CONTEMPORARY APPROACHES IN THE ANALYSIS OF SUSTAINABILITY PERFORMANCES OF AN ENTERPRISE

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Abstract: Timely and reliable information about various performance indicators represents the valuable basis for decision making and can therefore facilitate sustainable growth and development of an enterprise. The performance indicators related to sustainability constantly gain on importance, due to the fact that sustainable development becomes an imperative for enterprises worldwide. Regardless the significant recent developments the consensus hasn’t been achieved on which indicators should be used to monitor and evaluate sustainability performances of an organization. Therefore, the authors’ aim in this paper is to present the most frequently used modern approaches and resulting methodologies for analysis of the sustainability performances. Applying comparative analysis method on secondary data sources, the authors found out that even though the generally accepted approach for analysis of these performances does not exist, the most prominent methodologies significantly overlap. Based on their points of similarities, authors defined few theoretical and managerial implications for enterprise’s sustainability performance measurement.

Keywords: corporate sustainability, sustainability performance measurement, methodologies.

1. Introduction

Intensive production and excessive consumption have caused many ecological, economic and social problems which would continue to intensify (according to e.g. Sheth & Parvatiyar, 1995; Mahajan & Banga, 2005; Sheth et al., 2011; Kotler, 2011) with further development and improved quality of life in so called “emerging markets” (Sheth, 2011).

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The increasing use of technology and consequently energy and other resources, followed by increasing quantities of waste, is expected to accelerate resource depletion, biodiversity damages and climate changes and cause other environmental, but also social and economic problems. These trends significantly reshape the environment in which modern enterprises operate.

In order to adapt to these new challenges, more precisely – to take proactive role, enterprises worldwide are strongly advised, by many organizations and groups (from local to international level) interested in solving these problems, to embed sustainability principles into their business models (Stanković et al., 2012c). Sustainable production is considered to be the basis for long term competitive advantage, as it transforms these challenges into opportunities to mitigate risks and create superior value for customers and other key stakeholders (see: European Union, 2010; Stanković et al., 2012a; RobecoSSAM, 2015). However, sustainable production needs to be supplemented with other aspects of business operations based on sustainability principles. Systems of business performances measurement and reporting also have to be redesigned to include “new indicators, based on which it is possible to assess the quality of the enterprise’s offer and its compliance with the requirements of sustainable, and therefore responsible business running” (Stanković et al., 2012b, p. 418). The information related to enterprise’s sustainability performances is beneficial for both external and internal stakeholder groups. It is crucial for decision making of increasing number of customers who prefer sustainable products and services, as well as for investors and other business partners who are more and more concerned about the sustainability performances of an enterprise they invest in or cooperate with. This information is important for managers, too, as they need to be able to assess the level of enterprise’s sustainability performances at any time, and make plans for further improvements. But even though it provides many benefits to all the key stakeholders, analysis of sustainability performances is still not commonly used by organizations in many countries, including Serbia. For these reasons, the authors have defined two main aims in this paper:

1. to describe and popularize the concept of business sustainability of an enterprise and contemporary approaches in the analysis of related performances;
2. to propose guidelines for assessing the level of enterprise’s sustainability performances.

The structure of the paper is accordant with these aims. In the first part, the concept of enterprise’s sustainability performance analysis is explained. In the second part of the paper, three influential novel approaches and resulting methodologies for analyzing sustainability performances are presented and described. In the concluding remarks, points of similarities and differences of the analyzed methodologies are identified and briefly discussed and some guidelines are proposed for managers who would like to assess their organizations’ sustainability performance as the starting point for further improvements.

