadership team, (3) top-down or laissez-faire management by the general manager, (4) poor coordination across functions, businesses, or borders, (5) lack of effective and honest vertical communication, and (6) inadequate leadership skills and development throughout the organization. Ultimately, they find that the key problem identified was rooted in the fundamentals of management and leadership rather than the quality or commitment of the people or the quality of the management systems and processes. Because these roadblocks are at the heart of a firm's organizational leadership, they are rarely discussed and substantially affect a firm's strategy implementation success. While these investigations contribute tremendously to understanding different perspectives and dimensions of strategy failures, the conclusion that leadership is the key problem in strategy implementation falls short of fully understanding the mechanics and causal direction of this

interpretation. Strategic planning is highly dependent on implementation. The implementation is highly dependent on strategic planning. Investigating this endogenous problem requires a sample size larger than 150 firms and the implementation of empirical causal inference models to understand its dynamics. Nevertheless, it provides a highly valuable snapshot of employees' perceptions and underscores the need for a coherent strategic planning and implementation model that links both strategic planning and operational factors logically and quantitatively. On this basis, the question of the role of leadership can be investigated more rigorously over time and, as a consequence, improvements can be derived for the organization on how to better lead and implement. Section 3 presents a detailed problem-solving approach.

Mintzberg (1994) argues that leaders should not mistake strategic planning for strategic thinking. He claims that the most successful strategies are visions - not plans–suggesting that the strategy-making process should be about capturing what the manager learns from all sources, such as soft insights from personal experiences and the experiences of others throughout the organization, hard data from market research, and, as a final step, synthesize this learning into a vision of the direction that the business should pursue. The logic of gathering insights from human experience and from the analysis of market data as the basis for learning and, as a consequence, improving a manager's strategic thinking and decision-making is convincing. However, he later argues that calculated strategies have no value in and of themselves. In particular, this part seems rather problematic for managers who are designated to implement strategies. Clearly, the set of assumptions for calculating a strategy should be defined with care and should always be updated with the best available information to adapt and correct a strategic path, but rejecting the idea of quantifying strategies altogether seems rather impracticable and inefficient. A potential reason for this harsh rejection of quantification could be that a pure reliance on the validity of numbers for decision-making

can pose a substantial risk if the robustness of the set of assumptions is not continuously optimized with the best knowledge. For example, it may create a false sense of security. how a market grows, potentially leading to ruinous long-term decisions that are path-dependent, such as large investments in production facilities or mergers and acquisitions. Therefore, it is advisable to use quantified strategies with high care; however, they are the best available tools to test and adapt the hypothesis defined for a respective strategy effectively and efficiently. Section 3 establishes a problem-solving approach to consistently build a bridge between strategic hypotheses and financial derivations, typically defined as business cases in practice.

Mankins and Steele (2005) conducted a remarkable study and found that, on average, companies realize only 63% of their strategic promises' financial performance. Based on their survey of senior executives from 197 firms worldwide with sales exceeding $ 500 million, the authors find that this strategy-to-performance gap is rooted in the fact that companies rarely track performance against long-term plans, indicating that only 15% of companies make it a regular practice to go back and compare the business's results with performance forecasts for each unit in its prior year's strategic plans. They further argue that much value is lost by poorly communicated strategies, making it impossible to translate strategies into specific actions and resource plans.

Both Beer and Eisenstrat (2000) and Mankins and Steele (2005) share the observation that strategies fail because of a lack of coherence between strategic planning and implementation. Contributing to two important perspectives, Beer and Eisenstrat surveyed employees, while Mankins and Steele surveyed senior executives, deriving a similar observation that strategies fail because of missing links between strategy and implementation. Interestingly, the former finds that poor leadership is the main cause of this

failure, while the latter, thus executives, claim that inadequate or unavailable resources are a primary driver for the failure of strategies. Thus, it remains unclear which factor is the driving failure.

As pointed out earlier, this endogenous problem requires an iterative strategic planning and implementation model that connects all variables from the market opportunity, over to the revenues and costs, up to the firm's profitability projection to understand the root cause of failed revenue targets that allow decision-makers to adapt opportunity costs accordingly. With every month, quarter, and year of implementation, this model is designed to update its data and thus further approximate the most effective and efficient path of implementation. In this notion, Mankins and Steele suggest seven rules that compellingly guide top decision-makers to close this strategy-performance gap: (1) keep it simple and make it concrete; thus, strategies should clearly and simply define where and how to play. (2) Debate assumptions, not forecasts, redirecting management's attention back to the beliefs that, as a causal set of numbers, produce the forecast and continuously overwork them. (3) Use a rigorous framework and speak a common language, in which the authors refer to existing concepts such as Porter's Five Forces. They also advise constantly analyzing profit pools and base long-term decisions on such market opportunities. (4) Discuss resource deployments early, which implies requesting resources early. This is typically conducted with business cases that set the required resources from the perspective of expected gains in revenues and profits. (5) Clearly identify priorities, pointing to a scarcity of resources that require identifying the most beneficial tactics and actions to realize the envisioned strategy. (6) Continuous monitoring of performance to establish effective and efficient trial-and-error processes. (7) Reward and develop execution capabilities, emphasizing the importance of both executives and employees in recognizing a firm's successful strategic plans. Overall, Mankins and Steele's work contributes immensely to solving the strategy-to-implementation problem. However,

