

The Dynamic Balanced Scorecard for Sustainability: A novel framework to manage unintended employee behaviors in turbulent times

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Abstract

The recent rise in environmental dynamism has intensified unintended employee behaviors, such as quiet quitting and great resignation, compelling organizations to adapt their management control systems (MCS) to remain competitive and resilient. Although the Sustainability Balanced Scorecard (SBSC) framework has demonstrated its effectiveness in managing such a level of complexity, its reliance on a static and linear perspective constrains its ability to address the dynamic nature of contemporary organizational challenges. To bridge this gap, this study proposes integrating the SBSC with the Dynamic Performance Management perspective. The resulting Dynamic Balanced Scorecard for Sustainability framework is designed to enable organizations to detect, monitor, and manage unintended employee behaviors, such as quiet quitting, within the context of uncertain and volatile environments. By incorporating dynamic cause-and-effect relationships and prioritizing non-financial performance indicators, this framework offers a more comprehensive approach to enhancing organizational resilience and sustainability.

Keywords: Quiet Quitting, Organizational Performance, Turbulent Environment, Sustainability, Balanced Scorecard, Dynamic Performance Management

1. Introduction

The recent highly economic instability, caused by the health pandemic crisis and other unexpected events, including Brexit and the Russian invasion of Ukraine (OECD, 2023), have generated multiple sources of uncertainty,

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resulting in adverse effects on firm performance and its sustainability (Bivona & Cruz, 2021; Cheng & Humphreys, 2016). This is the case of the employee quiet quitting and the great resignation phenomena (Mahand & Caldwell, 2023; Serenko, 2023).

Employee quiet quitting has been defined as a work-related phenomenon in which employees intentionally limit their efforts to their job descriptions, refraining from tasks beyond their core duties such as unpaid overtime, discretionary collaboration, or proactive engagement. While remaining formally employed, such employees disengage psychologically, often due to perceived imbalance between effort and reward, lack of recognition, or deteriorating well-being (Serenko, 2024). In contrast, the great resignation refers rather to unprecedented high numbers of workers who decide to voluntarily leave their jobs in search of better working conditions, greater work-life balance, and higher pay and job satisfaction (Formica & Sfofera, 2022). Both phenomena can lead to unexpected declines in productivity and, more critically, the erosion of human capital—ultimately threatening long-term competitiveness and sustainability. To deal with these unintended employees' behavior, firms tend to design customized initiatives to enhance employees' work-life balance and reduce the probability of quiet quitting (Hays, 2022; Hetzner, 2022; Howley, 2022; Kailas, 2024; Patel, 2024).

Despite the continuous efforts to develop more comprehensive and effective management control systems (MCS) frameworks to help organizations in navigating turbulent times, these contributions tend to prioritize internal measures directly influenced by the management, thereby overlooking the broader external factors that have become significantly influential in determining organizational sustainability (Dávila et al., 2024). In the absence of MCS capable of effectively capturing and monitoring organizational complex phenomena, such as quiet quitting, organizations tend to struggle to define and implement sound strategies to counteract unexpected performance shortfalls (Di Luozzo et al., 2023). Starting from the Balanced Scorecard (BSC) (Kaplan & Norton, 1992), scholars (Figge et al., 2002; Journeault, 2016) have further developed this framework integrating the sustainability perspective, including economic, social, environmental and stakeholders' dimensions in response to external turbulences. This is the case of the Sustainability Balanced Scorecard (SBSC) frameworks, which aim to enhance overall organizational performance and long-term resilience (Chehimi & Naro, 2024; Nathan, 2018). The SBSC (Chehimi & Naro, 2024; Figge et al., 2002; Mio et al., 2022) diverges from the BSC in its architectural design, explicitly incorporating sustainability-related objectives and performance measures. However, despite SBSC's valuable contributions, its linear structure limits

its capacity to address the complex feedback relationships between strategic decisions, employee behavior, and sustainability outcomes (Hahn & Figge, 2018; Hansen & Schaltegger, 2018), thereby increasing the risk of unintended consequences generated by managerial policies (Figge et al., 2002; Hahn & Figge, 2018). This raises the need to adopt a more holistic and dynamic approach in designing MCS to support organizations in effectively addressing environmental challenges (Kumar et al., 2024; Leoni et al., 2021).

In accordance with the recent call to investigate how the changing behaviors in human resources impact the design of MCS frameworks (Pedroso & Gomes, 2024) in time of high uncertainty, this study seeks to address the following research question: *to what extent can a SBSC effectively support organizations in dealing with employees' unintended behaviors in turbulent environments?*

To answer this question, this study develops a novel framework, the Dynamic Balanced Scorecard for Sustainability (DBSCfS) and applies it to a sample case. The DBSCfS integrates the SBSC framework (Figge et al., 2002; Hahn & Figge, 2018; Hansen & Schaltegger, 2018; Journeault, 2016) with the Dynamic Performance Management (DPM) approach (Bianchi, 2016).

Within this context, the DBSCfS serves as monitoring tool and diagnostic mechanism, enabling the analysis of how unintended employee behaviors interact with strategic variables. These variables may act as mediators (e.g., organizational identification), or as moderators, (e.g., perceived climate), thereby influencing outcomes such as customer satisfaction, turnover, and value erosion (De Nicola et al., 2024; Karrani et al., 2023).

By emphasizing feedback loops, the accumulation of strategic resources, and the identification of performance drivers, internal outputs, and external outcomes, the DBSCfS aims to foster a more adaptive and learning-oriented performance management system. As such, it represents a valuable advancement over static frameworks, particularly in contexts where employee behavior is influenced by macro-level disruptions and shifting organizational expectations.