1 This is also evident from the fact that Serbia and many other countries are still not included in the Country Sustainability Ranking (RobecoSAM, 2017) which presents environmental, social and governance aspects of sustainability in 65 analysed countries.
2. Enterprise’s sustainability performances analysis – importance of the concept and problems in its application

Depending on their point of view, managers can interpret changes in the environment as challenges and transform them into opportunities for further improvements, or as threats with definitive negative influences on business operations of an enterprise (Stanković et al., 2012b). Studies show that enterprises led by proactive managers who accept and incorporate sustainability principles into business operations achieve superior financial performances (Lopez et al., 2007) and market positioning (Fowler et al., 2007) based on competitive advantage which is not easy to replicate (Stanković et al., 2002c). Therefore, it is very beneficial for managers to assess the level of their enterprises’ sustainability and strive to constant improvements. These facts form the underlying rationale for sustainability performance analysis. However, the reporting related to sustainability performances is still voluntary, as any reporting not related to performances which are subject to financial reporting (Stanković et al., 2002c). Nevertheless, the growing number of innovative enterprises and other organizations, regardless the size, location and affiliation to particular industry, design and use systems for measuring sustainability performances and communicate the results to various internal and external stakeholders by disclosing reports with extensive information that reflects the level of business operations sustainability (Skouloudis & Evangelinos, 2009; La Rovere, et al. 2010; Searcy, 2012). As none of the approaches (and resulting methodologies) is universally accepted, managers decide which of the indicators expressing the degree of business sustainability they will use and which information they will make available to the public2. Namely, “various measurement and reporting standards3 have embraced the idea,” (of measuring sustainability and overall impact of business operations – authors’ note) “but they are only principles-based and do not specify how it should be done, much less which metrics to use” (Thomas & McElroy, 2015, p. 2).

Practical mechanisms for measuring corporate sustainability are not yet proposed in relevant literature either (Mendel-Gonzales et al., 2013, p. 34). But there is a consensus that enterprise’s sustainability performance should be measured via composite index (Cherchye & Khuosmanen, 2002; Damjan & Glavic, 2005, Blanc et al., 2008) due to its multidimensional nature. Namely, the traditional performance measurement has changed dramatically in the last 25 years shifting from shareholders’ to stakeholders’ point of view (Hubbard, 2009; Mendel-Gonzales, et al., 2013). In addition to shareholders, other stakeholders have influence on enterprise’s business operations, demanding higher quantity and quality of information and pursuing higher standards of responsibility and accountability from it (PwC, 2013, p.7). As it needs to incorporate interests of different

2 This is also due to the fact that currently there is no universally accepted definition or assessment metrics for sustainable development either, not internationally agreed sustainable development indicators (Mendel-Gonzales et al., 2012, p. 37).
3 In other words: “Organizations like the International Integrated Reporting Council, Global Reporting Initiative, Impact Reporting and Investment Standards and Sustainability Accounting Standards Board are developing frameworks for balancing financial reporting with the social and environmental impacts on business activities, but lack a robust and comprehensive approach to measuring impacts”. (PwC, 2013, p.13)
stakeholders, the system of sustainability performance measurement needs to be multidimensional. Its multidimensionality is also influenced by the fact that corporate sustainability as a concept integrates social, environmental and economic aspects (Schaltegger & Burritt, 2005) of business, which correspond to Triple-Bottom-Line concept’s element – people, Planet, profit (Thomas & McElroy, 2015). Therefore, corporate sustainability measurement system also needs to incorporate all these dimensions and indicators related to each of them, so the potential and actual impacts of business operations are fully assessed.

In practice, several international organizations and institutions have gone further than defining just general principles and guidelines as in literature and standards (more in: Stanković et al, 2012c). They have actually proposed multidimensional approaches and methods for enterprise’s sustainability performances analysis. In the further text we will present three of these methodologies.

3. Contemporary approaches and methodologies for analyzing enterprise’s sustainability performances

During the last 20 years there have been significant developments in the field of corporate sustainability performances assessment. Many theorists have been studying best approaches which should be applied for such a complex matter and international authorities have proposed frameworks for reporting on related issues. Meanwhile, several organizations and institutions have been developing actual methodologies for analyzing enterprise’s sustainability performances. We will focus on three of them, recently developed by respectable and internationally well-known consulting companies.