their work lacked a clear recommendation on how to implement these rules effectively and efficiently. This is precisely the gap to which the *Adaptive Strategy Model* is contributing.

Another perspective is suggested by Reeves, Love, and Tillmanns (2012). They emphasize the need for different strategy development styles given the predictability and malleability of the market environment in which the firm is operating. More precisely, the answer to the questions of (1) how far into the future and how accurately can you forecast factors, such as demand, corporate performance, competitive dynamics, and market expectations, and (2) to what extent can a firm or competitors influence these factors in its favor. Given the different answers for the respective industries in which firms are competing, they suggest four different styles to develop the most effective and efficient strategy. First, the *Classical* style refers to the strategy-making process with which most strategists are already familiar, implementing the classic frameworks presented in section 2.1. They argue that these concepts are less useful in highly dynamic industries such as the biotech industry. As a consequence, they suggest, the *Adaptive* strategy-making process that implies a flexible and more agile way of updating beliefs and adapting your strategic measures thus mode of action accordingly. The third approach, the *Shaping* style, is recommended for markets with low predictability but allows firms to influence the dynamics of the market factors (e.g., the internet software industry). Finally, the *Visionary* strategy-making style is considered the right mode for market environments in which decision-makers operate in a predictable environment in which market participants can influence the dynamics of the market in a relevant way.

While it is plausible that the key is a continuous collection of new data of your market environment and translating these into your assessment of assumptions and beliefs from which the market opportunities in subsequent months and years are inferred, the suggestion

of four different styles to use contradicts the argument made that market environments should not be tackled with a rigid concept. Surely, the four styles are only starting points of a reflection process of a strategist to find the optimal style for its respective business model – because both predictability and malleability can be only assessed on a heuristic basis. Further, the different styles do not sufficiently answer *how* to implement these strategy styles. This is precisely what motivated the development of the *Adaptive Strategy Model*. It is suggested as an instrument to develop a fully flexible navigation system for the company, allowing to adapt speed and direction fully flexible and not only as prescribed four modes of styles to drive and steer as most market environments change quickly in their predictability and malleability assessment. Therefore, the *Adaptive Strategy Model* aims to learn the optimal strategy-making process for the individual business model and, as a consequence, develop strategies that have the highest likelihood of successful implementation.

Miller (1992) suggests the *Icarus Paradox* that describes a company's greatest asset leads to its demise. He points out that taking to excess those things that drove success in the past, giving examples that craftsman often turns into rigid tinkerer, growth builder often turns into imperialistic, pioneers evolve into chaotic escapists, and organizations driven by excellent sales executives frequently turn into drifters thus becoming oppressively bureaucratic. The author gives numerous case studies as examples for these claims, but it is clear that these generalizations are taken a bit too far and a large set of empirical analysis and behavioral lab experiments would be needed to support these causal claims. Nevertheless, such anecdotal evidence from business reality is still highly valuable as it allows for a series of meaningful hypotheses to be tested. A key aspect that the *Adaptive Strategy Model* aims to solve is the problem of strategic learning observed by Miller, meaning a strategy-making process that iteratively updates key assumptions and allows for an immediate understanding of the impact it has on the further development of the financial projections, thus the business

cases, and the program of activities to implement the strategies. A shift in assumptions about how price expectations or volumes customers are willing to buy in a certain region or product segment typically has a substantial impact on the market opportunity, which demands a correction of the achievable revenues and affordable cost structures. The depicted logical link is often not established as the market model is frequently defined as a given truth, impossible to compute precisely anyway thus simply taken as a robust figure. However, the truth is that the market opportunity, thus the SRM, is difficult to estimate but highly fundamental to be modeled and linked to the financial and operational models in the firm to consistently observe and synthesize market signals to improve the firm's planning and implementation capacities. In section 3, a detailed elaboration on the market modeling and its logical connection to the strategic, financial, and operational model is presented.

