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SUSTAINABILITY ACCOUNTING – DEFINITION AND TRENDS

Abstract: The purpose of this article is to analyse the concept of sustainable accounting and reporting in light of the principles of sustainable development theory. What is sustainability? Sometimes the term is used alternatively with the term Corporate Social Responsibility. The most widely accepted definition of sustainability that has emerged over time is the "triple-bottom-line" consideration of: 1) economic viability, 2) social responsibility, 3) environmental responsibility. Although environmental considerations are often the focus of attention, the triple-bottom-line definition of sustainability is a broader concept.

Keywords: accounting, sustainability accounting[1], sustainable development, financial reporting.

1. Introduction

More and more often accounting starts to pay attention not only to the measureable effects of economic activity, which may be codified and entered into the financial statements, but also those which are not measureable, such as ethics, responsibility and ecology. This opens broad perspectives for using the accounting instruments to effectively manage enterprises in accordance with the principles of sustainable development.

What is sustainability? Sometimes the term is used alternatively with the term Corporate Social Responsibility, the most widely accepted definition of sustainability that has emerged over time is the "triple-bottom-line" consideration of: 1) economic viability, 2) social responsibility, 3) environmental responsibility.

While environmental considerations are often the focus of attention, the triple-bottom-line definition of sustainability is a broad concept. In addition to the preservation of the physical environment and stewardship of natural resources, sustainability considers the economic and social context of doing business and also

[1] Also known as social accounting, social and environmental accounting, corporate social reporting, corporate social responsibility reporting, or non-financial reporting [Tilt 2009].

encompasses the business systems, models and behaviours necessary for long-term value creation.

The purpose of this article is to analyse the concept of sustainable accounting and reporting in light of the principles of the sustainable development theory.

The author of this article used the research methods of induction and critical analysis.

2. Economy of sustainability development – introduction

The core of the most basic approaches to the understanding of economical phenomena has its roots in the 19th century. It was in the 19th century when Burke wrote that the source of human history is neither an abstract judgment suspended in a fictitious space nor the equally fictitious *homo oeconomicus*. A. Bastiat [2003] reveals to his readers the knowledge of the fact that every action, deed and right have their consequence and therefore they are not indifferent to the achievement of the goal selected by the economic unit. Deliberations on the rules of economy were presented by the moralists and representatives of classical economics in the context of achievements of civilisation: regulations, rules, moral standards, tradition, and customs. All these "unshaken" values, by their repeatability, make the world a predictable and safe place and relieve the individual from the pressure of making too many decisions as well as provide directions and act as guides in the world which at first glance seems so complicated and chaotic [Kiwak 2007, p. 211].

Classical economics, created in the 18th and 19th centuries was at that time the dominant economic science. Its main purpose was to explain why the prices of goods develop the way they do (value theory) and how those prices (including incomes) are distributed. The major developers of this school include: Adam Smith, David Ricardo, Jean Baptiste Say and John Stuart Mill [Rogall 2010, p. 55].

The classical theory was the starting point for neoclassical economics. It is not that simple however, to define the notion of neoclassical economics. For example J.M. Keynes believed all schools preceding his own to be classical. On the other hand, H. Rogall includes a large number of more recent fractions in liberalism among the classical concepts, explaining the supply-side economics with the fact that in the end, all of them represent the standpoint of radical market liberalism creating the common foundation for economic theory [Rogall 2010].

Modern economists believe that the social facts are not a simple sum of individual facts and have recently started to devote more time to the analysis of values which are the focal point of ethics. Redefining the neoclassical paradigm has broadened the research spectrum of economy. As a result of viewing economic activity through the viewpoint of ethics it became essential to develop new research methods and tools required for the analysis of values which are incorporated in the material sphere of life [Kiwak 2007, p. 211; Gabrusewicz 2010, ch. 1, 9, 10].

The conventional understanding of sustainable development, based on the "three pillars" model is flawed because it implies that trade-offs can always be made between environmental, social and economic dimensions of sustainability. In response to this, a distinction is often drawn between "strong" sustainability (where such trade-offs are not allowed or are restricted) and "weak" sustainability (where they are permissible). The concept of "critical natural capital" is also used to describe elements of the biosphere that cannot be traded off (e.g. critical ecosystems or species). However, in practice, development decisions made by governments, businesses and other actors allow trade-offs and put greatest emphasis on the economy above other dimensions of sustainability. This is a major reason why the environment continues to be degraded and development does not achieve desirable equity goals.