The remainder of this paper is organized as follows. Section 2 provides a literature review, focusing on the evolution of the SBSC frameworks, including their limitations in managing unintended employee behaviors in turbulent environments. Additionally, it presents the theoretical foundations and measurement approaches for unintended employee behaviors, such as quiet quitting. Section 3 introduces the DBSCfS, as a novel framework integrating the SBSC with the DPM perspective, explaining its conceptual foundations and the benefits it offers. Section 4 shows the application of the DBSCfS to

a sample case. Section 5 discusses the key findings, comparing the DBSCfS with existing frameworks. Finally, last section summarizes paper contributions, addresses its limitations, and proposes future research directions.

2. Literature Review

2.1 Defining and Measuring Unintended Employee Behaviors: Implications for Performance and Engagement

The recent health crisis caused by the COVID-19 global pandemic, the broader financial and political crises (e.g., Brexit and the Russian invasion of Ukraine) have created an unprecedented level of uncertainty and complexity in the business environment. These disruptions distinguish the current crisis from previous ones, as they expose organizations to unintended phenomena, including employee quiet quitting and the great resignation (Formica & Sfodera, 2022; Karrani et al., 2023; Mahand & Caldwell, 2023; Serenko, 2024). These trends are often grouped under the broader category of unintended employee behaviors, referring to behavioral responses that diverge from organizational expectations, not as acts of misconduct, but as signs of disengagement, frustration, or misalignment between individual and organizational goals (Karrani et al., 2023; Serenko, 2023).

Quiet quitting refers to the deliberate choice of employees to limit their efforts to what is strictly outlined in their job descriptions, deliberately avoiding discretionary or extra-role activities. This behavior reflects a growing emphasis on personal well-being and psychological self-protection in the face of perceived organizational neglect (Formica & Sfodera, 2022). In contrast, the great resignation refers to the mass voluntary exodus of workers from their jobs during and after the recent global pandemic. This phenomenon has been observed in unprecedented numbers, with individuals seeking improved working conditions and a better work-life balance (Tessema et al., 2022; Zieba, 2023). These resignation behaviors vary widely in their form and strategic intent, ranging from impulsive and emotionally driven exits to calculated and communicative departures (Klotz & Bolino, 2016). The notions of quiet quitting and the great resignation reflect deeper shifts in employee attitudes toward work, organizational commitment, and the psychological contract.

Among these, quiet quitting exemplifies a subtle and yet overlooked form of disengagement, where employees continue to meet formal job requirements but withdraw from extra-role contributions critical to organizational

adaptability and innovation. This withdrawal behavioral frequently coincides with a decline in Organizational Citizenship Behaviors (OCBs), defined as voluntary and discretionary actions that go beyond prescribed duties to support organizational functioning (Anand et al., 2024; Karrani et al., 2023; Talukder & Prieto, 2025). A reduction in OCBs has been shown to weaken organizational cohesion, adaptability, and collective learning, ultimately impairing the firm's capacity to detect early warning signals of disengagement and respond proactively to emerging crises (De Nicola et al., 2024).

Empirical evidence suggests that the extent to which employees exhibit OCBs is significantly influenced by their alignment with organizational values and their perception of fairness, recognition, and psychological safety in the workplace (Talukder & Prieto, 2025). Moreover, unintended behaviors may act as mediators or moderators within broader organizational dynamics. For instance, employee identification may mediate the link between organizational climate and voluntary contributions, while perceptions of injustice may weaken managerial interventions.

Therefore, understanding and managing unintended behaviors requires a framework capable of capturing the complex interplay among organizational climate, identification, voluntary behaviors, and strategic outcomes.

This novel situation has generated the need for organizations to design customized policies (Hays, 2022; Hetzner, 2022; Howley, 2022; Kailas, 2024; Patel, 2024) and to redesign their MCS to remain competitive and ensure firm resilience (Broccardo et al., 2024; Hayne, 2022; Mancini et al., 2021; Roffia & Dabić, 2024). Tessema et al. (2022) argue for the need to promptly implement sound retention strategies to counteract employees' great resignation. Managing unintended employee behavior, however, implies for organizations higher training costs due to the increased employee turnover, as well as higher costs to improve organizational climate (Mahand & Caldwell, 2023). Similarly, quiet quitting requires a re-evaluation and adaptation of corporate strategies and appropriate measures to monitor and improve employee engagement and, ultimately, organizational performance (Serenko, 2024).

2.2 Challenging Management Control Systems to cope with unintended employee behaviors in turbulent environments

Scholars have recently developed innovative MCS frameworks aimed at supporting organizations to manage rising level of uncertainties (Di Luozzo et al., 2023). Although most approaches focus on managing the internal complexity itself, they tend to neglect the impact of the external complexity generated by the environmental dynamism within organizations (Dávila et al.,

2024; Marchi, 2020). MCS frameworks often tend to prioritize internal resources and measures that can be directly influenced and controlled by management (Dávila et al., 2024). These frameworks, similar to Otley's recommendations (2012, p. 256), tend to focus "on processes [rather] than outcomes and results, because these latter are significantly influenced by unknown and unpredictable external effects".

Before the COVID-19 pandemic outbreak, Cheng & Humphreys (2016) remarked that the BSC (Kaplan & Norton, 1992) is likely to assist organizations in navigating uncertain periods, by supporting the alignment and management of firm operations with their strategic goals. However, more recently, Di Luozzo et al. (2023) have claimed that the BSC shows multiple drawbacks in changing environments. To overcome such criticisms, scholars (Chehimi & Naro, 2024; Figge et al., 2002; Journeault, 2016) suggested to expand the BSC by adding the sustainability perspective, resulting in the Sustainability Balanced Scorecard (SBSC).