3.1. RobecoSAM’s Corporate Sustainability Assessment approach and methodology

The RobecoSAM’s Corporate Sustainability Assessment (CSA), developed in 1999, is conducted annually in order to measure corporate sustainability performance of selected companies and serve for construction of Dow Jones Sustainability Indices (DJSI). Each year, 2500 largest global publicly traded companies are invited to participate in CSA for possible inclusion in Dow Jones Sustainability World Index which identifies 10% most successful companies within each industry in terms of sustainability of their business operations. Surveyed companies provide direct information, via on-line industry-specific questionnaire, much more detailed than data presented in public reports. As an integrated approach, CSA includes financially relevant sustainability criteria which are grouped into economic, environmental and social dimensions. Each dimension includes 6-10 criteria, and each criterion is evaluated based on answers to 2-10 questions. Points for each criterion are multiplied by dimension’s weight. Total Sustainability Score from 0 to 100 is calculated (based on predefined weights established for each question and criterion) and companies are ranked against others in their industry (RobecoSAM, 2015, pp. 1-3).

Both general and industry-specific criteria are used in CSA (ibid, pp.5-7). General criteria, applied to enterprises from all industries, correspond to standard managerial practices and areas as corporate governance, human development and risk and crisis
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management. They account for 40 to 50% of the total score, depending on the industry. The rest of the score derives from the industry specific criteria – economic, social and environmental aspects particularly relevant for enterprises from a certain industry. Namely, CSA approach is based on conviction that industry-specific challenges from the environment are crucial for enterprise’s sustainability performances, and that best conclusions come from comparing these performances to those of the enterprises within the same industry. The weights of industry-specific criteria compared to general criteria depend on the industry\(^4\), and so do the relative weights of economic, social and environmental dimension. Furthermore, the same criterion can include slightly different questions in different industry-specific questionnaires\(^5\), and this is all due to the fact that CSA is based on bottom-up analysis for each industry. The questions within each criterion are structured to capture following elements (ibid, p.9): 1. Awareness of the importance of sustainability factors to enterprise’s financial success; 2. Determining potential financial impacts of these factors; 3. Implementing strategies to manage these sustainability-related risks; 4. Measuring results to evaluate effectiveness of the strategy; 5. Validation or external audit of these results; 6. Reporting on sustainability strategies and achieved results. Managers’ answers to these questions need to be supported by the appropriate documentation.

It can be concluded that the main aim of this approach is to provide information basis for strategies that address sustainability-related issues and for tracking progress in achieving sustainability-related goals.

### 3.2. Thomas & McElroy’s MultiCapital Scorecard approach

Incorporation of sustainability aspects into one of the most influential performance measurement systems, the Balanced Scorecard (BSC) has been advocated by many authors for almost 20 years. Some of them (e.g. Schaltegger & Dyllick, 2002; Bieker, 2003; Gminder, 2005) proposed extension of original BSC by adding dimensions which relate to sustainability or Triple-Bottom-Line aspects. The other authors suggested development of separate Sustainability Balanced Scorecard (e.g. Figge et al., 2002; Krstić et al., 2014) which reflects sustainability objectives exclusively, and which serves as a supplement to the traditional Balanced Scorecard.

However, a recent novel approach suggests using a new type of scorecard which includes metrics for assessing the total impact of business operations on the social and natural environment, in other words – for assessing enterprise’s sustainability performances. This approach or “performance accounting system” is known as

\(^4\) For instance, out of 13 criteria used within economic sustainability dimension in Banking, Electric utilities and Pharmaceutical industry, just three are general (Codes of Conduct/Compliance/Corruption and Bribery; Corporate Governance; Risk and Crisis Management), out of 12 environmental criteria just 2 are general (Environmental Policy/Management System; Environmental Reporting), out of 14 social criteria - 5 are general (Corporate citizenship and philanthropy; Human capital development; Labor practice indicators; Social reporting; Talent attraction and retention) and others are industry-specific.