Neilson, Martin, and Powers (2008) provide valuable insights into the question of why strategies fail, suggesting that the translation of important strategic and operational decisions into quick actions substantially determines its success, The authors identified four fundamental building blocks: (1) clarifying decisions rights, (2) designing information flows, (3) aligning motivators, and (4) making changes to organizational structures. These pillars of successful strategy implementation require a fully integrated orchestra of (1) understanding the market opportunity and its underlying dynamics in the form of a market model, (2) defining the most effective strategic mode to attack this opportunity established as a strategic model, (3) triangulating the beliefs of the opportunity in financial terms as a business case, and (4) deriving the adequate allocation of resources to build and guide teams towards the consistently extrapolated programs of action for implementation. This, in summary, is the rationale for the *Adaptive Strategy Model*. It contributes a problem-solving kit that executives can implement immediately to strategize and implement quickly and effectively.

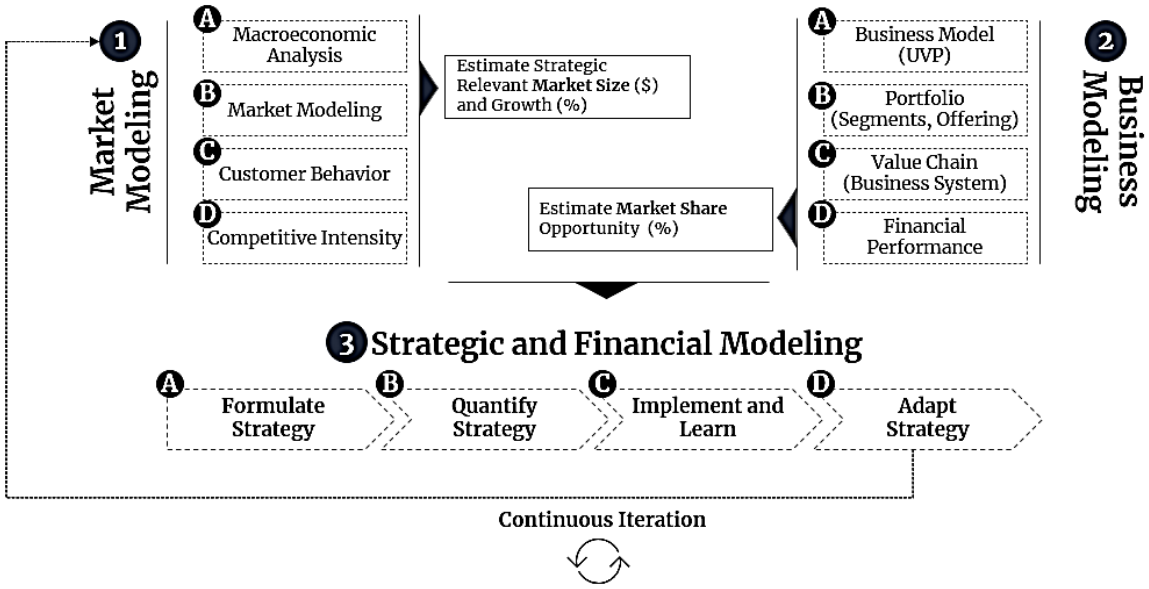
Another work that contributes to this notion of closing the gap between strategy and execution is delivered by Sull (2007). He states that rapid changes in macroeconomic factors, customer demand, and competitive landscape thwart the best laid-out plans and suggests that managers must capture new market information, make midcourse corrections, and implement quickly, making use of the window of opportunity. The author suggests the *Strategy Loop*, an iterative process that consists of four major steps: (1) Make Sense, which he refers to as developing a shared mental model of a situation, (2) Make Choices, suggesting deciding on the path to pursue, (3) Make Things Happen, ensuring that people make good promises and deliver, and (4) Make revision, sensing anomalies and revise key assumptions. Sull's *Strategy Loop* is another excellent contribution that helps understand the overriding principles of iteratively adapting assumptions and aligning strategies, financial, and operations accordingly. However, like the numerous contributions I pointed out above, it falls short of explaining *how* to use this in executives' daily work. The *Adaptive Strategy Model* that is presented in this paper is rooted in the idea: to precisely provide this: a problem-solving kit that can be implemented by decision-makers right away without learning a new language of strategy. It connects many of the powerful, and still useful, classic strategy tools and synthesizes them into a dynamic model that allows for iterative adaptation of the firm's strategic mode, financial planning, and operational execution systems.