This approach recognizes that employee engagement, development, and well-being, as well as human resources knowledge are crucial for ensuring firm competitive advantage (Hansen & Schaltegger, 2018; Lopez-Valeiras et al., 2024). Therefore, performance appraisals, training programs, and employee surveys must be integrated into MCS to ensure that human resources are aligned with organizational goals and can adapt to changes effectively (Hoque, 2005). This perspective underscores the importance of designing participatory, trust-based control systems that promote psychological safety and constructive dialogue, particularly in contexts of uncertainty and behavioral volatility.

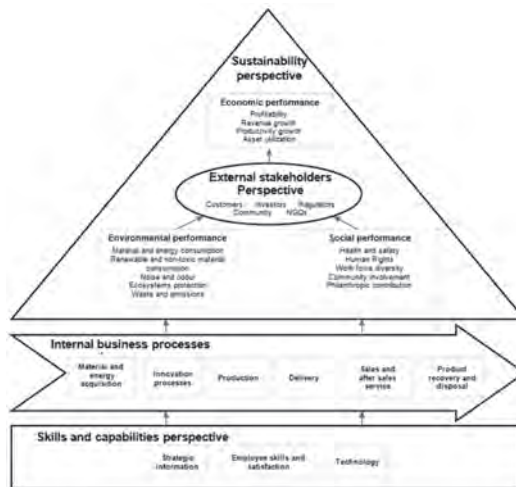
Figge et al. (2002) proposes a three steps process to formulate a SBSC with a non-market perspective. The first step is the selection of the strategic business unit (SBU), which is assumed to have a pre-existing strategy. The second step is the identification of the relevant environmental and social aspects. The third step is the assessment of the relevance of these aspects to the specific SBU's strategy. While this framework offers a structured approach to integrating sustainability into strategic management, its static nature presents a limitation in its applicability within turbulent environments.

In response of the SBSC introduced by Figge et al. (2002), Journeault (2016) proposed the Integrated Scorecard (IS). As illustrated in figure 1, the IS embeds strategically the three dimensions of sustainability – economic, environmental and social – performance within four different perspectives, namely: a) *environmental, social and economic performance*, b) *stakeholder management*, c) *internal business processes*, and d) *skills and capabilities*.

By integrating these three dimensions within the core business strategy, this framework enables organizations to identify and measure the levels of environmental and social performance between sustainability initiatives and their financial outcomes. This, in turn, allows for a more robust monitoring system where sustainability is directly linked to leading and lagging performance indicators, helping organizations to report externally their initiatives to meet the stakeholders' expectations and to maintain a sustainable competitive advantage.

Although the above framework (Figge et al., 2002; Journeault, 2016; Kaplan & Norton, 1992) provides an add value for aligning organizational strategy with sustainability goals, its application in turbulent environments gives rise to questions regarding its capacity to address the dynamic and complex challenges posed by unintended employee behaviors and external uncertainties. This underscores the need for a comprehensive examination of its limitations, aimed at deepening the understanding of its effectiveness and identifying potential pathways for improvement.

Figure 1 - The Integrated Scorecard, a specific SBSC. Source: Journeault (p. 219, 2016)



2.3 Exploring the limitations of the SBSC frameworks to manage unintended consequences

A comparative analysis of the BSC and SBSC frameworks is essential to better understand their conceptual and operational limitations, particularly in addressing emergent and unintended dynamics within organizations. In this

regard, Table 1 summarizes the key aspects of their respective scopes of application, the emphasis of their performance drivers, and the linear and static nature of their approaches.

All frameworks consider human capital as a critical asset within the learning and growth perspective, as it pertains to the organization's capacity to recruit, train, motivate, and oversee its human resources (Becciu et al., 2022; Sands et al., 2016). However, SBSC and IS shed light on how they impact on the sustainability of firm performance, as employees' skills and capabilities as well as their motivation and satisfaction represent a fundamental prerequisite for an effective implementation of a long-term corporate sustainable strategy (Journeault, 2016).

Table 1 - A comparison between BSC and SBSC frameworks

Frameworks	Balanced Scorecard (BSC). Kaplan & Norton (1992)	Sustainability Balanced Scorecard (SBSC) Figge et al. (2002)	Integrated Scorecard (IS) Journeault (2016)
Scope of application	Enhances strategic alignment by integrating financial and non-financial performance metrics	Integrates environmental, social, and economic dimensions into BSC	Extends SBSC by incorporating stakeholder management
Performance drivers and measures: Internal vs Internal-External	Internal: Connects financial and non-financial measures through a cause-and-effect chain	Internal-External: Combines financial and operational metrics with environmental and social measures	Internal-External: Integrates external factors, emphasizing stakeholder involvement and sustainability
Cause-and-Effect Relationships: Linear vs Feedback loop perspective	Linear: Impacts on financial measures through a linear cause-effect chain	Linear: Incorporates the sustainability dimensions using a linear cause-effect relationships	Linear: Integrates the stakeholder perspective within the sustainability dimensions
Approach: Dynamic vs. Static	Static: Provides a performance snapshot discarding market turbulence	Static: Neglects organizational complexity designing financial and sustainability measures	Static: Acknowledges organizational complexity while managing trade-offs between financial and sustainability performance

