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The Importance of Resources and Capabilities for the BSC: a conceptual synopsis

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Abstract: Certain organisations maintain their competitive advantage, despite the enormous environmental turbulence in the current economic and social context. Due to this environmental complexity, managing resources and dynamic capabilities is crucial for organizations. To guide the organisations, this study assumes that besides monitoring, the Balanced Scorecard (BSC) plays a role in monitoring the organisations' strategy. Recently [1] argued that strategy performance should be measured by implementing indicators, which makes the BSC a strategic instrument. We intend to characterize if the organizations with the BSC are based on valuable, rare, hard to imitate and irreplaceable resources according to the Resource Based View (RBV).

For this purpose, interviews will be conducted with the largest exporters in Portugal. Due to the external turbulence, they are subjected to, they make up the target audience indicated for the study. These organizations seek to differentiate themselves by configuring their resources and competencies to gain a competitive advantage. This research thus fills a gap in the literature to the extent that it seeks to identify the potential of the BSC as a useful tool for boosting resources and capabilities. This study aims to understand how certain companies that use the BSC methodology gain competitive advantages by configuring their resources and capabilities.

In short, the aim is to increase the knowledge about the causes that lead some organizations to achieve competitive advantages.

Keywords: Balanced Scorecard, Resource Based View (RBV), Dynamic capabilities, Organizational Performance.

1 Introduction

Due to environmental and technological demands, managers must make decisions quickly to respond to market opportunities [2], which has always required companies to adopt strategies that guarantee sustainable competitive advantages. This line of thought is increasingly a reality for the business fabric anywhere in the world, where the Covid 19 pandemic has triggered the need for new business models based on their human resources and their capabilities and skills, especially the ability to adapt to change, the disruptions of the external environment and anticipation of competitors [3]. Therefore, it is perceived that the vision of [4] [5] which postulated that companies should be analyzed from the outside in, is no longer sufficient for the understanding of which strategies companies should implement to leverage their growth, given its balancing of strategy with the external context, competing companies and forces external to the companies[6]. Instead, the resource-based theory (RBV) emerged in this context, which advocates that a set of resources and capabilities forms companies. That is, their analysis should be carried out from the inside out [7]–[17].

This means that the literature legitimizes that the RBV has gained greater recognition for not being limited to the importance of tangible resources, where [15] following the idea of [18] pointed out that what differentiates the resources of companies is not the quantity, but the way they are allocated and grouped. However, based on the need for organizations to be increasingly flexible, the RBV highlights some limitations of flexibility, so the theory of dynamic capabilities emerged [19] as a complement to the first. Of the definitions of this concept, the following are highlighted:



1) "Capacities of an organisation to renew and recreate its capabilities strategic capabilities to meet the needs of changing environments" [20, p.2] "The dynamic capability approach focuses attention on the firm's ability to renew its resources in line with changes in its environment." [21]; 3) "Leadership is another core element of an organization's dynamic capabilities." [22]. In short, dynamic capabilities have as their main objective to assist in the adaptation of resources in turbulent environments, which are increasingly competitive, through the dynamic configuration of resources and competencies along the various organisational areas [23] so that companies become more competitive, leading to higher business performance [24].

These arguments show the importance of configuring the resources and capabilities of organisations, in which the Balance Scorecard management tool acts as a facilitating element to align the various organisational perspectives since it provides the measurement of the performance of organisations, allows them to be monitored and controlled, and also harmonises the appropriate application of available resources [25]. It is precisely this statement that underpins the link between the RBV and dynamic capabilities and the BSC if one considers that [26] argued that the BSC is a management tool that intends to provide a global and integrated view of organisational performance according to the financial perspective (reflecting the results of past actions) and the non-financial perspective (customers, internal processes and learning and growth), where the latter is related to intangible factors considered essential for good future performance. Additionally, [27] considered that the BSC had been understood as one of the best solutions for achieving alignment of all organisational resources, particularly human resources, and achieving change, which is in line with the definition of dynamic capabilities [21], [22]. In sum, the BSC goes far beyond a set of indicators divided into its four perspectives since it is a coherent system of objectives and indicators that fosters dynamic responses to the permanent changes and challenges of the competitive environment of organisations [28].

Given this scenario, the complexity that these constructs involve in parallel to the continuous change in the business world, the economies, and the demands associated with the maintenance of competitive advantage, it is necessary to shed some light on how the BSC, the human resources and the dynamic capabilities can become a holistic corporate tool to help organizations to sustain the transversality of their alignment and, consequently, their performance, which is the purpose of this study, to which is implicit the presentation of a conceptual framework.

This article contributes to the theory insofar as it connects the relevance of the theory of resources and dynamic capabilities to the influential management control tool BSC, with recognized merit in Management Control. In addition, it has a preponderant contribution for managers of the Management Control areas and executive and corporate managers to the extent that it illustrates and explains how resources and dynamic capabilities should be allocated to enable organizational performance measured through the BSC tool.

2 Literature Review

2.1 Resource-Based View (RBV)

In the late 1950s, [18] stressed the importance of a specific range of unique resources for companies to perform better. In the view of [18], organisations represent more than a simple management unit composed of a cluster of productive and valuable resources that contribute to and influence organisational management. These resources can be characterized as (i) Physical (manufacturing facilities, technology, geographical location, among others) and (ii) Human (experience, know-how, knowledge, and interpersonal relationships from operations to management).

The organisational resources represent the organisational structure as a whole, including the management specificities such as management skills, application of tools and performance control) [15], [19], [29]. Briefly, resources are considered tangible or intangible assets. In turn, capabilities are intangible and reflected in other resources [30].

The contribution of [18] is acknowledged as the first step in the literature towards constructing the resource-based theory. Despite this contribution still in the late 1950s, it was only in the mid-1980s and early 1990s that the resource-based view (RBV) gained emphasis in the field of organizational strategy, having [14], [31] assumed a very important role in this valorization. According to [14], resources and capabilities must be efficiently allocated to make the company competitive, preventing competitors from implementing a given product in the same period. Strategic resources are broken down into the following characteristics: valuable (exploit opportunities and mitigate threats); rare (challenging to acquire among competitors); difficult to imitate (possess certain characteristics that are difficult to imitate), irreplaceable (non-existence of products with the same characteristics) [31]. [31], going to meet [14], was distinguished in the field of enterprise resource theory, as he grounded his ideas in the contribution of [18]. These resources are relevant, valuable and difficult to imitate ([32]. Especially concerning the development of resources because resources directly impact the company's competitiveness. How companies work towards strategic objectives makes the difference [33].