3. The Adaptive Strategy Model

Strategies fail too often. Different than in other domains in which falsification of a hypothesis (e.g., academic research, start-ups) is a fundamental part of learning and adaptation, corporate executives often perceive an adaptation to the original strategy as a failure. Considering the number of assumptions required to make and the fast-paced context in which these

assumptions are made, it is rather astonishing when a strategy is implemented successfully, as originally planned. In the epistemological context, *Via Negativa*, the process of falsification is the main methodology to approximate the truth (Popper, 1959; Taleb, 2012). The process of experimentation is the main instrument for revealing a better understanding of the mechanics and causalities in behavioral or socioeconomic environments. In corporate reality, a strategy that does not deliver the expected results is typically seen as a failure.

Figure 1. The Adaptive Strategy Model



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While in academia or a start-up failing is somewhat part of the process, an established firm often does not have the resources to repeatedly fail in its strategic ambitions – even if the failures deliver highly relevant results for adaptation. At some point, the firm simply loses the financial resources to further operate. Therefore, minimizing the risk of defining an entirely wrong hypothesis is crucial. Business leaders strive to realize market opportunities and define as strategic relevant market, the business potential that a firm can address with its

business model and resources. (Johnson, Christensen, & Kagermann, 2008; Zott & Amit, 2007; Zott & Amit, 2008). This leads to the first key element of the *Adaptive Strategy Model* (Figure 1). The objective of this first step is to estimate the strategic relevant market size and growth rate with a *Market Model*.

3.1. Market Modeling (Step 1)

Modeling the size of a strategic relevant market is surely among the most complex exercises for a strategy professional, answering the question: *How big is the market for us, with our business model and resources available?* The latter part of the question is often neglected or even ignored in strategy development processes in corporations. To develop such a proxy, it is key to first understand who your potential customers could be, their purchasing decision criteria, and their willingness-to-pay. The aggregation of the number of potential customers, structured into customer segments, along with the sum of their wallet size for the offering you aim to sell, is the firm's strategic relevant market (SRM), the market opportunity that a company can compete for effectively and efficiently with their current business model and value proposition. The high complexity of gathering this information leads to outsourcing of market intelligence to agencies that estimate market sizes and growth rates of an entire industry or market, *on average*. (Bustinza, Arias-Aranda, and Gutierrez-Gutierrez, 2010) As a consequence, industry market reports typically form the starting point of a corporate strategy process. A respective business segment is hypothesized to amount to a certain monetary value. This value, let us assume it is $ 1 billion, often forms the reference point for determining the financial targets, foremost the revenue targets. The major problem arises when corporate strategists take this value and do not triangulate to adjust for the firm's particularities of its business model, customer base, and resources. Neglecting this step is frequently a source of massive underperformance of a financial plan.

To understand why, it is fundamental to investigate the mechanics of the volumes sold into a market and the average selling prices achieved. While agencies typically implement sophisticated methodologies to estimate demand and price developments, these models remain a highly fragile construct of many variables for which magnitudes and causalities are often not fully clear. (Taleb, Gigerenzer & Todd, 1999) Due to a lack of alternatives and reliability on outside credibility, this happens nevertheless and bears a structural risk to the outcome of a strategy. Extrapolating a certain revenue development from a market size projection that is assumed to be € 1 billion before market entry but proves to be only half the size after year 1, clearly makes any five-year business case meaningless. To mitigate this problem, I suggest a bottom-up triangulation of market size projections, investigating the number of potential customers and their approximate willingness-to-pay (wallet sizes) for the next three years.

$$S = \sum (N_i * W_i) \; for \; i = 1 \; to \; x$$

Whereas *S* represents the sum of the strategic relevant market. N_i represents the number of customers for each "i" in the range. W_i represents the willingness-to-pay per customer for each "i" in the range. The outcome of this bottom-up modeling reduces the risk of an entirely wrong market size and growth estimate hence minimizing the risk of the outcomes of a strategy substantially.

To determine the number of existing and potential customers it is required to understand the trend of historical volumes sold in the market at different price points by the firm and direct and indirect competitors. Benchmarking the volumes sold and prices along with an assessment of macroeconomic drivers and impediments will allow for an

approximation of the future growth volume and price growth and decline hence it will inform about the expected market value growth over the subsequent years. There is a diminishing marginal benefit from trying to quantify macroeconomic events in the context of strategy development. Gigerenzer and Todd (1999) contribute an insightful school of thought regarding highly sophisticated quantitative forecasting models, suggesting that there is a limited marginal benefit from these under the condition of uncertainty. Considering the distinction between risk and uncertainty, macroeconomic events and trends mostly fall into the category of uncertainty, implying that probabilities of the expected outcome cannot be sufficiently estimated. While it can be still useful to use macroeconomic forecasting models, it bears the risk of relying too much on the validity and neglecting its sensitivity to the firm's formulated strategy and financial projections. There might be instances and business models for which specific macroeconomic parameters, such as the oil price, are of such fundamental importance that quantification should be at least attempted. However, for many firms' quantification of macroeconomic developments in the context of strategy development rarely contributes robust additional evidence to improve the prediction of market development and in the worst case creates a bias of predictability where there is none. However, it is recommended to at least understand, map, and roughly qualify the risks and opportunities of macroeconomic developments. For the strategy development process, the outcome of such an opportunities and threats analysis is to be used to calibrate the expected annual growth rates for the SRM.