Unlike the original BSC, SBSC and IS allow organizations to identify non-financial performance indicators for each strategic objective, thereby

fostering corporate social well-being, cultural development, and increasing corporate commitment to environmental matters (Lopez-Valeiras et al., 2024). As shown in table 1, the growing focus on intangible assets such as human knowledge capital calls for more inclusive and participatory MCS (Hansen & Schaltegger, 2018). To this end, the IS provides a suitable framework for integrating stakeholder engagement into value creation, which is especially relevant in times of uncertainty. This approach aligns with scholars who emphasize the need for systems that promote greater involvement of employees and stakeholders (Budd et al., 2023). In the same vein, Dávila et al. (2024) claim that an externally-focused control system that leverages external information to stimulate face-to-face discussions of a large part of the company's hierarchy around uncertainties can facilitate their identification and resolution (Broccardo et al., 2024; Simons, 1994).

As previously discussed, the SBSC and, more specifically, the IS (Figge et al., 2002; Journeault, 2016; Mio et al., 2022) have been suggested in the literature as a potential means of addressing corporate issues that have arisen from environmental turbulence. In contrast to traditional BSC, these frameworks provide a means of linking external factors that exert a significant influence on the success of a firm with relevant intangible assets, such as human capital (Chehimi & Naro, 2024; Journeault, 2016; Mio et al., 2022).

Nevertheless, the SBSC and the IS share some important limitations. First of all, "the criticisms are directed primarily at the BSC in its original form" (Chehimi & Naro, 2024, p. 8). Similarly to the BSC, the SBSC and the IS adopt a static and linear cause-and-effect perspective in exploring the complexity behind the interrelatedness of sustainability issues, thereby ignoring the presence of virtuous and critical vicious feedback loops, and associated unintended consequences. Such omission is particularly problematic when dealing with unintended employee behaviors, which often emerge as nonlinear responses to organizational policies and cannot be understood through linear causal chains alone.

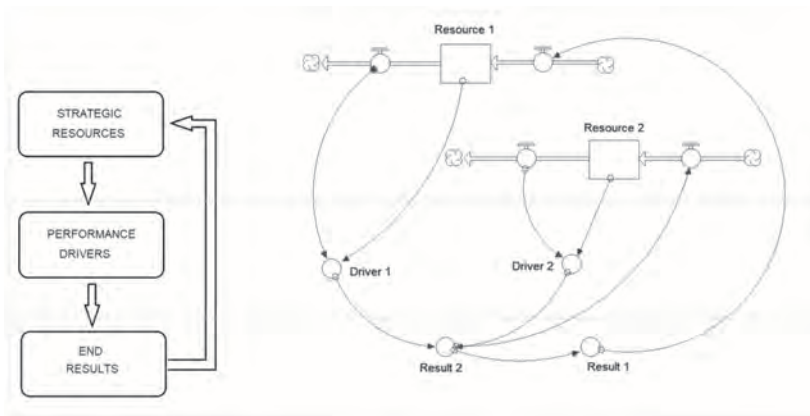
Moreover, these frameworks do not address trade-offs among conflicting sustainability objectives and financial performance, even though such aspects represent a significant challenge for firm sustainability. Hansen & Schaltegger (2018, p. 942) observed that a more detailed analysis of such trade-offs would lead to overly complex "diagrams" that would be more akin to "drawings" than useful "maps." Such complexity would hinder managers' ability to effectively comprehend and utilize the information. In this context, rather than attempting to control and manage these trade-offs in detail, the SBSC and IS serve as simplified abstractions of reality, providing clear pathways for organizations to address their sustainability objectives.

3. The Dynamic Balanced Scorecard for Sustainability (DBSCfS): integrating the Dynamic Performance Management perspective into the Sustainability Balanced Scorecard

3.1 Introducing the conceptual framework of the DBSCfS

Given the limitations of the current SBSC frameworks, this study seeks to explore to what extent these frameworks can effectively support organizations in dealing with employees' unintended behaviors in turbulent environments. To this purpose, this work introduces a novel framework, the Dynamic Balanced Scorecard for Sustainability (DBSCfS), which results from combination of the SBSC framework (Chehimi & Naro, 2024; Figge et al., 2002; Hahn & Figge, 2018; Journeault, 2016) with the Dynamic Performance Management (DPM) approach (Bianchi, 2016). The use of DPM, as it integrates the System Dynamics (SD) methodology (Sterman, 2000) with the performance management perspective (Bititci et al., 2012; Otley, 1999), offers a means of addressing SBSC main limitations.

Figure 2 - The Dynamic Performance Management framework - Source: Bianchi (2016, p. 73)



As shown in figure 2, the DPM adopts a conceptual framework based on cause-and-effect relationships divided into three interrelated layers: *end results*, *performance drivers*, and *strategic resources*. *End results* aim to capture the changes in firm performance. They represent the long-term goals of the organization and serve as final measures of performance. They can be divided into *outcomes* and *outputs* to differentiate the impact on the external

environment and within the organization. Examples include revenues and profit as financial indicators, while change in customer satisfaction, change in employee engagement, and change in employees' skills are non-financial measures of end results. *Performance drivers* are the intermediate factors that influence end results and, as such, are critical in determining the success of a firm. They are defined as the ratio between the current firm performance and the target/competitor performance. Examples are innovation rates, customer acquisition and retention. *Strategic resources* are firm assets and capabilities that are likely to impact on performance drivers. These include tangible and intangible assets like infrastructure and technology, brand reputation, and human knowledge. Managing these resources effectively is essential for improving performance drivers and, ultimately, achieving end results.