\(^5\) The same criterion can have different weights in different industry settings. E.g. criterion entitled Occupational health and safety, has different weights in mentioned 3 industries – 5% in Banking, 4% in Electronic utilities and 2% in Pharmaceutical industry.
multicapitalism and it measures economic, social and environmental impacts in integrated way (Thomas & McElroy, 2015). The name “multicapitalism” comes from the fact that business performances of an enterprise are interpreted in terms of impacts on all vital capitals – economic, but also natural, human, social and other capitals. In other words, sustainability reporting is done according to context-based approach, as advised by United Nations Environment Program in their Annual report for year 2015 (UNEP, 2015). The methodology based on this approach, MultiCapital Scorecard, is “structured, context and capital based methodology that organizations can use to measure, manage and report their performance (...)”, a truly Triple-Bottom-Line measurement and reporting system” (Thomas & McElroy, 2015, p. 3). Its creators (founders of internationally known consulting agency Thomas and McElroy LLC) point out that this methodology enables assessment of sustainability performances relative to organization-specific circumstances, as it is based on relevant areas of impacts identified by bottom-up, organization-specific approach. Namely, implementation of MultiCapital Scorecard approach is a three-step process and it includes the following phases:

2. Developing Areas of Impacts – researching and developing sustainability norms, goals, measurement models and data collection protocols for each area of impacts.

The Scorecard itself includes areas of impacts, categorized according to triple bottom line dimensions\(^6\). Performances related to defined areas of impacts are measured in the following manner: first, the progression score is evaluated for each of them, and then this score is multiplied by assigned weight (which depends on organizational goals and areas of impact). The calculated weighted score is then compared to “fully sustainable score” and gap to this ideal score is identified. That way, managers can understand performance across all dimensions, track progress and plan corrective actions. This methodology also enables consolidation of reports for organizations with multiple divisions in very different contexts.

3.3. PwC’s Total Impact Measurement and Management (TIMM) approach

Instead of constant strive to continuous growth at any price, the renowned consulting company PricewaterhouseCoopers (PwC) is advocating the idea of “good” growth. By its Total Impact Measurement and Management (TIMM) approach, PwC promotes business model that delivers “more real, more inclusive, more responsible and more lasting growth” (PwC, 2013, p.4, 8), which takes into consideration various impacts of business activities. The aim of TIMM is to enable a holistic understanding on how business activities impact various stakeholders and how these impacts in turn affect the

\(^6\) In their paper (Thomas & McElroy, 2015), the authors give examples of several areas of impact. Examples related to social dimension are: living wage, workplace safety; economic dimension: equity, borrowings, competitive practices; environmental dimension: water supplies, solid wastes.
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business. The impacts can be positive or negative and direct (arising directly through business operations) or indirect (e.g. emerging through effects on customers on the market or business partners in the supply chain). All of these impacts are categorized into four groups (ibid, p.23):

1. **Social impacts** - consequences of business activities on key stakeholder groups such as employees, customers and communities - impacts of business on living standard, health, education, empowerment, community cohesion;

2. **Environmental impacts** - air emissions, water pollution, waste, land use, water use and use of other resources caused by business operations;

3. **Fiscal (or tax) impacts** – business’s overall tax contribution, taxes it pays and collects, including profit taxes, people taxes, production taxes, property taxes, environmental taxes;

4. **Economic impacts** – business’s contribution in terms of value added and employment, supplemented by wider economic impact. This dimension includes impacts related to payroll, profits, investments, exports, intangibles.

The scope of impact this approach covers includes results of direct business operations of the analyzed enterprises, but also operations in upstream (supply chain) and downstream (marketing channels), and even outside business value chain and communities business affects. The subjects it takes into consideration, as the ones that are affected by business operations of an enterprise are: employees, shareholders, customers, suppliers, government and communities. So it can be concluded that main characteristics of this approach are: **multidimensionality** (as it covers all the key elements of impacts and supports holistic view of value creation), **quantitative - financial nature** (as it assigns monetary value to both individual and aggregate business impacts), multiple **flexibility** (it is both backward and onward looking; can be applied to different parts or whole organization and even whole value chain; can be based on different criteria – areas of impact), **usefulness for decision making** (as it provides consistent, comparable (over time and between organizations) and valuable information).