Through the exposure of [31], it is clear that in a competitive environment, a company can become more efficient than its competitors based on its unique resources and competencies. Because organisations possess valuable resources that are rare, difficult to imitate and irreplaceable, they can achieve competitive advantages [14], [15], [18], [33]. Mainly through value creation strategies, unattainable by competitors (Barney, 1986, Grant, 1991). Likewise, [34] highlights the importance of resources (capabilities and competencies) being unique or difficult to imitate to take a leading position. In the interests of competitiveness, [35] highlighted the heterogeneity and immobility of resources.

For decades, this theory was considered crucial to the strategic development of organisations [36]. Thus, accumulating resources to leverage other resources has become key in the strategic thinking of both researchers and managers [36]. The most relevant characteristics for development are effectively the value and difficulty of imitation [30]. Based on this objective, strategies that focus on value creation can be merged and are difficult for competitors to imitate [9], [14]. Thus, resources should remain heterogeneous. In this sense, the resource theory became an alternative to the industrial organisation of the time, as it was based on the competencies of the companies. Nevertheless, it was an important starting point which exerted influence, mainly in business strategy. Currently, it is considered a basic theory of organizational strategy, having been so notorious that allowed it to be classified as a reference theory in the field of strategy [30].

To enable the strategy, managers must focus on exploiting existing resources and developing new resources following market requirements. All corporate resources and acquisitions must allow for high profitability and financial return [14] In this sense, resources should be integrated regardless of whether tangible or intangible [37] as these constitute strengths and weaknesses that aspire to competitiveness [14] To be able to respond to environmental fluctuations, managers must define a set of strategic resources [38] To do so, they must focus on the core capabilities of the organization's core competencies, betting on its differentiating competencies, which make the organisation unique compared to the competition. This focus requires strategic vision, useful time and investment, as the competitive advantage of organisations is achieved through articulating the company's resources and competencies [39]. Certain distinctive and valuable resources and capabilities are thoroughly selected for competitive advantage [40]. While [14][14] calls for a distinction between resources, [41] states that the only truly valid agent is people since all tangible and intangible resources result from human activity and continue to depend on them for their development. This differentiation leads managers to identify what distinguishes organisations and what leads certain customers to buy products from a particular company rather than another [38]

The answer to these questions may be the organisational experience, the level of engineering, and the know-how, among other distinctive factors, although primarily the resources and competencies of the organisations. For these organisations that wish to assert themselves in a given market, the resource-based theory is extremely relevant, as it highlights the importance of inter-organisational relationships, networks and the growing importance of intangible resources[9] in contradiction to [15] [29] state that the characterization of resources in terms of VRIN does not allow a competitive advantage in the long term. Due to the economic environment, organisations are forced to become more competitive regarding their resources and capabilities and, consequently, how they are applied. Correct allocation and adaptation are key in continuous restructuring [29], [42]. Companies developing a particularly innovative product assume a pioneering competitive advantage, First-Mover Advantage, over their followers [43][43].

Lack of flexibility in the face of swings and turbulence is the main limitation of the resource-based theory [44], [45][44], [45]. Thus, despite its potential, due to technological developments and the turbulence of markets and technological intensity, this theory had to be developed so dynamically that it expanded from studying RBV resources to dynamic capabilities. This evolution is important because, as argued [46, p.1] "One of the important factors for achieving a competitive advantage is effective human resource management through the application of appropriate human resources strategies."

2.2 Dynamic Capabilities

RBV theory, despite its value in the Strategy domain, had to be extended due to technological and industrial change [11], [47] As a result, the concept of dynamic capabilities emerged mainly due to the need for flexibility and adaptation to environmental turbulence, with a more flexible and dynamic nature, allowing the organisation to adapt to an increasingly demanding global market.

Dynamic capabilities are defined as the capabilities that allow adaptation to the environment, especially in the face of rapid and discontinuous changes [19] It is evident, in this scenario, that the attention of managers lies primarily in the rapid adaptation to environmental demands, the creation and renewal of resources, as well as the reconfiguration of the range of resources already in existence [19], [48]. In this sense, dynamic capabilities allow organisations to adapt quickly to market changes and demands [49]. Allied to this dynamic must be the knowledge that is central to the correct



adaptation [50].

[19] emphasize the efficient management of resources in turbulent environments, highlighting the importance of sensing, seizing and reconfiguring characteristics. Clarifying Teece's concepts, the sensing aspect characterizes the ability to gather information by scanning the market to discover new opportunities; seizing refers to the adaptation of products to needs, according to a product selection and architecture, within the scope of a business model; finally, reconfiguring characterizes the possibility of transforming resources and competences, based on knowledge management and specialisation, according to customers' needs [19].

Given the above definition, dynamic capabilities are distinguished from ordinary capabilities by their ability to sustain the organisation in the long term [19]. These capabilities also can potentially leverage resources in operational activities [51]). Dynamic capabilities support new challenges by reshaping and protecting knowledge, skills and resources to achieve or maintain competitive advantage [19], [52]. The design of new resources and configurations, demanded by the market, is underpinned by organisational routines and strategies. However, these demands are not static, as needs emerge, collide, divide and fade [16], [19], [29], [53]. The added value inherent in dynamic capabilities is mainly noticeable in highly dynamic markets, where advantage must be achieved in an unpredictable scenario. This unpredictability condition required overcoming the resource-based theory's characteristics [54], [55]. In this sense, due to the need for constant adaptation, dynamic capabilities enable the sustainability of the competitive advantage [56]. Some companies manage to create competitive advantage, despite being inserted in an environment of constant alteration, for such they have to be quick in the environmental and technological changes, demanded by the market [19]. Through dynamic capabilities we can understand the potential of the organisation to integrate, create and reconfigure internal and external competencies, as a response to market fluctuations [19]. It is precisely this characteristic that is highlighted by [29] when they state that the primary value of dynamic capabilities is not linked to the capabilities themselves, but to the configuration of resources. It is very important to assertively allocate resources, in adequate number and flexible position, in order to quickly allow eventual reconfigurations.

Based on this requirement of rigour in strategy management, dynamic capabilities reveal to be very important for the adaptation, integration and reconfiguration of resources, which will consequently leverage new horizons [19], [29], [47], [57]. Dynamic capacities also reveal their importance and impact on fostering partnerships and developing new products [58], [59], [60], [51]. Based on the combination of dynamic capabilities and innovation, the competitive advantage of organisations is achieved, allowing the increase of their "evolutionary fitness"

The contribution of dynamic capabilities in turbulent environments is clear, but they are also relevant in moderately turbulent environments[29]. However, [61] contradict [29], [51], as they state that a dynamic capability is considered dynamic if there is a radical change and consequently leverages the way the organisation operates.