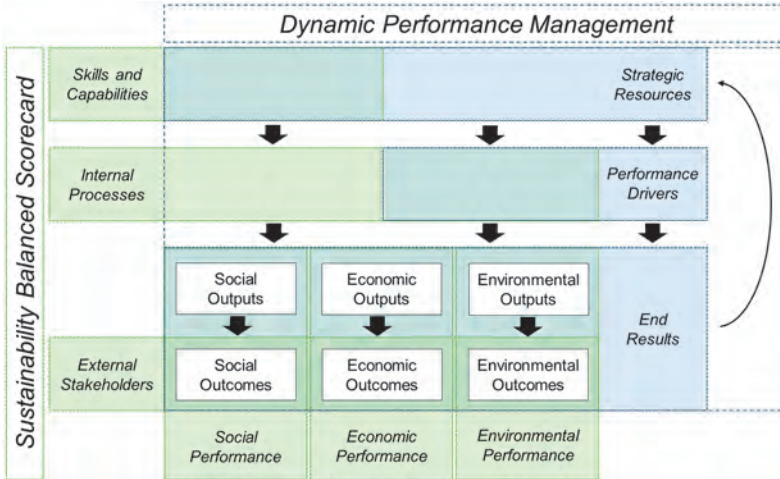
The adoption of the above three-layer structure in an MCS is likely to facilitate a more dynamic and integrated approach to managing firm performance (Bianchi, 2016). In addition to its qualitative benefits, the DPM enhances the use of simulation modeling to analyze and explore the evolving behavior of complex systems over time. This quantitative dimension can support organizations to test different future scenarios and evaluate the potential impacts of strategic decisions before implementing them. The benefits of the DPM have been shown in multiple contexts (Bianchi, 2016; Bianchi et al., 2018; Bivona, 2023; Bivona & Cosenz, 2021).

While the literature has introduced the use of SD to support the traditional BSC in a more dynamic manner, through the Dynamic Balanced Scorecard (DBSC) framework (Barnabè, 2011; Bianchi & Montemaggiore, 2008), the DBSCfS offers a more comprehensive framework that not only accounts for dynamic complexities but also focuses on aligning sustainability strategies with organizational performance in times of turbulence. To this purpose, this study proposes the DBSCfS, as result of the combination of the SBSC with the DPM, as depicted by figure 3.

The DBSCfS illustrates how the SBSC and the DPM converge in many aspects although using different perspectives. The SBSC focuses on linking broader external factors to relevant intangibles in four sectors (Skills and Capabilities, Internal Processes, External Stakeholders and Performance), emphasizing the linear cause-and-effect relationships. Furthermore, it highlights the intangible organizational perspective through a focus on skills and capabilities. While the DPM integrates a performance management logic with SD modeling to account for feedback loops, delays, and nonlinear interactions among relevant variables. Furthermore, by dividing the key performance var-

ables into three layers (end results, performance drivers and strategic results), the DPM offers a deeper understanding of the underlying mechanisms impacting firm performance over time.

Figure 3 - The Dynamic Balanced Scorecard for Sustainability (DBSCfS) - Source: Authors' own elaboration



The DBSCfS, by integrating SBSC into the DPM framework, can support organizations to refine their strategies and operations through an iterative learning process, ensuring a more adaptive and resilient organizational posture.

3.2 Methodological approach for implementing the DBSCfS

Figure 4 outlines the logical steps for facilitating the effective implementation of the DBSCfS framework in monitoring and managing unintended employee behaviors.

The first step is to identify the strategic variables that influence employee behaviors and organizational performance. To accomplish this step, decision makers can use surveys and interviews to gather data on employee satisfaction, engagement, and work-life balance. Existing performance data are analyzed to identify trends and patterns. The next step is to perform a causal loop analysis (e.g., negative-balancing or positive-reinforcing feedback loops) to understand the dynamic interactions underlying employee unintended behaviors. The third step involves developing strategies to monitor

and manage unintended employee behaviors. Decision-makers should establish organizational policies – such as flexible work arrangements or employee wellness programs – to address identified challenges. Additionally, they should implement monitoring systems that track employee behaviors using key indicators including, for instance, work-life balance and job satisfaction. The fourth step involves integrating an SD model into the performance management system, allowing decision-makers to simulate alternative scenarios and evaluate their potential impact on employee behaviors and organizational performance. Insights from these simulations enable the refinement and adjustment of strategies to enhance policy effectiveness. Finally, organizations must improve the effectiveness of their DBSCfS through a periodical monitoring and an organizational learning process. In fact, the periodical review of performance data and the adjustment of adopted policies ensure alignment with sustainability goals and encourage a culture of continuous improvement and learning among employees and management. By activating this learning-oriented planning process (Argyris, 2005), decision-makers can return to the initial step to identify new strategic variables that may further clarify how employee behaviors influence organizational performance.