The synthesis of estimating the number of potential customers and their respective willingness-to-pay along with calibrating and adjusting the computed market size based on market growth drivers and impediments created by macroeconomic factors and competitive pressures, will give a first proxy about the market opportunity. It is important to note that this

estimation is the first hypothesis that is expected to be further shaped throughout the process of analyzing the firm's internal capabilities which is the next step of the model.

A further piece of guidance in this phase of strategizing is that, given the arguably limited marginal benefit of extensive macroeconomic analysis, the strategy process in this stage should focus on market modeling rather than an overwhelming set of macroeconomic analyses. Quite too often the marginal benefit is not only diminishing, but it can also be even negative as it might create a false sense of security and waste valuable resources and time needed for the more relevant problem-solving focus, investigating the firm's volumes, prices, and customers' key purchasing criteria.

Market modeling is the first step to better understanding the market mechanics and developing an efficient and sophisticated hypothesis as a starting point for analytically and iteratively converging towards the size of the market opportunity for the firm. This hypothesis requires further triangulation by investigating the firm's resources, such as its unique value proposition, its offerings portfolio, its value chain, and its organization, as well as its financial performance. Therefore, Business Modeling, as a next step, is key to complement the firm's strategic intelligence and be able to define the strategic mode, which will be elaborated on in the subsequent section (Step 3).

3.2. Business Modeling (Step 2)

Analyzing the internal capabilities is essential to further approximate the firm's strength relative to competitors and customer expectations, and to further triangulate its strategic market opportunity size and growth (Grant, 1991). To grasp the firm's original business model advantage, it is key to disentangle the factors that might create the unique value proposition (UVP) of a firm. In some cases, the search for a UVP remains fruitless as the firm has not established a clear differentiation yet. This alarming observation is often a

precursor for a firm's mid-term and long-term decline. Frequently firms are still benefiting from efforts of the past short-term thus an eroded proposition does not necessarily become evident immediately. To investigate a firm's business model, Osterwalder and Pigneur (2010) suggest a pragmatic approach to narrow down potential levers for differentiation. Further, many powerful concepts, such as Henderson's (1970) Growth Share Matrix and Kim and Mauborgne's (1997) Value Curve facilitate mapping and prioritizing future investments by disentangling high-performing products and services within the portfolio of the firm. Porter's Value Chain (1985) and Galbraith's (2014) guidance on organizational designs are robust concepts to zoom into the firm's key activities and organizational structure. These analyses should be substantiated by fundamental financial analysis, giving a clear understanding of past performance metrics as the basis to project potential future developments of business segments or products. Other frameworks that are deemed useful to better understand the firm's internal capabilities and resources can be added or substituted with the aforementioned methodologies. However, it is recommended to constantly question the marginal benefit of the use of numerous strategic concepts for a respective analytical dimension.

Identifying the firm's unique value proposition, narrowing down, and prioritizing the most lucrative offerings in the portfolio, and understanding the company's critical process steps in the value chain, will give a robust indication of which market share the executive team might be able to gain. With *Market Modeling* (Step 1) and *Business Modeling* (Step 2), the firm's principal strategists are equipped with robust intelligence to formulate a master plan to conquer the aspired market share. To formulate the strategy mode, we propose a logical deconstruction of value drivers in a firm which we will suggest in the next section (Step 3), synthesizing the logic tree approach (Minto, 1987) and standard financial modeling methodology to ensure a common language between strategy and finance.

3.3. Strategic and Financial Modeling (Step 3)

3.3.1. Strategy Formulation (Strategic Mode)

With the intelligence generated to hypothesize about the market opportunity and the expected market share gain based on the firm's competitive edge, we suggest deriving the firm's strategic mode, using a logical deduction of each value driver in the business model. A common error in strategy development and implementation proved to be the missing consistency between strategy and financial projection (Kaplan and Norton, 1996; Rappaport, 1986; Myers and Marcus, 2018; Brigham and Houston, 2016; Brealey, Myers and Allen, 2017).