The three "pillars" cannot be treated as if they were equivalent. First, the economy is an institution that emerges from society: these are in many ways the same, the one a mechanism or set of rules created by society to mediate the exchange of economic goods or value. The environment is different, since it is not created by the society. Thinking about trade-offs we rarely acknowledge this. Second, the environment underpins both society and economy. The resources available on earth and the solar system effectively present a finite limit on human activity. Effective limits are often much more specific and framing, in that the capacity of the biosphere to absorb pollutants, provide resources and services is clearly limited in space and time. In many areas (e.g. warm shallow coastal waters adjacent to industrialised regions) that capacity is close to its limits [Adams 2006].

3. Sustainability accounting

The concept of sustainability was introduced in 1987 in a report commissioned by the United Nations – the Brundtland Report. Brundtland defined sustainability as: "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" [http://worldsustainability.pbworks.com].

The concept of sustainability was originally proposed as environmental sustainability, and was concerned with the use of environmental resources in such a way not to deprive future generations of them. Thus, it has been very closely linked with environmental accounting. Business organizations have more recently adopted the term "sustainability" and it has become the basics of a great deal of corporate promotion and advertising.[2] In business organizations, however, the concept has been transformed into the notion of "corporate sustainability" or "corporate social responsibility" and this term has become more closely linked with economic or financial sustainability [Dellaportas et al. 2005, p. 214; Gabrusewicz 2010, pp. 56–63].

Many companies have now adopted triple-bottom-line reporting, as they believe that it provides an opportunity to demonstrate to their stakeholders that they are

[2] More on this subject in [Gabrusewicz 2010, pp. 7–56; Samelak 2013, pp. 5–22].

introducing sustainable business practices. In many of the sustainability reports that are published, however, social performance is closely related to its economics effects. For example, benchmarks of reduced employee accidents are related to savings in insurance premiums of lost work days. The Mays Report [*Corporate Sustainability*… 2003], discussing sustainability, points out that transparency is an important aspect of sustainability, embedding the concepts internally in order to add shareholder value is the most important issue [Dellaportas et al. 2005, p. 215].

From the experience of foreign countries experience, sustainability accounting is based on extending the existing financial accounting framework. In the U.K., it is based on a combination of company law, accounting standards from regulatory bodies and the customs used by accounting professionals. These are drawn up together in the U.K. Generally Accepted Accounting Practice (or UK GAAP). Different countries have different GAAPs, based on their own legal and regulatory frameworks but they influence each other and share many core principles.

There is, however, a strong move towards global convergence of financial reporting standards. From 2005, all EU listed companies are required to comply with the International Financial Reporting Standards, as issued by the International Accounting Standards Board.

Although there are many users of the company accounts – such as tax authorities, regulators, employees, customers and suppliers – financial accounting is primarily designed for investors, to inform them of the company's financial performance and allow them to make investment decisions. Therefore, accounting practice draws a narrow boundary around the company for financial reporting.

The boundary uses the concept of control, whether the organisation has the ability to:

1) deploy economic resources and,
2) benefit (or suffer) from their deployment.

If so, then the economic resources, and the benefits or costs which are associated with them, are included in the financial accounts. If not, the resources and the associated benefits or costs are not included.

Sustainability accounting extends the traditional accounting boundaries to take into account environment, social and economic costs (and benefits) that accrue to the full range of stakeholders. A distinction is therefore made between private costs and benefits which accrue directly to the organisation and societal or external costs and benefits that accrue to other stakeholders.[3]

As a result of reflections in this paper the working definition of sustainability accounting is: "the generation, analysis and use of monetarised environmental and

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[3] For example: Stress has impacts both inside an organisation, e.g. through productivity loss, and outside an organisation, e.g. the quality of life of the employee and family. The impact to the organisation is internalised as productivity loss and could be drawn out in a Social Financial Statement. The wider impacts on the individual and society are not internalised and so would appear in an account of external social costs.

socially related information in order to improve corporate environmental, social and economic performance."

A more complete and technical name could be "Sustainability Financial Accounting," to differentiate this approach (focused on monetarised data) from wider forms of sustainability reporting.

4. Selected trends in sustainability accounting

Due to the volume of this article, at this point, only selected trends in foreign literature will be presented.

If an organisation has a good system of financial accountability, its ability to sustain financial shocks will be readily foreseeable and measureable. From an internal perspective, accountability systems can be linked to appropriate internal monitoring of financial affairs, which ensures the provision of reliable accounting information necessary for responsible financial management [Sopher 1998, pp. 45–47]. It is generally agreed that the requirements for good internal management control include competent personnel, assignment of responsibility, division of work, separation of accountability from custodianship, adequate records and equipment, rotation of personnel, internal auditing and physical protection of assets [Anthony, Young 1994; Gaffikin 1993; Herzlinger, Nitterhouse 1994]. However, accountability expectations extend management control into areas of planning and budgeting, raising funds, allocating resources, record keeping, monitoring and evaluating, reporting and auditing [Elkin 1985, p. 13].