Figure 4 - Implementing DBSCfS in monitoring and managing unintended employee behaviors - Source: Authors' own elaboration



4 Applying the DBSCfS to monitor and manage employees' unintended behaviors

To demonstrate the potential applicability of the DBSCfS framework, this section presents a case study developed from secondary sources discussed here below. The primary aim of employing this sample case is to explore plausible behavioural dynamics and corresponding strategic responses

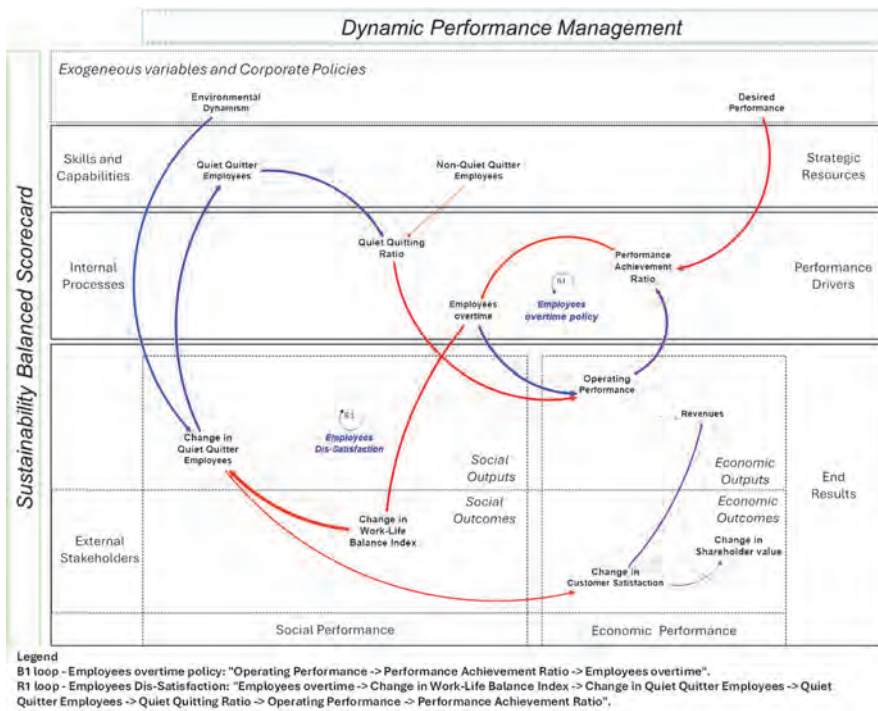
within a simulated organizational setting. This step is critical for the preliminary validation of the framework, serving as a foundational phase that informs its future application to real-world cases and supports the development of empirically grounded management interventions.

In response to growing environmental turbulence, several organizations – including Meta, Ford, and Microsoft, among others – have begun to focus greater attention on unintended employee behaviors. Within this context of heightened uncertainty, there is increasing evidence that employees are prioritizing personal well-being over the continuous pressures associated with so-called “hustle culture” (Serenko, 2024). For instance, Meta has implemented a strategy of “quiet layoffs,” which entails issuing ultimatums to employees, requiring them to either improve their performance or face termination (Hays, 2022). To manage this phenomenon, the company has increasingly labelled employees as “underperforming” and placed them under strict performance improvement plans, with the ultimate goal of removing those who are deemed not to meet expectations. Another example is provided by Ford, who introduced a policy targeting long-term employees, particularly those with over eight years of tenure (Hetzner, 2022). Such employees who do not meet expectations are presented with the option of either departing from the organization voluntarily with a buyout or facing a formal performance improvement plan, which could result in the loss of several benefits if they fail to meet performance targets. Similarly, Amazon has implemented policies requiring employees to return to the office, which may contribute to an overall increase in stress levels and potentially encourage certain employees to leave their positions, particularly those who are less engaged (Kailas, 2024). In response to these challenges, Microsoft adopted a different strategy aimed at fostering a flexible work culture. This strategy offers remote work options and well-being programs designed to improve organizational performance (Howley, 2022; Microsoft, 2022). The objective of these initiatives is to enhance employee satisfaction, facilitate a healthier work-life balance, and reduce the probability of quiet quitting. By offering flexibility, Microsoft acknowledges the value that employees place on autonomy and a healthy balance between their personal and professional lives, which helps to prevent disengagement. While the cases of Meta, Ford, Amazon, and Microsoft are not directly analyzed, they offer contextual insights that help inform the design of the illustrative scenario presented here below.

The initiatives undertaken by the above companies illustrate different strategies aimed at addressing the quiet quitting phenomenon to enhance organizational performance. However, these responses can be better under-

stood and managed within a more systemic analysis, considering the phenomenon as a reaction to exogenous shocks, such as environmental dynamism, which affects multiple dimensions of sustainability. The above empirical evidence from organizations addressing quiet quitting (Hays, 2022; Hetzner, 2022; Howley, 2022; Kailas, 2024; Patel, 2024) and insights reported in the literature (Mahand & Caldwell, 2023; Serenko, 2024; Sterman, 2000; Zieba, 2023) provided the foundation to apply the DBSCfS to a sample company. For simplicity, in the sample company, it has been assumed the absence of resignation, layoff and hiring policies.

Figure 5 - Detecting Quiet Quitting as employees' unintended behaviors through the Dynamic Balanced Scorecard for Sustainability



The DBSCfS framework depicted in figure 5 highlights two critical loops: a negative feedback loop (B1) labeled "Employees overtime policy" and a positive feedback loop (R1) labeled "Employees' Dis-Satisfaction". The diagram employs color coding to differentiate between types of relationships. Blue lines represent direct relationships between variables, indicating that

both variables change in the same direction (i.e., if one variable increases, the influenced variable also increases, and vice versa). In contrast, red lines denote inverse relationships, where variables change in opposite directions (i.e., if one variable increases, the influenced variable decreases, and vice versa). This visual representation provides a dynamic understanding of the interplay between variables and their impact on firm performance.

Similarly to the cases previously discussed, it is assumed that an increase in *Environmental Dynamism* within the sample company triggers a rise in the *Change in Quiet Quitter Employees*, leading to an accumulation of the strategic resource *Quiet Quitter Employees*. Consequently, the resulting increase in the performance driver *Quiet Quitter Ratio* is likely to negatively impact *Operating Performance*.