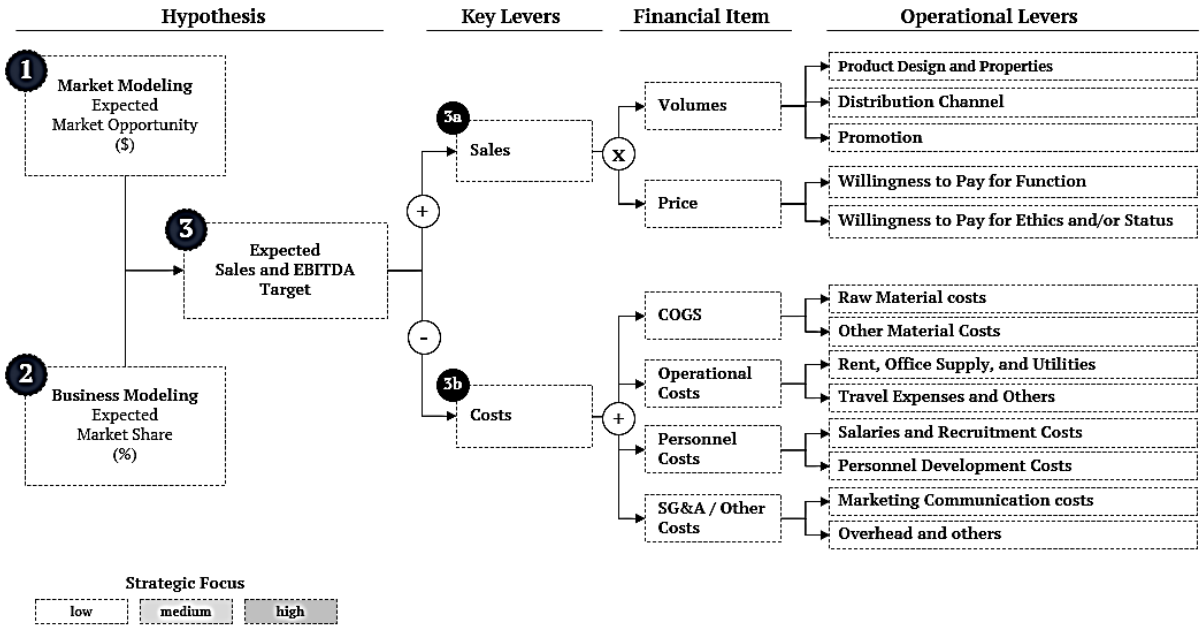
In this model, I define strategy and finance as mirroring functions. While not all strategic measures can be quantified precisely, the mere approximation already mitigates the problem of inconsistency substantially. Mostly, firms do not start entirely from scratch. There is a running business model in place. Therefore, instead of reinventing the firm's strategy, it proved to be effective and efficient to investigate the value drivers of the firm historical performance. The investigation of the profit and loss statement gives a solid structural basis to determine the firm's future strategic focus.

Figure 2 shows the logical deduction of sales and costs within a firm. In the model, I suggest assessing, benchmarking, evaluating, and prioritizing the strategic focus the firm's market opportunity indicates as potentially most promising. I do not suggest norm strategies for different market situations, industry life cycles, or firm maturities – this would rather resemble game plans for a professional sports team that might be correct within the set of assumptions in which the norm strategy has been defined, but the sensitivity of certain variables to assumptions made typically differ from industry to industry and business model to business model. Therefore, the usefulness of norm strategies is limited (Mintzberg and

Waters, 1985). In this model, I suggest calibrating and mirroring the strategic conduct based on the dynamics of the market opportunity (Miller, 1996). For example, depending on the market situation, it might be key to increase or decrease prices, while at the same time optimizing personnel expenses or material costs. The association of assumptions made on the market opportunity has a causal impact on the bottom line of the firm. To steer the cost position most efficiently it is key to always mirror strategy, finance, and activities.

Typically, executive teams cannot optimize all strategic and financial levers at the same time. Therefore, our logic tree enables strategic decision-makers to prioritize their strategic mode to capture the market opportunity and gain further market share. Therefore, depending on the respective market opportunity, the logic tree requires a focus on all the variables shown in the diagram. Strategists should define each value driver as *high*, *medium*, or *low*.

Figure 2. Logic Tree for Strategic and Financial Modeling



Source: Christian Fuat J. Ecer, Dr. Ecer Strategy and M&A

Typically, executive teams cannot optimize all strategic and financial levers at the same time. Therefore, our logic tree enables strategic decision-makers to prioritize their strategic mode to capture the market opportunity and gain further market share. Therefore, depending on the respective market opportunity, the logic tree requires a focus on all the variables shown in the diagram. Strategists should define each value driver as *high*, *medium*, or *low*. The set of defined focus variables (such as *Volumes* or *Personnel Expenses*, etc.) will give adapted strategic guidance for the particular business situation and objectives of the firm. Due to the variety of business models, maturity levels, and competitive environment of the firm, the choice of these focused drivers will be often very different even for firms in the same market with similar customer segments.