2.3 Balanced Scorecard (BSC)

Orientation only on financial indicators, focusing on the short term, makes long-term options unviable [62]. In this sense, the mere definition, analysis and monitoring of financial indicators are insufficient for evaluating and supervising performance. [63] stood out in this area, as it introduced the concept of management by objectives. Given the need to broaden the scope of action by involving medium and long-term financial and non-financial indicators, the innovative Balanced Scorecard tool was conceived and implemented. It is one of the most highly regarded management tools for monitoring, measuring and assessing organisational performance. The authors[64] refer that organisational management cannot only consider financial indicators, since the financial aspect alone, in isolation, does not generate value. The BSC corresponds to a multidimensional management instrument, bringing together the four fundamental perspectives of organisational management: financial, internal, customer, and knowledge and development (later referred to as learning and growth).

The financial perspective reflects financial measures, such as income and productivity, and is an economic and financial reflection of decisions taken in the past [24]. In turn, the customer perspective characterizes the concern for market segmentation, creating value for the customer to satisfy and retain customers and obtain better financial returns [65]. Concerning the internal perspective, it aims to identify and analyze the processes critical to value creation, such as productivity and efficiency, in the short and long term [24]. Finally, the learning and growth perspective combines the indicators for analysing employees' learning and growth for long-term organisational growth. The four main independent organisational perspectives are interconnected through cause-and-effect relationships. Altogether, these four perspectives are generally composed of 18 to 25 indicators, which make it possible to compare the strategic objectives defined and the organisational performance achieved [66]. Therefore, they should be considered in an aggregate, interrelated manner to highlight the cause-effect relationships between the strategic objectives duly identified in the strategic maps [67].

Until the mid-1990s, the primary purpose of the BSC, composed of its four perspectives, was to measure organisational performance. Subsequently, the BSC began to help forecast growth, research and development of new products and integrate human resource systems [24].

In this sense, the Balanced Scorecard management tool is an aid to business change and adaptation, as it assists organisations in several key steps, such as promoting growth, monitoring performance, focusing on critical data, and clear goals, objectives and measurements[68]–[71] [72]. However, [73] states that the BSC is mostly applied to assist decision-making.

For the BSC to be functional, certain organisational objectives have to precede the implementation of the BSC [74]:

Definition of the mission - consists of defining the organisation's objective;

Definition of the vision - characterizes future organisational aspirations;

Definition of the respective values - guides actions to generate value.

The strategic maps make it possible to visualize the organization's critical objectives and primary relationships synthetically. Reading the information provided by the BSC transforms this methodology into a management instrument capable of evaluating short, medium and long-term performance, thus enabling efficient strategic planning [75].

The BSC is relevant because it identifies and monitors factors that lead to excellent performance following the company's strategy [76]. Based on the four perspectives will be reflected in business practice, vision and organisational strategy, defined by the directors [77] In 1996 the importance of the BSC in strategic management was recognized, and managers and researchers consider it one of the most valuable strategic management tools [78]. This progress has made this tool crucial at the beginning of the millennium for monitoring organisational strategy and performance. This is important because it does not exclusively cover financial indicators but also includes indicators from other organisations' perspectives. Thus, in addition to the volume of sales and profitability, it includes factors such as customer satisfaction, employee motivation, and the capacity for innovation and learning, which play a crucial role in the company's sales volume, profit margins, among others, report a past situation. It is recognized that past ratios do not guarantee that the same situation will prevail in the current financial year, so managers have to take action in advance. As they point out [79] in an organisation it is insufficient to rely on financial indicators, as these only reflect the past.

2.4 Characterisation of the Resources of Organisations with BSC

Organisational knowledge of resources and competencies is the key factor for sustainability [80]. In this sense, organisations increasingly rely on intangible resources, which, due to their nature, are not easily measurable through traditional metrics [81].

Because of environmental turbulence, resources must behave in an adjusted and dynamic way, and integrated performance gauges detect changes through their financial and non-financial indicators. In this sense, [82] suggest using the BSC as an integrated system for performance measurement. Also, [83] see the BSC as the most suitable approach to assist organisations in measuring and achieving performance.

The BSC, as a management tool, identifies, monitors, communicates and guides towards future performance. For example, suppose organisations abstract from the environment and, consequently, from all the innovations and product launches the competition shows in the market. In that case, they will soon face the threats of the competition. By then, their response time will be so long that the business opportunity will no longer be recoverable [84]. This lack of attention to the external environment is mainly because managers focus only on the correct definition and control of operational tasks. As a result, they may compromise the adaptation to the market's demands [85]. In this sense, dynamic capabilities characterize the potential of organisations to adapt, align and readjust so that they can respond to market opportunities and consequently obtain better economic and financial returns [86]

[61] Refers to a Case Study in which the operational employees routinely maintained their tasks despite being in a very turbulent environment. This case study shows that turbulence is absorbed and cushioned by innovation, engineering and other development-related processes. Dynamic capabilities allow organisations to function systematically and routinely with new resource formats and constant improvements. For an organisation to function and remain sustainable, income from product commercialization must support, in addition to business costs, the costs of research and development of new products [53]. Thus, as verified by the examples clarified [61] dynamic capabilities are key to success, as they enable significant economic impacts when monitored, identified, and adapted as requested by the market.

The literature highlights that the interconnection between dynamic capabilities and the BSC management tool remains



unexplored. [80] consider that the information obtained and collected from the BSC could be crucial for organisational knowledge regarding adapting and reconfiguring new resources and capabilities.

3 Conceptual Framework

Based on the conceptual model, it is intended to explore the relevance of the resources and competencies configuration in line with the BSC functionalities. This interconnection was highlighted throughout the literature review, in which it is clear that organizations increasingly need to adapt to market demands dynamically. However, this needs to adjust resources and competencies to the external reality, which should be identified, monitored and followed up to achieve the final goal. Hence the innovative relationship of the BSC to the dynamic configuration of resources and capabilities, since, if, on the one hand, the resources should be adjusted, on the other hand, they need a guiding tool, which guides them in their positioning. The organisations must be able to reflect, at the operational level, the configuration requested by the markets. However, despite the many studies in the literature, this connection of the BSC to resources and capabilities remains unexplored. Thus, the aim is to understand the configuration and characterization of the resources and capabilities of organizations with the BSC operation.

In short, this conceptual model, identified below, is intended to assess and characterize the organization's resources and their implications at the competitive advantage level (figure 1).



Fig. 1: Framework Conceptual.

The reading of Figure 1 enables us to make considerations about it. Thus, the following assertions will be addressed:

• Environmental information received through the BSC

In the past, several market-leading organisations saw their positioning decline as managers could not innovate, adapt their resources and exploit their experience. This organisational myopia led several successful companies to regress due to their inability to adapt to the market [87]. Organisations must actively adapt to their environment, relying on their resources and competencies [88]. Resources, in turn, must be interconnected and interdependent [14]). It should be noted that for strategic plans to be efficient, they need to integrate information from the environment [75]. Through the BSC, information is received from the external environment that will allow managers to assess performance in the short, medium and long term and adapt accordingly. This guiding tool is a very important aid for managers, as it allows them to capture information and transmit it along the four organisational perspectives.

