

# The Sustainable Value Creation Diamond: The Resource-Based Theory Approach

Paul Stefan Markovits  
National University of Political Studies and Public Administration,  
Faculty of Management, Bucharest, Romania  
[paul.markovits.21@drd.snsa.ro](mailto:paul.markovits.21@drd.snsa.ro)

## Abstract

*The Sustainable Value Creation Diamond is a metaphorical model for leaders in any firm aiming to create sustainable value. The paper's purpose is to further develop earlier original work done by the author initially focused on farms, making it now applicable to all types of firms. It builds on the Resource-Based Theory of the firm broadening the model's use to the management of a wide spectrum of organizations. The importance of “Time” in “Value Creation” is recognized through the construct of “Time to Value Capture”. The diamond metaphor's source domain meaning is that of lasting and sought after value. It is an original graphical model and a powerful illustration of the core claims of the model. The model could be used as a blueprint in the decisional process of an organization as well as an educational tool to illustrate the synergies in the existent literature on firms' performance.*

**Key words:** value creation, ESG, resource-based theory, metaphorical thinking

**J.E.L. classification :** D21, D70, D81, M1

## 1. Introduction

Value creation literature is extraordinarily rich, including an extensive number of books and articles, and it is treated from remarkably diverse points of view (Markovits, 2022). Definitions of value have been a constant concern in academic works and might go back all the way to Aristotle (Yar Hamidi, 2019).

The aim of management in a company or firm is to create value (Kraaijenbrink & Spender, 2011; Yar Hamidi, 2019). For the viability of a firm, the long-term value creation is essential (Goedhart & Koller, 2020, Bowman & Ambrosini, 2007). Decision-making is the essence of management, and it is usually built on two pillars: first, the process of generating alternatives of how to solve problems and, second, choosing among the generated options (Drucker, 1974), therefore decision making in a firm should also have the aim of value creation (Spetzler et al., 2016).

Amit and Zott (2001) in their study of e-businesses found four potential sources of value creation: *efficiency, complementarities, lock-in, and novelty*. Digital transformation of businesses is deemed to be a powerful way to create value (Markovits, 2022), especially when focused on the value chain categories proposed by Porter (Porter, 1985, p. 37): firm infrastructure, procurement, inbound logistics, operations, outbound logistics, marketing & sales, service, human resources management and technology development.

In their analysis of the interviews of ten influential global CEOs Pinzaru et al (Pinzaru et al., 2019) highlight that digital transformation of businesses should consider both the technological and the human sides of the transformation. Furthermore, value capturing from digital transformations is considered more desirable when these transformations generate a more socially responsible and greener outcome.

## 2. Literature review

The most recent opinions about value creation for all the stakeholders in farms, as agricultural firms, are related to implementing Agriculture 4.0 practices. The general expectation is that adopting the Agriculture 4.0 practices create value chain efficiencies, augments animal welfare, significantly reduces environmental impact through reduced usage of chemicals, enhances productivity and will increase food security. (Abbasi et al., 2022 ; Latino et al., 2021; Dayioglu & Turker, 2021; Saiz-Rubio & Rovira-Mas, 2020; Klerkx et al., 2019 ; Trendov et al., 2019).

In farms, value creation through Agriculture 4.0 is likely to be more complicated to deliver than in the case of Industry 4.0 firms because value creation mechanisms in agriculture are exposed to stochastic events (weather dependency). Farms also tend to have a lower degree of labor division and specialization than industrial organizations and the occurrence of heuristics in the management process tends to be more frequent. Finally, the mobility of the production facility also has a diminishing effect on the value created. (Braun et al., 2018; Zambon et al., 2019).