Application of TIMM is the five steps process which includes:

1. **Defining the scope** – i.e. identifying and formulating objective of sustainability performance measurement and deciding on impacts which will be included (areas of business, location, timeframe);

2. **Defining dimensions of value** – mapping the total impacts (identifying reach throughout value chain for each of them), deciding on methodologies for assessing each of them and identifying necessary data and data sources which will be used;

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7 PwC has developed special methodologies and tools for measuring business's impacts for each category, suggesting data and sources which should be used for evaluations. (see: PwC, 2013, p. 24)

8 According to research done by PwC, the main benefits, according to surveyed managers are: identifying and managing risks better, providing more insights than conventional financial reporting, identifying business opportunities, enabling more effective reporting to stakeholders, delivering good growth, saving resources (PwC, 2013, p.21).
3. Collecting existing data about defined impacts from the corporate databases;

4. Sourcing new data – identifying additional information which is needed, planning and executing additional information gathering;

5. Analyzing data and valuating impacts – using economic and process modeling techniques to estimate impacts and valuation techniques to monetize them.

4. Concluding remarks

When comparing analyzed methodologies, we can identify many points of similarities and overlaps. This fact leads to the conclusion that there is almost commonly accepted understanding of corporate sustainability concept and the way in which it should be measured, which we find very promising. All of these approaches and methodologies are based on multidimensional approach, taking into account interests of various stakeholders and various aspects of business operations or areas of impacts. There is consensus between all three of them that sustainability includes social, environmental and economic aspect. PwC’s approach adds fiscal aspects to these, but we consider that fiscal aspect can be divided and integrated into other three – taxes which are collected and allocated to improvements in the communities could be added to social aspect of sustainability; environmental taxes to environmental aspect; and other taxes to economic aspect. Therefore, our first suggestion to managers is to integrate social, environmental and economic dimensions and interests of all key stakeholders into methodology for assessing enterprise’s sustainability performance.

In all three analyzed approaches it was underlined that assessment should be industry- or even organization-specific. We suggest that relevant areas of impacts should be defined for a specific enterprise and the indicators should be weighted and prioritized according to organizational goals. Indicators themselves should correspond to goals, strategies, policies and business area of an enterprise.

In the end, we would like to point out that analysis of enterprise’s sustainability performance shouldn’t be seen as its own goal. The information it provides should be used as valuable basis for decision making and further development, as improved sustainability performances lead to improved overall business and financial performances of an enterprise. The implementation of the chosen sustainability performance analysis approach and methodology should be taken as a process and done gradually and seen as a learning experience.

References


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SAVREMEJNI PRISTUPI U ANALIZI PERFORMANSI ODRŽIVOSTI POSLOVANJA PREDUZEĆA

Apstrakt: Redovne i pouzdane informacije o raznim merilima performansi čine vrednu osnovu za donošenje odluka u preduzeću i stoga mogu olakšavati njegov rast i razvoj. Značaj merila performansi koje se odnose na održivost konstatno raste, jer održivi razvoj postaje imperativ za preduzeća širom sveta. Iako su tokom poslednjih nekoliko godina ostvareni značajni napreki, još uvijek nije postignut konsenzus o tome koja merila treba koristiti za praćenje i vrednovanje performansi koje se odnose na održivo poslovanje organizacija. Zbog toga je cilj autora ovog rada da predstave najčešće korišćene savremene pristupe za analizu performansi održivosti poslovanja i metodologije koje iz njih proizišu. Primjenjujući metod uporedne analize i koristeći sekundarne izvore podataka, autori su ustanovili da, iako ne postoji
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