• VRIN resource configuration in organisations with BSC

The strategic resources of organisations increasingly call for differentiating characteristics [14], [31] so they must be developed and dynamically controlled [14], [31]. In this sense, and to meet the need for dynamic control, the BSC is an appropriate tool to complement dynamic capabilities, as it can lead organisations to improve performance [24], [89]. Following this exposition, the BSC is one of the most powerful strategic tools, as revealed by [78]. Managers use the BSC mainly to help them make decisions and coordinate and monitor [73]. Therefore, this tool is suitable for the parameterisation and monitoring of strategic resources of

the VRIN type. This is because resources need to be dynamically adjusted, and they need guidance. The BSC can support precisely this orientation.

• Information absorption capacity (sensing) and adaptation (seizing) to the environment in organisations with BSC

Organisations are required to constantly research and scan new technologies and markets (sensing) and consequently adjust (seizing) products to their business model [19]. However, this demand is arduous, and knowing that organisations continuously create new products makes measuring this dynamic process very complex. To facilitate this process, they need the help of integrated performance systems [90]. For this dynamic process to be continuous and progressive, information from the environment is central to the design of new products [53] Given that the environment is very divergent and therefore requires frequent organisational changes [91], the accuracy of receiving this information from the outside is very valuable, especially for intangible assets [34]. This needs for timely and up-to-date information is mainly noticeable in larger companies or those linked to innovation. The primary objective of these organisations is to identify activities related to sensing, maintaining a very close relationship with universities to obtain extensive knowledge [92]. Coincidentally it is the larger organisations that are more receptive to implementing the BSC, noting that the BSC was developed in its embryonic stage for the private sector, dedicated to industries [93], [94]. This tool is today considered a fundamental working basis [95] with a tendency to be increasingly implemented, as it adds value through relevant and balanced information that is concisely transmitted to managers [96]. The information obtained and collected from the BSC and the organisational knowledge are elementary to adapting and reconfiguring resources and capabilities [80]. Based on the described added values inherent to the BSC communication tool, we understand that the external environment will be more easily interpreted through the BSC.

New resources and configurations are created to overcome external oscillations, which are leveraged by routines and organisational strategies [16], [19], [29], [53]. Dynamic capabilities, due to their essence of constant adaptation, attention to the market, and reconfiguration of resources, are precious for organisations operating in highly demanding markets [92]. Organizations inserted in environments of extreme oscillation need to anticipate changes and react to them based on the capacity of mutation, namely the dynamic capabilities [97]. The BSC enables organisations to use existing resources, pool them, and link them together to create long-term value through business adaptations [72] Based on the monitoring, it is possible to analyze the organisational success in a short and long-term perspectives [98]

All in all, this tool links goals to organisational strategy [99] that enables communication with members of the organisation [100]. Through the BSC, managers can adjust to changes per the organisational strategy [101]. All changes play a relevant role in the configuration of resources. It is precisely linking strategy to the operationalization of resources that proves to be the added value of this research through monitoring resources. It is allowed for them to adjust accordingly. Eisenhardt [2] concluded that the faster the strategic decisions are reached, the better the performance. Eriksson [97] states that the mechanism that leads dynamic capabilities to performance improvement lacks empirical research. This research aims to relate dynamic capabilities with a well-regarded management tool in performance monitoring to fill the empirical gap in this research area. Consequently, as we discovered the possible interconnection between the BSC and the dynamic capabilities, we intend to assess through the following proposition the operationalization of the tool in the configuration of resources and competencies.

• Resource and capability reconfiguring capacity in organisations with BSC

The need for reconfiguration is linked to innovation, as referred to by the classic [102] which considered innovation the means of communicating new trends. Organisations, sustained by trends, must combine resources and technologies supported by innovative knowledge [103]. In this context, from the perspective of a dynamic lens, reconfiguration aims at resources that interconnect the various areas creatively [29]. It is possible to transform resources and competencies according to customer needs through reconfiguration through specialisation and knowledge management [19]. To enable integrated reconfiguration, sustained organisational interlinking across processes is central [104]. In this way, they meet customer needs and market requirements [105]. The market demands that orders be executed ever more quickly. At the lowest cost, successful organisations rely on qualified



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employees to cooperate more closely with all those involved and better understand which variables allow success to be created [44].

Consequently, organizations must determine the competencies segmented into integration, construction and reconfiguration [19]. Yet [2] mentioned that real information is central to strategic decision-making. Thus, resources and capabilities effectively depend on an instrument that provides real information. It should also be noted that the more often organisations can reconfigure themselves, the more successful they will be in turbulent external environments [106].

Given these needs, on the one hand, to obtain real information and, on the other, to be able to reconfigure, the BSC can show the global strategy of the organisation, allowing an analysis of individual and global performance, as well as the identification of any possible turbulence [107]. Organisations that invest in research and development can use the BSC to achieve the strategy [81] Organisations need to obtain information from the outside to adapt, adjust and reconfigure resources as desired by the environment [86]. Finally, managers need a tool to help them in this complex process. Consequently, through its four aspects, we consider the BSC a very relevant aid, considering that it is based on real information.

• Configuring for competitive advantage in organisations with BSC

With the exponential growth of organisational turbulence, managers increasingly need to control and monitor organisational performance in great detail, focusing on the sources of competitive advantage, namely resources and competencies [108]. [109] mentioned that in the automotive industry, the economic decline was due to managers focusing exclusively on productivity. Managers must simultaneously focus on innovation, as they cannot lose that essential focus. In this sense, the factors supporting superior performance are identified and monitored through the BSC, considering the need for innovation and market adaptation according to the company's strategy [98]. In this sense, dynamic capabilities effectively contribute to competitive advantage and consequently have an impact on organisational performance, as they allow companies to reconfigure their resources and consequently achieve new business opportunities [11], [19], [29], [40], [53][11], [19], [29], [40], [53]. In this sense, [36] says organisations can quickly integrate and reconfigure their internal and external resources through dynamic capabilities to maintain their competitive advantage. However, dynamic capabilities have to be "fed", meaning that the organisation has to receive information from the environment as input to adjust resources to achieve competitive advantage. It is precisely in the informational support of dynamic capabilities that lies the great added value on the part of the BSC. because it is allied to dynamics and will provide the necessary input for dynamic capabilities. The Balanced Scorecard mirrors the external changes related to technological turbulence and the consequent competitive advantage. This competitive advantage is primarily based on intangible resources, including commercial relationships, innovative products, information, technology, and the ability to solve problems [72]. However, there is no magic recipe that promotes competitive advantage because it is the intangible resources which consequently show financial reflexes [110] in light of this exposition and corresponding to the need for empirical research regarding how the influence and orientation around dynamic capabilities were detected by [97] throughout its systematic literature review.