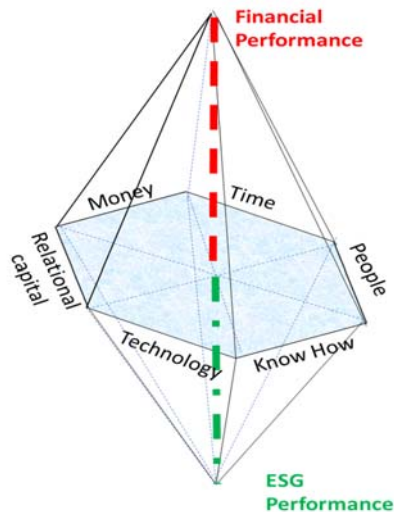
Amit & Zott (Amit & Zott, 2012) proposed the construction of “business model” as a proper place to assess value creation in a firm. In their definition, the business model “depicts the design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities.” They also affirm that a firm’s business model is an “important locus of innovation and a crucial source of value creation for the firm and its suppliers, partners, and customers” (Amit & Zott, 2001, p.493).

Osterwalder and Pigneur (Osterwalder & Pigneur, 2010) are prolific proponents the concept of business model taking it to a different level of understanding and usage through the creation of an entire toolbox comprising the business model canvas (Osterwalder & Pigneur, 2010) and value proposition canvas (Osterwalder et al., 2015) to aid practitioners to create value and build strong and lasting companies resilient in face of potential disruptions (Osterwalder et al., 2020).

Kaplan and Norton’s (Kaplan & Norton, 1996, 2004) balanced scorecard and strategy maps fundamentally changed the means to measure and illustrate the company’s strategy to create value while in more recent developments recognize the importance of non-financial value creation (Kaplan & McMillan, 2021).

The initial *Value Creation Diamond* (Markovits, 2023) proposed an illustration of the resources used in a farm and the two types of results the farm as an enterprise could and should deliver: financial performance (i.e. revenue, profit, and positive cash flow) and ESG (Environmental, Social and Governance) performance (i.e. reduced environmental impact, sustainable usage of land and water, rural social development by means of upskilling and even retention of youth in the rural communities):

Figure no. 1 The Value Creation Diamond



Source: (Markovits, 2023)

It has already recognized the importance of considering financial and non-financial goals in the managerial decision-making process. It also suggested the interdependence of the resources used in the farm-enterprise while building on the existent literature on strategy (Bratianu, 2022; Bratianu & Lefter, 2011; Bratianu & Murakawa, 2004; Porter, 1985) and strategy measurement and operationalization (Kaplan & Norton, 1996, 2004; Kaplan & McMillan, 2021). This result came with a strong impulse to explore the possibility of extrapolating it to other types of enterprises, thus making the object of the present paper.

While moving beyond the realm of the field crop farms into the broader domain of firms in any industry, it is useful to also look at some recent economic theorists. In a 2020 World Economic Forum address (Stiglitz, 2020), while warning against possible „greenwashing” Joseph Stiglitz advocates the importance of considering the Environmental, Social, and Governance (ESG) performance in the way companies operate. Joseph Stiglitz's economic theories (Stiglitz, 2019) and ESG thinking share a common thread in recognizing the limitations of traditional economic models that focus solely on financial metrics.

There are several ways in which Stiglitz's theories intersect with the ESG principles:

*Table no. 1 Stiglitz's theories and ESG thinking convergence*

	<b>Stiglitz's Theories</b>	<b>ESG thinking</b>
<b>Social and Environmental Externalities</b>	Argued that markets often fail to account for social and environmental externalities, such as pollution or inequality, which can have wide-ranging impacts on society.	Stresses the need to incorporate social and environmental considerations into business and investment decisions.
<b>Inclusive Growth</b>	Was a proponent of policies promoting inclusive economic growth, arguing that the benefits of economic development should be shared more equitably.	Emphasize the importance of creating value not just for shareholders but for all stakeholders, including employees, communities, and the environment.
<b>Corporate Social Responsibility</b>	Emphasized inclusive growth and equitable distribution	Advocate for businesses to go beyond profit maximization and take into account their social and environmental impacts.
<b>Governance and Accountability</b>	Called for a more nuanced and inclusive approach to governance, businesses to be accountable to a broader set of stakeholders.	Emphasizes the importance of strong corporate governance, transparency, and accountability

*Source:* Author's adaptation

Stiglitz's emphasis on considering the social and environmental dimensions of economic development aligns with the principles of sustainable development embedded in ESG. Both Stiglitz's work and the ESG perspective advocate for a company's decision-making to include social and environmental objectives, promoting sustainable and inclusive development. Both perspectives recognize the importance of long-term sustainability, addressing social challenges, and preserving the environment for future generations. Stiglitz's ideas strengthen the foundational framework for the Value Creation Diamond's considering the broader impacts of any economic activities.