Thus, adequate financial accountability systems will enable entity leaders to decide in a timely manner, whether their organisation is likely to be vulnerable to financial shocks, and thus to anticipate the extent of the organisation's financial sustainability [Ireland 1999, pp. 96–99].

Financial accounting traditionally records and presents the financially-related flows and stocks of an organisation in the form of the Profit and Loss Account and the Balance Sheet, respectively.

Sustainability accounting tries to provide information in three different dimensions – presented in Table 1.

Table 1. Multi-dimensional accounting – range

1	Timing	Does it provide a snapshot in time of the state of the stock or does it show the flow of goods and services arising from the stock over a period?
2	Location of impact	Is it within the company's financial reporting boundaries – internal – or outside the boundaries – external?
3	Type of impact	Is the impact environmental, social or economic?

Source: own, based on [*The Sigma Guidelines*… 2003, p. 10].

The environmental, social and economic elements are often thought of as the components of the "triple bottom line" of sustainability reporting which can be disaggregated into the Five Capitals Model in the following way:

Manufacturing Financial	}	Economic
Human Social	}	Social
Natural	}	Environmental

Figure 1. The 5 Capitals Model and the triple bottom line

Source: own, based on [*The Sigma Guidelines*… 2003, p. 10].

Sustainability requires that attention is paid to all different economic, social and environmental systems (or all the Five Capitals) now and in the future. Sustainable development is likely to be a dynamic activity where different dimensions are working in synergy. At present most measures or indicators only address one part of the puzzle.

The importance of the need to integrate is matched by the difficulty in doing so. There have been some attempts, such as the Sustainability Assessment Model, Integration requires the unbundling of hard issues such as [*The Sigma Guidelines*… 2003, pp. 34, 35]:

- **boundaries and responsibilities** – where does an organisation's responsibility end and other begin? How can we consider an organisation's individual responsibility when it is participating in a socio-economic system which only rewards certain sorts of behaviour?
- **valuation methods[4] – can the same judgements be applied to environmental and social valuation methods?**
- **adding up and across** – the conversion of social and environmental impacts into monetary values makes it possible to add up the impacts and trade them off against each other. This opens up the possibility of comparing 1 PLN/USD etc. worth of climate change damage with 1 PLN/USD etc. of reduced impact from waste or 1 PLN/USD etc. of contribution to the local economy;[5]
- **accounting for what you can count** – an organisation may not be aware of its impacts, or not be able to count them. The strength of using a stakeholder engagement methodology is that the stakeholders can provide an organisation with information on an impact which otherwise might have been omitted.

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[4] More in: [Gabrusewicz 2012].

[5] These trade-offs may not make sense from the sustainability perspective of living off the revenue rather than degrading the capitals. This point about comparing 1 PLN/1USD etc. of environmental or social impact also applies to comparison between 1 PLN/USD etc. of impact between different years and between different companies.

Over the past few decades, community values have been undergoing incremental changes to reflect a growing concern for social and environmental issues, highlighted by the comments of the United Nations Conference in Stockholm [*Declaration*… 1972].

Since the United Nations statement in 1972, legal requirements for corporations to integrate social and environmental responsibility into normal business activities have been wide-ranging. In many cases, not only is a corporation now liable for its environmental and social activities and impacts, but by various regulatory requirements may also incorporate the personal liability of managers [Drever et al. 2007, p. 194].

In 1987, R. Gray, D. Owen and K. Munders [Gray et al. 1987, pp. 76, 77] defined social and environmental reporting as a process of communicating the social and environmental effects of organisations' actions within society and to society at large.

Sustainability has implications for intergenerational equity, and is often deemed more theoretical than practical for business firms, whereas corporate responsibility embraces governance issues. The former relates to social equality, whereas the latter is more concerned with transparency and ethics.