4 Final Considerations

The topic addressed here was not exhausted in this conceptual research since it only intended to shed some light on the importance of interconnecting constructs so scientific knowledge evolves. Thus, it was outlined in this synopsis considerations present in the scientific literature on the RBV, the dynamic capabilities and the BSC. These provided the development of a conceptual framework that shows the holistic association of these three constructs and how it contributes to improving the competitive advantage of organizations.

Managers are aware of the relevance of dynamic resources and capabilities; however, they feel there is a lack of information regarding the performance measurement of these same resources and capabilities, so they aim for a tool to help them measure performance. This argument is based on the fact that it is essential to implement management information and control systems, the results of which should return the evolution of critical factors from a financial and non-financial perspective, going far beyond the historical records of information, as is the case of the BSC. This means that the BSC provides critical information to stimulate managers' actions directed to the future. On the other hand, many managers in organisations know what they want and where they want to go but do not understand how

to make it operational because they do not have a visualization of that path, i.e., a strategic map such as the BSC. As with any study, this one is not exempt from limitations. The first relates to the typology of the article -conceptual synopsis-which can be addressed by a systematic literature review with the following search string: "resource-based theory" or "RBV" and "dynamic capabilities" and "BSC" or "Balance Scorecard". The second refers to the absence of data and empirical evidence to validate the framework presented, which suggests future research.

The current turbulent global environment has transformed the cross-cutting alignment provided by using the BSC in organizations, highlighting the relevance of developing empirical studies. Therefore, the following propositions can be studied in the future: Proposition 1: Organizations with BSC adapt more efficiently to changes in the external environment; Proposition 2: Organizations that have BSC exhibit better VRIN-type (valuable, rare, difficult to imitate and irreplaceable) capabilities; Proposition 3: Organizations that have BSC exhibit better capabilities for recognizing the external environment (sensing type); Proposition 4: Organizations using BSC present better adjustment and adaptation capabilities (seizing type); Proposition 5: Organizations, with BSC implemented, present better capabilities for reconfiguring resources and competencies (reconfiguring type); Proposition 6: Organizations that have BSC present better competitive advantages than those that do not. Another innovative study would be the association of the BSC to the absorptive capacity theory and knowledge management, considering that knowledge dissemination is increasingly important to solve unexpected problems in the business world, which was recently revealed with the pandemic environment.

Another future track is related to the introduction in the BSC of the sustainability dimension (economic, social and environmental), as suggested by more recent studies.

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References

- N. H. M. Zawawi and Z. Hoque, "The Implementation and Adaptation of the Balanced Scorecard in a Government Agency," Aust. Account. Rev., vol. 30, no. 1, pp. 65–79, 2020, doi: 10.1111/auar.12281.
- [2] K. M. Eisenhardt, "Making fast strategic decisions in high-velocity environments," Acad. Manag. J., pp. 543–576, 1989.
- [3] M. Rodrigues, R. Silva, and C. Oliveira, "O papel dos recursos intangíveis e da inovação para a competitividade the role of the intangible resources.," Gestin, vol. 22, no. 1, pp. 55–86, 2021.
- [4] M. E. Porter, Competitive strategy: Techniques for analyzing industries and companies. 1980.
- [5] M. E. Porter, Competitive Advantage: Creating and sustaining superior performance, vol. 15. 1985.
- [6] M. Porter, "Towards a dynamic theory of strategy," Strateg. Manag. J., vol. 12, no. S2, pp. 95–117, 1991, doi: 10.1002/smj.4250121008.
- [7] D. A. Aaker, "Managing Assets and Skills: The Key To a Sustainable Competitive Advantage," Calif. Manage. Rev., vol. 31, no. 2, pp. 91–106, 1989, doi: 10.2307/41166561.
- [8] J. Barney, "Firm Resources and Sustained Competitive Advantage," J. Manage., vol. 17, no. 1, pp. 99–120, 1991, doi: 10.1177/014920639101700108.
- J. B. Barney, M. Wright, and D. J. Ketchen, "The resource-based view of the firm: ten years after 1991," Journal of Management, vol. 27, no. 6. pp. 625–641, 2001, doi: 10.1177/014920630102700601.
- [10] J. B. Barney and W. S. Hersterly, Strategic Management and Competitive Advantage., Fifth Edit. 2015.
- [11] C. E. Helfat and M. A. Peteraf, "The dynamic resource-based view: capability lifecycles," vol. 24, no. 10, pp. 997–1010, 2003.
- [12] M. A. Peteraf, "The Cornerstones of Competitive Advantage: a Resource Based View," Strateg. Manag. J., vol. 14, no. November 1992, pp. 179–191, 1993, doi: 10.1017/CBO9781107415324.004.