### 3. Research methodology

This paper reviews the relevant literature in the fields of decision making, knowledge dynamics and digital agricultural decision-making systems. It is inspired by earlier work done on digitally assisted balanced decision-making in agricultural farms. It builds on and reconciles that work with currently known and used value creation models (Osterwalder & Pigneur, 2010, Osterwalder et al. 2015, 2020) as well as it relies on the Resource-Based Theory of the firm (Wernerfelt, 1984, 1995,

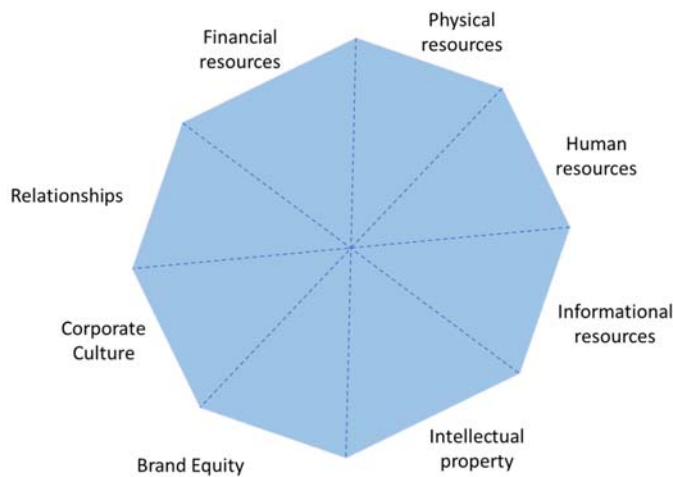
Schoemaker & Amit,1993, Barney, 1986, 1991, Grant,1991, Peteraf, 1993, Teece et al.,1997) in order to make the model applicable to the management of a broad spectrum of organizations.

Similar to its earlier version of the Value Creation Diamond (Markovits, 2023) the knowledge metaphor construction method (Bratianu & Bejinaru, 2019) was kept to draw on the known (the source) domains of the “hexagon surface”, “pyramid” and its “height” as well as the “diamond” to the target domains of “effort”, “performance” and “value creation”. The diamond metaphor was kept for its source domain meanings of lasting and sought after value, shaped through a conscientious effort of chiseling each face and inspired by the adjoined pyramid representation.

#### 4. Results and discussion

In order to broaden the scope of the firms for which it could apply, The Polygon of Resources used in the Value Creation Diamond (Markovits, 2023) was updated to reflect more prominently the views of the Resource-Based Theory of the firm (Wernerfelt,1984, 1995, Amit & Schoemaker 1993, Barney, 1986, 1991, Grant,1991, Peteraf, 1993) using the constructs of tangible (i.e. financial, physical and human resources) vs intangible assets (Teece et al.,1997) (i.e. intellectual property, informational sources, brand equity, corporate culture and relationships). This is a richer set of assets allowing to also account for non-tangible resources that could be under-represented in the average field crop farms (e.g., brand equity, corporate culture, intellectual property):

Figure no. 2 The revised Polygon of Resources



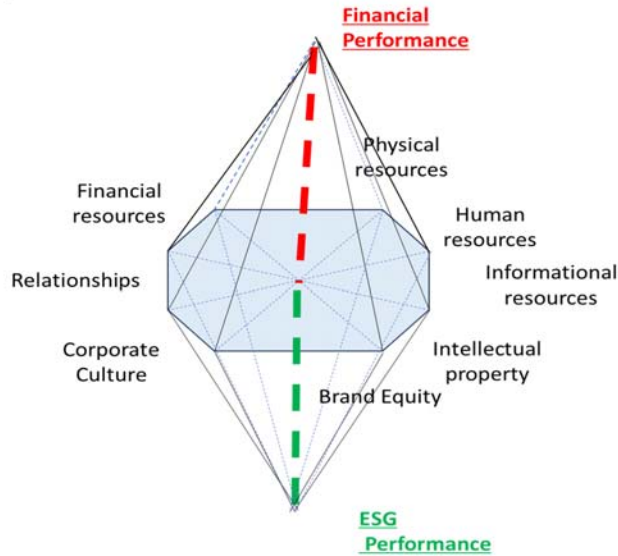
Source: Author’s own conceptual representation