To address the decline in performance and the widening *Performance Achievement Ratio* (defined as the ratio between operating and desired performance), decision-makers may implement an overtime policy, requiring employees to work additional hours, thereby activating the balancing loop B1.

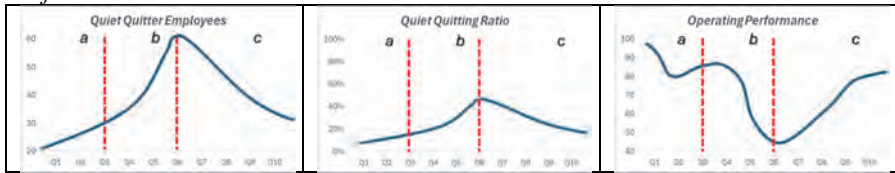
Figure 6 offers an illustration of how such a policy could influence firm performance over a ten-quarter horizon, based on the expected behaviors of three key variables: *Quiet Quitter Employees*, *Quiet Quitting Ratio* and *Operating Performance*, expressed in number of employees, % and performance index respectively. Each chart shows three phases:

- (a) depicts the effects generated by the initial change in environmental dynamism, triggering a rise in quiet quitting;
- (b) shows the firm response through the overtime policy;
- (c) portrays the consequences of a comprehensive personnel strategy.

During phase (b), following the introduction of the overtime policy at the end of quarter Q1, operating performance may initially improve. However, as illustrated in quarters Q3 to Q6, performance tends to decline again, potentially falling below its initial level. This behavior suggests that short-term efficiency gains might be offset by deeper systemic tensions, particularly those linked to employee dissatisfaction and behavioral disengagement.

These patterns can be traced back to the unintended consequences of the reinforcing vicious feedback loop R1 “Employees’ Dis-Satisfaction”. Specifically, the increase in employees’ overtime negatively affects the *Change in Work-Life Balance Index*, a recognized antecedent of quiet quitting (Chatterjee et al., 2022; Formica & Sfodera, 2022; Yucel et al., 2023; Zieba, 2023). As this index deteriorates, the *Change in Quiet Quitter Employees* intensifies, further contributing to the accumulation of *Quiet Quitters* and an increase in the *Quiet Quitting Ratio*. This, in turn, exacerbates the decline in *Operating Performance*.

Figure 6 - Comparing Quiet Quitter Employees, Quiet Quitting Ratio and Operating Performance



In addition, the positive *Change in Quiet Quitter Employees* also results in a drop in the *Change in Customer Satisfaction*, which subsequently reduces *Revenues* and negatively impacts the *Change in Shareholder Value*.

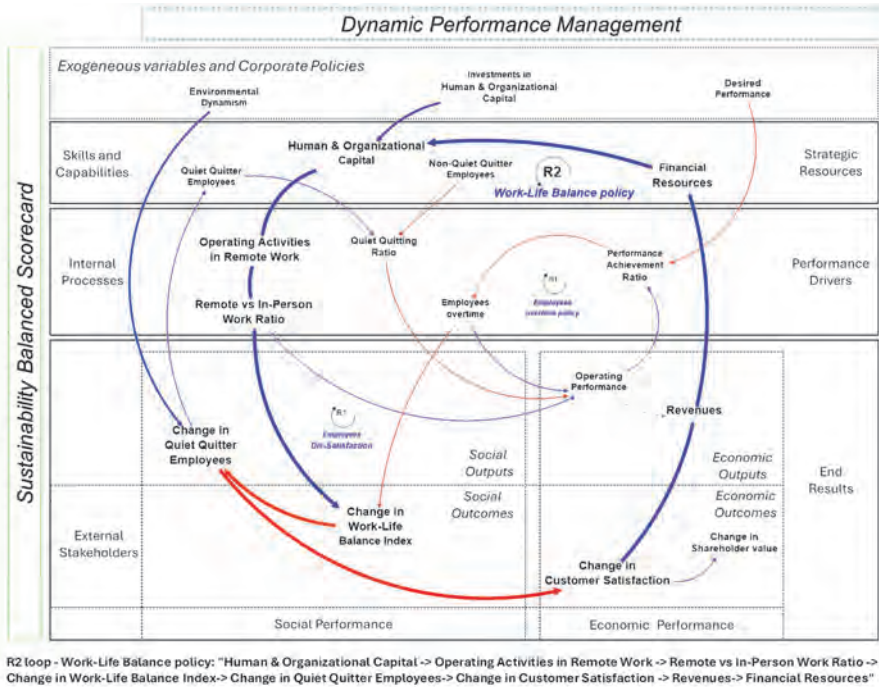
These unintended outcomes demonstrate the limits of reactive policies and highlight the need for a more proactive and systemic response.

To address these systemic issues, figure 7 introduces a comprehensive human resource strategy grounded in *Investments in Human and Organizational Capital*. The proposed intervention includes the adoption of a hybrid working model, a policy supported by emerging literature (Becciu et al., 2022; Chatterjee et al., 2022; Chingan Thottathil & Nandakumar, 2024), to better align organizational practices with employee needs and to enhance work-life balance.

This strategy is likely to yield dual benefits. First, it activates the mechanisms of the reinforcing loop (R2), titled “Work-Life Balance Policy”, by effectively balancing remote and in-person work activities. Second, it enhances employee productivity, thereby improving the organization’s operating performance. In fact, by reducing commuting times, employees could allocate more time to family and community activities, leading to an improvement in the *Change in Work-Life Balance Index*. As this index improves, the *Change in Quiet Quitter Employees* also shows positive trends reflected in a declining *Quiet Quitting Ratio*. This, in turn, gradually improves the *Operating Performance*, as shown in sector (c) figure 6.