- [13] P. M. Wright, B. B. Dunford, and S. A. Snell, "Human resources and the resource based view of the firm," J. Manage., vol. 27, no. 6, pp. 701–721, 2001, doi: 10.1016/S0149-2063(01)00120-9.
- [14] B. Wernerfelt, "The Resource-Based View of the Firm," Strateg. Manag. J., vol. 5, no. 2, pp. 171–180, 1984.
- [15] J. Barney, "Firm Resources and Sustained Competitive Advantage," J. Manage., vol. 17, no. 1, pp. 99–120, 1991, doi: 10.1177/014920639101700108.
- [16] C. E. Helfat and M. a. Peteraf, "The dynamic resource-based view: Capability lifecycles," Strateg. Manag. J., vol. 24, no. 10 SPEC ISS., pp. 997–1010, 2003, doi: 10.1002/smj.332.
- [17] M. A. Peteraf, "The conerstones of competitive advantage: A resource-based view," Strateg. Manag. J., vol. 14, no. April 1992, pp. 179–191, 1993, doi: 10.1002/smj.4250140303.
- [18] E. Penrose, The Theory of the Growth of the Firm. New York: Oxford University Press, 1959.
- [19] D. J. Teece, G. Pisano, and A. Shuen, "MANAGEMENT," Strateg. Manag. J., vol. 18, no. 7, pp. 509–533, 1997.
- [20] G. Johnson, K. Scholes, and R. Whittington, Fundamentos De Estrátégia. 2011.
- [21] C. Bowman and V. Ambrosini, "How the Resource-based and the Dynamic Capability Views of the Firm Inform Corporatelevel Strategy," Br. J. Manag., vol. 14, no. 4, pp. 289–303, 2003, doi: 10.1111/j.1467-8551.2003.00380.x.
- [22] D. J. Teece, "Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm," Eur. Econ. Rev., vol. 86, pp. 202–216, 2016, doi: 10.1016/j.euroecorev.2015.11.006.
- [23] D. J. Teece, G. Pisano, and A. Shuen, "Dynamic capabilities and strategic management," Strateg. Manag. J., vol. 18, no. 7, pp. 509–533, 1997, doi: Doi 10.1002/(Sici)1097-0266(199708)18:7<509::Aid-Smj882>3.0.Co;2-Z.
- [24] R. S. Kaplan and D. P. Norton, "Using the Balanced Scorecard as a Strategic Management System," Harv. Bus. Rev., vol. 74, no. January-February, pp. 75–85, 1996, doi: 10.1016/S0840-4704(10)60668-0.
- [25] J. Russo, Balanced Scorecard para PME e Pequenas e Médias Instituições, 6th ed. Lisboa: Lidel, 2015.
- [26] R. S. Kaplan and D. P. Norton, "The balanced scorecard measures that drive performance," Harvard Buiness Rev., no. January-February, pp. 71–79, 1992.
- [27] F. Pinto, "Balanced Scorecard-alinhar mudanças, estratégia e performance nos serviços públicos.," Tour. Manag. Stud., vol. 3, no. 21, pp. 214–215, 2007.
- [28] H. Jordan, J. Carvalho das Neves, and J. Rodrigues, O Controlo de Gestão ao serviço da estratégia e dos gestores, 10th ed. Lisboa: Áreas Editora, 2015.
- [29] K. M. Eisenhardt and Martin, J.A., "Dynamic capabilities: What are they?," Strateg. Manag. J., vol. 21, pp. 1105–1121, 2000.
- [30] D. Hoopes, T. Madsen, and G. Walkers, "HOOPES;MADSEN[^] and WALKERS_2003," J. Strateg. Manag., no. 24, pp. 889– 902, 2003.
- [31] J. Barney, "Competitive Advantage," J. Manage., vol. 17, no. 1, pp. 99–120, 1991.
- [32] N. W. Hatch and J. H. Dyer, "Human Capital and Learning As a Source of Sustainable Competitive Advantage.," Strateg. Manag. J., vol. 25, no. 12, pp. 1155–1178, 2004, doi: 10.1002/smj.421.
- [33] J. Barney, "Strategic factor markets: Expectations, luck and business strategy.," Manage. Sci., vol. 32, no. 10, pp. 1231–1241, 1986.
- [34] C. Eustace, "A new perspective on the knowledge value chain," J. Intellect. Cap., vol. 4, no. 4, pp. 588–596, 2003, doi: 10.1108/09574090910954864.
- [35] J. Barney, "Special Theory Forum The Resource-Based Model of the Firm: Origins, Implications, and Prospects," Journal of Management, vol. 17, no. 1. pp. 97–98, 1991, doi: 10.1177/014920639101700107.
- [36] L. Y. Wu, "Applicability of the resource-based and dynamic-capability views under environmental volatility," J. Bus. Res., vol. 63, no. 1, pp. 27–31, 2010, doi: 10.1016/j.jbusres.2009.01.007.
- [37] R. Hall, "The strategic analysis of intangible resources," Manag. J., vol. 13, no. 2, pp. 135–144, 1992.
- [38] R. Amit and P. Schoemaker, "Strategic Assets and Organizational Rent," Strateg. Manag. J., vol. 14, no. August 1992, pp. 33– 46, 1993.
- [39] R. L. Priem and J. E. Butler, "Is the RBV a useful perspective for strategic management research?," Acad. Manag. Rev., vol. 26, no. 1, pp. 22–40, 2001, doi: 10.5465/AMR.2001.4011938.
- [40] J. F. Henri, "Management control systems and strategy: A resource-based perspective," Accounting, Organ. Soc., vol. 31, no. 6,

^{© 2023} NSP Natural Sciences Publishing Cor.

pp. 529–558, 2006, doi: 10.1016/j.aos.2005.07.001.