There is a second crucial element to our suggestion. Prioritizing the different elements within the logic tree allows for a consistent extrapolation of concrete measures that can be packaged as sub-tasks to the individual functions, such as sales, marketing, human resources, purchasing, logistics, and finance. The connecting lines between market opportunity, the firm's competitive edge, and the strategic mode and operational measures are instrumental for the intelligent adaptive mechanism that I propose with this model. With the definition of the strategic mode, it is in the subsequent step key to quantify and mirror the strategic conduct into a financial model.

3.3.2. Strategy Quantification (Business Case)

Based on the strategic mode defined, I then propose to quantify each financial line item. Starting with the sales targets by extrapolating expected sales volumes and average selling prices. To project the sales volumes, historical analysis as well as intelligence derived from the market modeling gives guidance. It is instrumental to triangulate assumptions made about volumes, testing the hypothesis by relating the growth rate to benchmarks with competitors

but also historical performances shown by the business segment or product line. Triangulation is a powerful methodology, as it allows for approximation and iteration to a reasonable set of assumptions. For example, it is difficult to assume beating the competitor with comparable pricing for its products by substantially higher volume growth rates if the business model analysis has not shown clear evidence of a substantial competitive advantage. Surely, there can be particularities in which it is feasible to achieve higher volume growth despite the lack of a clear differentiation from direct competitors, but testing the argument among the principal strategists within the firm will inform about the validity.

Similarly, determining the price development in the market as a proxy to calibrate the firm's pricing position is a complex problem to be solved. However, historical data about the offering's performance in comparison to competitive benchmarks typically helps to determine a robust range in which the executive team can strategize. In this context, I suggest testing different price points and computing their potential impact on volumes. The price scenario analysis will indicate a further narrowing to an optimal price in terms of the sales targets the management team aims to achieve. Depending on the strategic mode defined by the leadership team in the previous step, a stronger focus on volume or price should be reflected in a more favorable outcome. Frequently the scenario analysis will indicate whether the principal strategists within the firm were biased in their assumptions to push for a certain strategic positioning. Discussions to define the strategic mode might have resulted in the hypothesis that increasing prices might be a strategic path for higher growth, but putting these assumptions into a quantitative model might show that such a strategy poses a risk of losing much more volume than expected. Ultimately, triangulation with assumptions in quantitative models helps to reduce bias and inform principal strategists to optimize their set of assumptions, modeling the sales expectations for the firm or segment in the subsequent years.

Cost of Goods Sold, *Operational Expenses*, *Personnel Expenses*, *Selling General & Administration Costs* as well as *Other Costs* should always harmonize with the strategic positioning defined by the executive team to achieve the expected profits. Therefore, it is key to benchmark cost developments with historical data but also with competitors to converge towards a cost positioning that allows the firm to compete effectively and efficiently. Frequently the mismatch between strategic positioning and cost basis accumulates risks for the firm's liquidity which can be observed especially in the frequent failure of start-ups.

3.3.3. Implementation, Learning, and Adaptation

In this step, the critical difference to existing strategy frameworks becomes obvious. The model proposed is a learning model. It accounts for the dynamic character of the market and competitive behavior by linking strategy, finance, and operations logically and creating a learning loop to further approximate the optimal strategic positioning. In many organizations strategies are developed isolated not only from the operational managers but also from finance teams, creating a typical source of disconnect between strategy and financial targets. To implement the model effectively, it is key to involve all relevant business functions in the market modeling, business modeling, and strategic and financial modeling process. That said the guiding principle should be the expectation of substantial contribution to the discussed problems at the various stages. Therefore, neither a fully isolated execution of the *Adaptive Strategy Model* among the principal strategists within the firm is recommended nor an involvement of all functions at all stages of the process. A balanced orchestration of involvement is proposed. Besides the risk of missing out on key information for strategizing by not involving operational experts, there is a psychological facet to this as the active participation of an operational employee not only drives his or her motivation but also creates

another ally to further investigate the complex mechanics of a market. (Lawrence and Lorsch, 1967).