Table 2. Accounting information for externalities stakeholders

	Examples of external costs and benefits		
Stakeholders	Environmental	Social	Economic
Customers	Environmental costs of benefits in the use and disposal of products	Ethical, social and health costs or benefits associated with the product	Customer surplus over and above the market place
Suppliers	Environmental impacts associated with the production of purchased goods and services	Ethical, social and health costs or benefits associated with the production of purchased goods and services	Stimulation of economic growth through the supply chain
Employees	Environmental benefits or risks associated with the workplace	Workplace social costs (unpaid overtime) and benefits	Employment creation through economic multiplier effect
Community	Emissions, effluents and land, air and water waste (local, regional, national and international)	Community health impacts; wider social impacts of redundancy and plant closure; nuisance and disturbance	Urban and rural regeneration; infrastructure
Investors	Investor's risk from poor corporate environmental reputation	Investor's risk from poor corporate social and ethical reputation	Investor's risk from poor corporate economic reputation
Public sector (PS)	Environmental benefits from the public sector investment of corporate taxes in environmental protection	Social benefits from PS investment of corporate taxes in health, education and social programmes	PS economic multiplayer effects

Source: [Drever et al. 2007, p. 196].

The business community, the natural community and the social community are interconnected. Firms operate as a part of the society, and with its permission. The legitimacy theory suggests that society will penalise firms that fail to conform to community expectations and values [Lindblom 1994].

Commercial transactions infiltrate the daily lives of employees, lenders, shareholders and others. Their inputs are drawn up from natural resources, and the output of their activities may adversely affect our ecology, and, indirectly, society. Based on the premise of accountability or stewardship, stakeholders require information on the social costs and the economic, social with corporate activities.

In Table 2 examples of individual stakeholders' costs and benefits which can give a contribution to the debate on the shape of financial reports in their area are presented.

There is no agreed way of defining the extent to which sustainability is being achieved in any policy programme. Sustainability and sustainable development are effectively ethical concepts, expressing desirable outcomes from economic and social decisions. The term "sustainable" is therefore applied loosely to policies to express this aspiration or to imply that the policy choice is "greener than it might otherwise be" (e.g. the idea of a "sustainable road building programme"). Everywhere the rhetoric of sustainable development is ignored in practical decisions. Often sustainable development ends up being development as usual, with a brief embarrassed genuflection towards the desirability of sustainability. The important matter of principle therefore becomes a victim of the desire to set targets and measure progress.

5. Conclusions

There is an increasing recognition that, in order for a market society to move toward sustainability, the pricing signals that influence behaviour must include the consequences of such behaviour. The mechanisms for internalising externalities – such as taxes and compliance costs – are becoming more popular as legitimate policy instruments for governments to set the context within which organisations innovate. The most prominent example of this is the mechanisms from the Kyoto protocol, including the proposed EU-wide carbon emissions trading schemes. In these circumstances, organisations which understand and can measure their externalities will have a competitive advantage. Sustainability accounting is one way to achieve this.

In order to adapt to the changes in the environment and to survive and develop, organisations need to implement sustainable and continuous development.

The concept of sustainable development assumes the application of synergy between the economic, social and ecological aspects. It shapes and creates conditions for development and the functioning of enterprises.

The measurement of the set goals is the basis for evaluation of the adherence to the concept of sustainable development on the organisation level. On an enterprise level, the sustainable development encounters difficulties with operationalisation. Despite the fact that there are numerous global, national, regional and even local indicators, there are no methods to evaluate the level of sustainable development. The article analyses the concept of a balanced accounting background theory of sustainable economic development.

The author tried to identify the most important areas of development accounting for completing the reporting of socially responsible companies. The realization of the main objective was possible through defining the concept of sustainability accounting, indication of the scope and directions of development (measurement and reporting).

This article is not exhaustive and is only a contribution for further research and discussion on the topic – especially in the field of sustainable ways of reporting.

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ZRÓWNOWAŻONA RACHUNKOWOŚĆ – DEFINICJA I TRENDY

Streszczenie: Celem niniejszego artykułu jest analiza koncepcji zrównoważonej rachunkowości i sprawozdawczości w świetle teorii zrównoważonego rozwoju gospodarczego. Czym jest zrównoważony rozwój gospodarczy i jaką rolę odgrywa w nim rachunkowość? Czasami pojęcie „zrównoważony rozwój" używane jest zamiennie z pojęciem społecznej odpowiedzialności biznesu. Najszerzej przyjęta definicja zrównoważonego rozwoju, jaka do tej pory się pojawiła w literaturze ekonomicznej, to koncepcja *triple-bottom-line*, którą pokrótce charakteryzują następujące pojęcia: 1) rentowność, 2) odpowiedzialność społeczna, 3) odpowiedzialność za środowisko. Choć względy środowiskowe najczęściej znajdują się w centrum uwagi wielu interesariuszy, definicja zrównoważonego rozwoju gospodarczego w *triple-bottom-line* jest znacznie szerszym pojęciem.

Słowa kluczowe: rachunkowość, zrównoważony rozwój, sprawozdawczość.