The value created will be a function of all the resource types available and used by a generic firm:

$$\text{Value Created} = F(\text{financial, physical, human, intellectual property, information, brand equity, corporate culture, relationships})$$

With this revision of the Polygon of Resources and keeping the two types of value created (Financial performance and ESG performance) the new Value Creation Diamond becomes:

Figure no. 3 The revised Value Creation Diamond



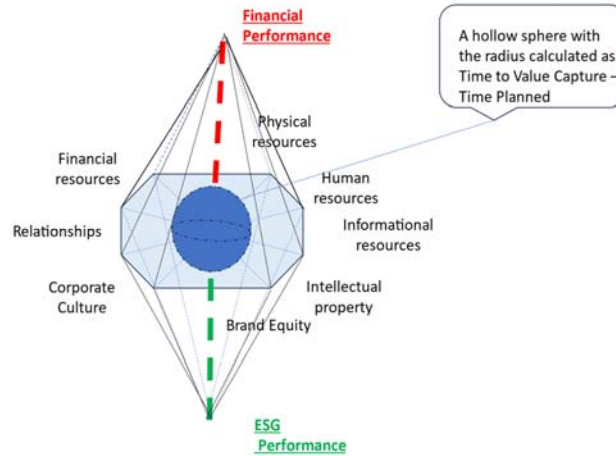
Source: Author’s own conceptual representation

In the earlier version of the *Value Creation Diamond* (Markovits, 2023) the “Time” as a resource had a very prominent role, being in the Polygon of Resources. This was due to the importance the “Time” resource plays in the project management theory and practice (Van Wyngard et al.,2012). While socializing the model at several academic conferences and inspired again by project management literature I found a new way to account for the importance of time. The inspiration came from Brent Flyvbjerg’s unique analysis of more than 16000 projects in more than twenty fields of activity done in 136 countries on all continents (Flyvbjerg & Gardner, 2023). He found that 99.5% of the projects do not achieve simultaneously their full objectives within the agreed timeframe and within budget while 8,5% could be finished on time and on budget but without achieving full objectives. Also 47.5% of the projects were completed within budget while a staggering 91.5% of projects were late, and thus late in delivering the projected benefits. This paper proposes that this new time, the time till a project delivers its expected benefits to be called *Time to Value Capture*. In line with Flyvbjerg’s learnings, the shorter the execution time, i.e., the Time to Value Capture, the more likely that the project could finish on time, within budget and on scope. He sees this time as a window of opportunity that while still open, could allow for disturbances even “black swans” to affect the delivery of the project and its expected value. The equation of created value would have to reflect the value extracted due to delays. The below formula proposes the way to account for the newly created value both financial and ESG and the value subtracted by the delay:

$$\text{Value created} = \text{Financial Performance} + \text{ESG Performance} - (\text{Time to Value Capture} - \text{Time Planned}) \times (\text{Financial Performance} + \text{ESG Performance})$$

$$VC = FP + ESGP - (TVC - TP) \times (FP + ESG)$$

Figure no. 5 The complete new Sustainable Value Creation Diamond



Source: Author’s proposal

## 5. Conclusions

Farms are a model of enterprise where financial performance and environmental impact make obvious the need to adopt a sustainable way to generate value. With rural development in play, it shapes the need for the value creation outcomes to achieve also other goals beyond financial performance, pointing to the gamut of the ESG objectives. Their example is a strong springboard to extrapolate this way of thinking to other types of firms. The revised Value Creation Model through its Resource-Based Theory of the Firm approach is giving an answer to this need. Introducing the Time to Value Capture construct, the model gains practical relevance as it factors in the importance of delivering the projected value in time and within budget. The model could be used by both practitioners and educators in their current activity as a blueprint in the decisional process of an organization as well as an educational tool to illustrate the need for performance synergies in sustainable firms.

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