- [41] K.-E. Sveiby, "A knowledge-based theory of the firm to guide in strategy formulation," J. Intelect. Cap., vol. 2, no. 4, pp. 344– 358, 2001, doi: 10.1108/02656710210415703.
- [42] C. M. Fiol, "Revisiting an identity-based view of sustainable competitive advantage," Journal of Management, vol. 27, no. 6. p. 691, 2001, doi: 10.1016/S0149-2063(01)00119-2.
- [43] M. Lieberman and D. Montgomery, "First-Mover Advantages," Strateg. Manag. J., vol. 9, pp. 41–58, 1988.
- [44] J. Gomes and M. Romão, "How benefits management helps balanced scorecard to deal with business dynamic environments," Tour. Manag. Stud., vol. 9, no. 1, pp. 129–138, 2013.
- [45] M. Aramand and D. Valliere, "Dynamic capabilities in entrepreneurial firms: A case study approach," J. Int. Entrep., vol. 10, no. 2, pp. 142–157, 2012, doi: 10.1007/s10843-012-0088-3.
- [46] E. Nafari and B. Rezaei, "Relationship between human resources strategies and organizational performance based on the balanced scorecard in a public hospital in Iran: a cross-sectional study," BMC Health Serv. Res., vol. 22, no. 1, pp. 1–8, 2022, doi: 10.1186/s12913-022-07767-z.
- [47] S. G. Helfat, C.E.; Finkelstein, S., Mitchell, W., Peteraf, M.A., Singh, H., Teece, D.J., Winter, Dynamic capabilities: Understanding strategic change in organizations. 2007.
- [48] V. Ambrosini and C. Bowman, "What are dynamic capabilities and are they a useful construct in strategic management?," Int. J. Manag. Rev., vol. 11, no. 1, pp. 29–49, 2009, doi: 10.1111/j.1468-2370.2008.00251.x.
- [49] D. J. Teece and A. Al-Ali, "E T & P International Firm:," Enterpreunersh. Theory Pract., no. 510, pp. 95–116, 2014, doi: 10.1111/etap.12077.
- [50] U. Lichtenthaler and E. Lichtenthaler, "A Capability-Based Framework for Open Innovation: Complementing Absorptive Capacity," J. Manag. Stud., no. December, 2009, doi: 10.1111/j.1467-6486.2009.00854.x.
- [51] A. Protogerou, Y. Caloghirou, and S. Lioukas, "Dynamic capabilities and their indirect impact on firm performance," Ind. Corp. Chang., vol. 21, no. 3, pp. 615–647, 2011, doi: 10.1093/icc/dtr049.
- [52] M. Augier and D. J. Teece, "Dynamic Capabilities and the Role of Managers in Business Strategy and Economic Performance," Organ. Sci., vol. 20, no. 2, pp. 410–421, 2009, doi: 10.1287/orsc.1090.0424.
- [53] S. G. Winter, "Understanding dynamics capabilities," Strateg. Manag. J., vol. 24, pp. 991–995, 2003, doi: 10.1002/smj.3I8.
- [54] V. S. Katkalo, C. N. Pitelis, and D. J. Teece, "Introduction: On the nature and scope of dynamic capabilities," Ind. Corp. Chang., vol. 19, no. 4, pp. 1175–1186, 2010, doi: 10.1093/icc/dtq026.
- [55] J. Kraaijenbrink, J.-C. Spender, and a. J. Groen, "The Resource-Based View: A Review and Assessment of Its Critiques," J. Manage., vol. 36, no. 1, pp. 349–372, 2010, doi: 10.1177/0149206309350775.
- [56] L.-Y. Wu, "Entrepreneurial resources, dynamic capabilities and start-up performance of Taiwan's high-tech firms," J. Bus. Res., vol. 60, no. 5, pp. 549–555, 2007, doi: 10.1016/j.jbusres.2007.01.007.
- [57] D. Lavie, "Capability reconfiguration: An analysis of incumbent responses to technological change," Acad. Manag. Rev., vol. 31, no. 1, pp. 153–174, 2006, doi: 10.5465/AMR.2006.19379629.
- [58] M. Zollo and H. Singh, "Deliberate learning in corporate acquisitions: Post-acquisition strategies and integration capability in U.S. bank mergers," Strateg. Manag. J., vol. 25, pp. 1233–1256, 2004.
- [59] Q. Wu, D. Yan, and M. Umair, "Assessing the role of competitive intelligence and practices of dynamic capabilities in business accommodation of SMEs," Econ. Anal. Policy, vol. 77, pp. 1103–1114, 2023.
- [60] S. M. S. Khaksar, M.-T. Chu, S. Rozario, and B. Slade, "Knowledge-based dynamic capabilities and knowledge worker productivity in professional service firms The moderating role of organisational culture," Knowl. Manag. Res. Pract., vol. 21, no. 2, pp. 241–258, 2023.
- [61] S. Winter and C. E. Helfat, "UNTANGLING DYNAMIC AND OPERATIONAL CAPABILITIES: STRATEGY FOR THE (N)EVER-CHANGING WORLD," Strateg. Manag. J., no. 32, pp. 1243–1250, 2011.
- [62] M. E. Porter, "Capital Disadvantage: America / s Failing Capital Investment System," Harv. Bus. Rev., no. september october 1992, pp. 65–82, 1992.
- [63] P. Drucker, The Practice of Management. New York: HarperCollins, 1954.
- [64] R. S. Kaplan and D. P. Norton, "The Balanced Scorecard Masures That Drive Performance," Harvard Buiness Rev., vol. 70, no. January-February, pp. 71–79, 1992.
- [65] T. García-Valderrama, E. Mulero-Mendigorri, and D. Revuelta-Bordoy, "A Balanced Scorecard framework for R&D," Eur. J. Innov. Manag., vol. 11, no. 2, pp. 241–281, 2008.



- [66] C. Curado and J. Manica, "Management control systems in Madeira island largest firms: Evidence on the balanced scorecard usage," J. Bus. Econ. Manag., vol. 11, no. February, pp. 652–670, 2010, doi: 10.3846/jbem.2010.32.
- [67] R. S. Kaplan and D. P. Norton, "Having Trouble With Your Strategy," Harv. Bus. Rev., vol. 5, pp. 167–176, 2000.
- [68] R. Silva and C. Oliveira, "The influence of innovation in tangible and intangible resource allocation: A qualitative multi case study," Sustain., vol. 12, no. 12, 2020, doi: 10.3390/su12124989.
- [69] C. Oliveira, A. Martins, M. A. Camilleri, and S. Jayantilal, "Using the Balanced Scorecard for Strategic Communication and Performance Management," Strateg. Corp. Commun. Digit. Age, pp. 73–88, 2021, doi: 10.1108/978-1-80071-264-520211005.
- [70] C. Oliveira, "The Contribution of BSC to Strategic Focus and Organizational Performance Perception of the mayor export companies in Portugal."
- [71] C. P. de Oliveira, "Balanced Scorecard, Cultura Organizacional e Desempenho: O Caso das Maiores Exportadoras de Portugal," 2018.
- [72] R. S. Kaplan and D. P. Norton, "Transforming the balanced scorecard from performance measurement to strategic management: Part 1," Account. Horizons, vol. March, pp. 87–104, 2001.
- [73] E. Wiersma, "For which purposes do managers use Balanced Scorecards?. An empirical study," Manag. Account. Res., vol. 20, no. 4, pp. 239–251, 2009, doi: 10.1016/j.mar.2009.06.001.
- [74] R. S. Kaplan and D. P. Norton, "Mastering the Management System," Harv. Bus. Rev., pp. 63–77, 2008.
- [75] M. Chavan, "The balanced Scorecard: a new challenge," J. Manag. Dev., vol. 28, no. 5, pp. 393–406, 2009.
- [76] R. S. Kaplan and D. P. Norton, "Using the Balanced Scorecard as a Strategic Management System," Harv. Bus. Rev., vol. 74, no. January-February, pp. 75–85, 1996, doi: 10.1016/S0840-4704(10)60668-0.
- [77] R. S. Kaplan and D. P. Norton, "Using the balanced scorecard as a strategic management system," Harv. Bus. Rev., vol. 85, no. February 1996, pp. 150–161, 1996, doi: 10.1108/10878570410699825.
- [78] P. Quesado and L. Rodrigues, "Fatores Determinantes Na Implementação Do Balanced Scorecard Em Portugal Determining Factors of the Bsc Implementation in Portugal," Rev. Universo Contábil, no. 54, pp. 94–115, 2009, doi: 10.4270/ruc.2009433.
- [79] D. Kallás and F. Ribeiro, "Balanced Scorecard (BSC) Conceitos Gerais," Universidade de São Paulo, São Paulo, 2008.
- [80] M. R. Cabrita, V. C. Machado, and A. Grilo, "Leveraging knowledge management with the balanced scorecard," in IEEM2010
 IEEE International Conference on Industrial Engineering and Engineering Management, 2010, pp. 1066–1071, doi: 10.1109/IEEM.2010.5674245.
- [81] W. G. Bremser and N. P. Barsky, "Utilizing the balanced scorecard for R&D performance measurement," R D Manag., vol. 34, no. 3, pp. 229–238, 2004, doi: 10.1111/j.1467-9310.2004.00335.x.
- [82] I. Kerssens-van Drongelen, B. Nixon, and A. Pearson, "Performance Measurement in Indutrial R&D," Int. J. Manag. Rev., vol. 2, no. 2, pp. pp111-143, 2000.
- [83] G. A. Neufeld, P. A. Semeoni, and M. A. Taylor, "Neufeld," Res. Technol. Manag., no. November–December, pp. 42–52, 2001.
- [84] M. Kennerley and A. Neely, "Measuring performance in a changing business environment," Int. J. Oper. Prod. Manag., vol. 23, no. 2, pp. 213–229, 2003, doi: 10.1108/01443570310458465.
- [85] N. Bontis and N. C. Dragonetti, "The Knowledge Toolbox: A Review of the Tools Available to Measure and Manage Intangible Resources," Eur. Manag. J., vol. 17, no. 4, pp. 391–402, 1999, doi: 10.1016/S0263-2373(99)00019-5.
- [86] D. J. Teece, "Dynamic Capabilities: Routines versus Entrepreneurial Action," J. Manag. Stud., vol. 49, no. 8, pp. 1395–1401, 2012, doi: 10.1111/j.1467-6486.2012.01080.x.
- [87] C. M. Christensen and J. L. Bower, "Investment, Customer Power, Strategic of Leading Firms and the Failure," Strateg. Manag. J., vol. 17, no. 3, pp. 197–218, 1996, doi: 10.1002/(SICI)1097-0266(199603)17:3<197::AID-SMJ804>3.0.CO;2-U.
- [88] H. Makkonen, M. Pohjola, R. Olkkonen, and A. Koponen, "Dynamic capabilities and fi rm performance in a fi nancial crisis ☆," J. Bus. Res., vol. 67, no. 1, pp. 2707–2719, 2014, doi: 10.1016/j.jbusres.2013.03.020.
- [89] H. M. H. Mingming, W. X. W. Xiong, L. S. L. Shun, D. Y. D. Yingliu, Y. Q. Y. Qingquan, and T. Q. T. Quanfu, "Research on Performance Evaluation of Logistics Enterprises Based on the Balanced Scorecard," Intell. Comput. Technol. Autom. (ICICTA), 2010 Int. Conf., vol. 3, no. 1, 2010, doi: 10.1109/ICICTA.2010.241.
- [90] O. Zizlavsky, "The Balanced Scorecard : Innovative Performance Measurement and Management Control System," J. Technol. Manag. Innov., vol. 9, no. 3, pp. 210–222, 2014.
- [91] I. C. K. Drongelen and J. Bilderbeek, "R&D performance measurement: More than choosing a set of metrics," R&D Manag.,