Once the strategic plan and business case along with the respective operational measures is defined, it is advised to use collected market and controlling information in the first 12 months of a strategy to further optimize the strategic path. The timings of iterations should be defined by the management team based on the evidence gathered in this natural experiment. Being able to align strategic assumptions to actual financial results logically, empowers the executive team to better understand the mechanics of a market or customer demand. With each iteration, the executive team will improve its set of assumptions that will equip them not only with an indication of the general path but also with operational symptoms with a substantial causal impact on the price, volume, or cost position.

The required skill level for a corporate strategist is increasing strongly. Strategic thinking is a key capability for executives (Liedtka, 1998). There is an imminent need for executives to deeply understand markets, develop strategies, investigate quantitatively, and lead operational problem-solving. Business Schools and executive training help immensely to equip executives with a sound set of capabilities. However, putting tools and concepts into the specific realities of the own firm has been quite a challenge. The *Adaptive Strategy Model* not only suggests a novel and dynamic approach to solving strategic problems and deriving thoughtful long-term decisions for the stakeholders but also enables top executive teams to further develop their understanding of the mechanics of the market.

4. Discussion and Conclusion

The *Adaptive Strategy Model* represents a dynamic approach to strategic decision-making in the corporate world. In a rapidly changing environment, traditional static strategy frameworks often fall short in providing actionable and adaptive measures to achieve set

targets. The model consists of three key dimensions: *Market Modeling*, *Business Modeling*, and *Strategic and Financial Modeling*.

Estimating the size of an SRM is a crucial step, requiring a deep understanding of customer preferences and their willingness-to-pay. In practice, this often involves outsourcing market intelligence to agencies, which provide industry reports to set reference points for revenue targets. However, these reports can be misleading due to the complexity of market and business dynamics. As a remedy, the model suggests a bottom-up approach to triangulate market size projections. This approach, while more intensive, reduces the risk of aiming for an entirely overestimated target. Further, it acknowledges the dynamic nature of markets and the limitations of relying solely on static industry reports. It empowers strategists to refine their understanding of the market over time, enabling improved strategic decision-making. However, it also underscores the importance of ongoing market research and the need to adapt strategies as new information becomes available.

Investigating internal capabilities is essential for understanding a firm's competitive edge and unique value proposition. This step involves disentangling the factors that contribute to the firm's strengths and weaknesses. It is key for prioritizing and focusing and the most lucrative offerings in the portfolio. The *Adaptive Strategy model* recognizes that not all firms start from scratch, and it encourages strategists to build upon existing strengths and weaknesses. It also highlights the danger of complacency when firms benefit from past efforts but fail to adapt to changing market dynamics (Mintzberg and Waters, 1985). This step underlines the importance of continuous adaptation to maintain a competitive edge (Teece, 2010; Teece, Pisano, and Shuen, 1997).

The model stresses the need for customization, acknowledging that norm strategies may not be effective for every firm or market situation. The logic tree approach allows for a

systematic analysis of various strategic modes, depending on the market opportunity. Furthermore, the model suggests quantifying each financial line item, aligning with the strategic positioning. This consistency between strategy and financial projection is crucial for achieving expected results (Hrebiniak, 2006). It also helps identify and rectify any biases that might have influenced the strategic decision-making process.

The most distinctive feature of the *Adaptive Strategy Model* is its learning aspect. In many organizations, there is a gap between strategy development and operational execution, leading to a disconnect between strategy and financial targets. The model recommends using collected market and financial data in the first 12 months of a strategy's implementation to optimize the strategic path. This iterative approach allows the executive team to better understand the market dynamics, financial outcomes, and operational nuances. It is important to emphasize that the model does not advocate over-sophistication in the analytical process or a false sense of security in complex predictive models. Instead, it promotes a practical and adaptive approach to strategy, where data and feedback loops drive decision-making, and adjustments are made based on real-world outcomes.

In a dynamic and fast-paced business environment, traditional strategy frameworks often fall short of providing rigorous yet simple solutions (Eisenhardt and Sull, 2001). The *Adaptive Strategy Model* presented in this article offers a practical and dynamic approach to strategic decision-making, encompassing the following steps: *Market Modeling, Business Modeling,* and *Strategic and Financial Modeling*. The model acknowledges the limitations of traditional industry reports, emphasizes the importance of adapting to changing market dynamics, and promotes an iterative approach to strategy formulation. Moreover, the learning and adaptation aspect of the model stands out as its most important feature. It recognizes the

need for a close alignment between strategic and financial objectives and advocates for continuous monitoring and adjustment in the early stages of strategy implementation.

The *Adaptive Strategy Model* offers a rigorous yet simple framework for corporate strategists to navigate the complex and uncertain business landscape, enabling them to make more informed decisions. It represents a step towards a more pragmatic and effective approach to strategic decision-making in today's ever-evolving markets.

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