The reduction in *Employees overtime* further reinforces these positive outcomes, contributing to an increase in *Customer Satisfaction* and *Revenues*. These favorable developments may encourage decision-makers to reinvest the additional financial resources generated by the virtuous reinforcing loop R2, thereby sustaining and amplifying the benefits of the implemented strategy. This final phase underscores how sustainable personnel strategies, such as hybrid work and investments in organizational capital, can foster a virtuous cycle of engagement, performance, and resilience.

Figure 7 - Managing and Monitoring Quiet Quitting as employees' unintended behaviors through the Dynamic Balanced Scorecard for Sustainability



5 Discussion

The DBSCfS framework can offer valuable support to decision-makers in identifying key variables that can monitor unintended employee behaviors, such as quiet quitting (Formica & Sfodera, 2022; Mahand & Caldwell, 2023; Serenko, 2024). As illustrated in the previous section, this framework is based on causal relationships between performance outcomes (*Revenues*, *Changes in Work-Life Balance Index* and *Change in Quiet Quitter Employees*) and performance drivers (such as *Quiet Quitting Ratio* and *Performance Achievement Ratio*). As such, these performance drivers serve as proxies for latent organizational performance dynamics that may lead to employees' disengagement, thus helping decision-makers to identify patterns that traditional MCSs often overlook. Such disengagement frequently results from a decline in Organizational Citizenship Behaviors (OCBs) (Klotz & Bolino, 2016). The erosion of OCBs can weaken organizational climate and diminish

adaptability, making their monitoring critical for early detection of unintended behaviors (Anand et al., 2024; Karrani et al., 2023).

As outlined in table 2 (*A comparative analysis of the BSC and its variants*) in Annex 1 (www.sidrea.it/dynamic-balanced-scorecard-sustainability), the DBSCfS addresses a critical limitation of earlier Balanced Scorecard variants by explicitly modeling how unintended employee behaviors can emerge and evolve. Unlike traditional MCS frameworks that focus on lagging indicators, the DBSCfS allows for the identification of unintended effects over time.

DBSCfS adopts a broad perspective by extending the foundations established by previous frameworks (Barnabè, 2011; Bianchi & Montemaggiore, 2008; Figge et al., 2002; Journeault, 2016; Kaplan & Norton, 1992). To this end, the DBSCfS expands the traditional customer perspective to encompass external stakeholders, while simultaneously integrating environmental and social dimensions into the internal business processes and the skills and capabilities perspective. Additionally, it is designed to address the complex interplay of factors influencing unintended employee behaviors in conditions characterized by environmental dynamism. In particular, the DBSCfS bridges the DPM perspective (Bianchi, 2016) with the sustainability-oriented lens offered by the SBSC frameworks. These two perspectives are not mutually exclusive but rather complementary, underscoring shared areas of interest and significant synergies. The DBSCfS conceptualizes the interconnections between organizational processes, skills and capabilities, external stakeholders, and environmental, social, and economic dimensions through a dynamic performance-oriented view.

Unlike earlier contributions, the DBSCfS addresses the limitations of the DBSC by explicitly elucidating how performance drivers influence firm end-results and associated outcomes (Bianchi, 2012; Bianchi & Montemaggiore, 2008). These findings underscore the DBSCfS capacity to support decision-makers in developing adaptive strategies that align organizational policies with employee well-being, thereby fostering resilience and sustainability. By integrating dynamic complexity and sustainability principles, it enables continuous learning and adjustment in turbulent environments.

6 Conclusions, limitations and further research

This study introduces the DBSCfS as a novel framework tailored to address unintended employee behaviors, such as quiet quitting and the great resignation, which have gained attention in the wake of recent turbulent environments. By integrating the principles of the SBSC (Figge et al., 2002; Journeault, 2016) with the DPM approach (Bianchi, 2016), the DBSCfS aims

to equip organizations with a robust and integrated tool to detect, monitor, and manage the complexities arising from external and internal dynamics that influence employee engagement and organizational performance.

Consistent with prior research (Chehimi & Naro, 2024; Marchi, 2020; Pedrosa & Gomes, 2024), the DBSCfS framework transcends traditional performance indicators by incorporating non-financial metrics related to employee well-being. This alignment of strategic MCS with sustainability dimensions is critical for fostering long-term organizational performance capable of withstanding the uncertainties of an increasingly unpredictable business environment.

Despite its potential, the integration of the DPM and SBSC perspectives presents certain challenges and limitations.

Developing an outcome-based performance framework requires a deep understanding of the main forces driving the dynamic of the investigated system. To address these challenges, organizations could adopt mitigation strategies such as internal capacity-building initiatives (e.g., training programs). In addition, the framework relies on assumptions regarding non-financial metrics and feedback loops, which implies empirical validation to confirm its robustness and proper operational skills.

As anticipated the DBSCfS is not without limitations. First, the current study focuses primarily on the phenomenon of quiet quitting. Expanding the framework to include behaviors such as burnout or high turnover could provide a more holistic approach to managing workforce dynamics.

Second, empirical validation across diverse industries, organizational sizes, and cultural contexts is necessary to test the framework's adaptability and efficacy beyond the current sample case. To this end, the study proposes a series of actionable steps to guide the practical implementation of the DBSCfS, offering a roadmap for future research to apply and refine this framework in addressing complex business challenges.

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