- [92] R. Wilden and S. P. Gudergan, "The impact of dynamic capabilities on operational marketing and technological capabilities : investigating the role of environmental turbulence," J. Acad. Mark. Sci., 2014, doi: 10.1007/s11747-014-0380-y.
- [93] G. Braam and E. Nijssen, "Braam, G," J. Manag. Organ., vol. 17, no. 6, pp. 714–728, 2011.
- [94] P. Quesado, B. Guzmán, and L. Rodrigues, "Fatores Determinantes da Implementação do Balanced Scorecard em Portugal: evidência empírica em organizações públicas e privadas," Rev. Bus. Manag., vol. 16, no. 51, pp. 199–222, 2014, doi: 10.7819/rbgn.v16i51.1335.
- [95] M. L. Frigo and K. R. Krumwiede, "The balanced scorecard: A winning performance measurement system," Strateg. Financ., vol. 81, no. January, pp. 50–54, 2000.
- [96] S. Mooraj, D. Oyon, and D. Hostettler, "The balanced scorecard: a necessary good or an unnecessary evil?," Eur. Manag. J., vol. 17, no. 5, pp. 481–491, 1999, doi: 10.1016/S0263-2373(99)00034-1.
- [97] T. Eriksson, "Processes, antecedents and outcomes of dynamic capabilities," Scand. J. Manag., vol. 30, no. 1, pp. 65–82, 2014, doi: 10.1016/j.scaman.2013.05.001.
- [98] R. S. Kaplan and D. P. Norton, "Linking the balanced scorecard to strategy," Calif. Manage. Rev., vol. 39, no. I, pp. 53–79, 1996, doi: 10.1016/S0024-6301(96)00116-1.
- [99] M. Lipe and S. Salterio, "The Balanced Scorecard: Judgemental Effects of Common and Unique Performance Measures," Account. Rev., vol. 75, no. 3, pp. 283–298, 2000.
- [100] M. Green, J. Garrity, A. Gumbus, and B. Lyons, "Pitney Bowes calls for new metrics," Strateg. Financ., vol. May, pp. 30–35, 2002.
- [101] R. S. Kaplan and D. P. Norton, "Putting the Balanced Scorecard to Work," Harv. Bus. Rev., vol. 71, pp. 134–147, 1993, doi: 10.1177/1056492604268208.
- [102] J. Schumpeter, The Theory of Economic development. Cambridge, MA: Harvard University Press, 1934.
- [103] H. Hamid Hawass, "Exploring the determinants of the reconfiguration capability: a dynamic capability perspective," Eur. J. Innov. Manag., vol. 13, no. 4, pp. 409–438, 2010, doi: 10.1108/14601061011086276.
- [104] F. T. Rothaermel and A. M. Hess, "Building Dynamic Capabilities: Innovation Driven by Individual-, Firm-, and Network-Level Effects," Organ. Sci., vol. 18, no. 6, pp. 898–921, 2007, doi: 10.1287/orsc.1070.0291.
- [105] S. a Zahra and G. George, "Absorptive capacity: A review, reconceptualization, and extension," Acad. Manag. Rev., vol. 27, no. 2, pp. 185–203, 2002, doi: 10.2307/4134351.
- [106] R. Wilden, S. P. Gudergan, and B. B. Nielsen, "Dynamic Capabilities and Performance : Strategy, Structure and Environment," Long Range Plann., vol. 46, no. 1–2, pp. 72–96, 2013, doi: 10.1016/j.lrp.2012.12.001.
- [107] R. S. Kaplan, Conceptual Foundations of the Balanced Scorecard Conceptual Foundations of the Balanced Scorecard 1. Elsevier, 2010.
- [108] R. M. Grant, "Toward a Knowledge-Based Theory of the Firm," Strateg. Manag. J., vol. 17, pp. 109–122, 1996, doi: 10.2307/2486994.
- [109] M. I. Benner and M. Tushman, "EXPLOITATION, EXPLORATION, AND PROCESS MANAGEMENT: THE PRODUCTIVITY DILEMMA REVISITED," Acad. Manag. Rev., vol. 28, no. 2, pp. 238–256, 2003.
- [110] M. Andjelkovic and J. J. Dahlgaard, "Using the Balanced Scorecard and the European Foundation for Quality Management Excellence model as a combined roadmap for diagnosing and attaining excellence," vol. 24, no. 6, pp. 652–663, 2013.