A large, leafless tree stands in a field of dry grass and brush. In the background, a house is visible through the trees. The sky is overcast.

A Good Life for All

**Essays on Sustainability
Celebrating 60 years of making
Life Better**

Arne Fagerström and Gary M. Cunningham, Editors

Chapter Eight

Sustainable enterprise theory: A good life for all

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Abstract

This chapter develops a theory of sustainable enterprises, sustainable enterprise theory (SET), which can only be a valid theory if knowledge about life and nature is complete. Knowledge limitations should not stop enterprises from doing business with a goal of better long-term life on earth. Life demands stewardship of the resources used during one's lifetime. This chapter develops a model influenced by enterprise theory and resource theory that includes more than money in the business activities of an enterprise. The SET model is used in analyses of accountability, management and in discussions about sustainable business organizations activities.

Sustainability and 'green' business:

A central theme of the 2012 United Nations Conference on sustainable development ('Rio+20') was the 'green economy' motivated by growing realisation that sustainable development is highly contingent on whether the economy and its frameworks can be transformed to a sustainable economy (UNEP 2011). Various organisations, such as the Organization for Economic Co-operation and Development (OECD), have drawn similar conclusions and launched strategies for 'green growth' (OECD 2011). The United Nations Environment Programme (UNEP) developed a working definition for a 'green economy' as "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one that is low-carbon, resource-efficient and socially inclusive" (UNEP). The OECD's definition is very similar (OECD 2011) and its report contrasts a 'green' economy with the economy of the present day. Increasingly, the OECD and the World Business Council for Sustainable Development are discussing the role of entrepreneurship in serving the interests not only of company shareholders, but of society as a whole. In other words,

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business operations must be a 'fair deal' for a broader group of stakeholders.

The major contrasts between the features of the current economy and a 'green' economy, as clarified in Table 1 below, mean that the current economy, its frameworks and incentive structures must be radically reformed to meet to the visions of a 'green' economy, one that promotes sustainable development. Mistra (2011 p. 5) argues "one central conclusion is that adopting the aims of the green economy would entail a shift of perspective in political discourse from viewing sustainable development as an endeavour to achieve a harmonious balance among economic, social and ecological development, as expressed by the Brundtland Report, to a perspective in which socially sustainable development is the aim, ecological sustainability is a fundamental requirement and the economy is seen as a tool". The social dimension is critical for a sustainable development. Development that is socially sustainable, in which the 'social capital', trust, is well developed, is not just an aim. It also appears essential for success in implementing the major changes in technology and economic frameworks and society at large that are needed to obtain a sustainable development.

Current economy	Green economy
GDP growth: more economic activity the aim	'Beyond GDP': prosperity the aim
Focus on the near future (short-termism)	Long-termism
Maximisation of return	Safeguarding of long-term incomes
Shareholder value	Stakeholder value: benefit to society
Extraction of natural resources	Management of natural resources
Linear production systems	Circular production systems
Short-life products for sale	Long-life services: the 'performance economy'
Efficiency measured in monetary terms (e.g. cost-benefit analysis, CBA)	Multidimensional efficiency (e.g. multi-criterion analysis, MCA)
Micro- and macrorationality highly divergent	Micro- and macrorationality highly congruent

Table 1. Examples of contrasting aims and features (as expressed by UNEP, the OECD etc.) of the current economy and a green economy. (Mistra 2011 p. 7)

Many aspects of these differences need research and political change; examples are:

- Jobs and employment: A particularly pertinent question is how a much more efficient use of natural resources, a key component in a green economy, would affect job opportunities.
- Value creation and stakeholder prosperity.
- International trade: what changes are required to align e-trading systems with the framework of an inclusive green economy?
- Technology including sustainability concepts: in particular, the digitalisation of the economy.
- Cultural and gender perspectives.
- Ethics, morality and psychological aspects of a transition.

The list could be long and filled with different aspects of the transition. So far, discussions of sustainable business have been largely *ad hoc*. The next step is to develop a comprehensive theory of sustainable enterprises which is the objective of this chapter. Following the lead of Suojanen (1954) and his enterprise theory of accounting, this chapter presents sustainable enterprise theory (SET) from which implications for business and accounting can be developed. This chapter is organised in sections that describe business activities and resource uses, value creation and stakeholders, the SET model and implications of the model.

Business activities and resources used

Suojanen (1954) developed and discussed enterprise theory (ET) that defined the firm as an enterprise or a social unit used by stakeholders. He argued:

If the enterprise is considered to be an institution, its operations should be assessed in terms of its contribution to the flow of output of the community. If the income generated in the enterprise is to be analysed on the basis of social considerations, then the traditional type of income statement is insufficient. (p. 395).

When considering social considerations from a sustainability perspective, it is important to consider first resource use from a sustainable entity perspective. An enterprise needs resources to produce products and services. The first resource is human and social, the second is ecological (environmental). These two basic resources are the primary resources in a society and in business entities. Without these primary resources, a sustainable life, a good environment and a social sustainability, the enterprise is in danger. Two other resources, technology and financial, are also needed. Technology and financial resources are tools to develop human, social and ecological sustainability. These four basic resources in SET are further developed and discussed light of the Sustainable Accounting Standards Boards (SASB) draft conceptual framework (2016).

Human and social resources (HSR)

Human beings are social and generally prefer sustainable lives for themselves and for following generations, especially their offspring. In the recent past, resources for enjoyable satisfying lives were plentiful; primary concerns in most 'industrialised' and emerging countries were over financial resources. Now with evolutions in many aspects of life, the scarcity of resources and additional perspectives on how one lives a satisfying life are evolving, thus raising awareness for a need for sustainable enterprises. In a broader context, being social creatures, individuals are part of social networks to achieve sustainable satisfying lives for themselves and generations to come. One essential element of such a network is a sustainable enterprise. The UN works actively to promote companies to 1) operate responsibly in alignment with universal principles, 2) take strategic actions that support the society around them. Then, to push sustainability deep into the corporate identity, companies must, 3) commit at the highest level, 4) report annually on their efforts, and 5) engage locally where they have a presence (UN 2016).

The proposed framework of the Sustainability Accounting Standards Board (SASB) recognises the importance of the human social dimension as a key item to deliver long-term value. This dimension relates to the perceived role of business in society in delivering benefits to society in return for a license to operate (SASB 2 and 3).

Management of an enterprise is a human activity and thus falls under human resources in SET. SASB No. 5 describes leadership and governance, which involve management of issues inherent in business models or common practices in the industry, that are in potential conflict with interests of such broader stakeholder groups as government, community, customers, and employees. Such conflicts create a potential liability or worse, a limitation or removal of a license to operate, including regulatory compliance, lobbying and political contributions. They also include risk management, safety management, supply-chain and resource management, conflict of interest, anticompetitive behaviour, and corruption and bribery, as well as the risk of complicity in human rights violations.

Ecological (environmental) resources (ER)

Ongoing international activity on different levels works to protect ecological resources. The UN plays an active part. In an annual report, it addresses risks and possibilities for environmental resources (United Nations Global Compact 2016 b). Ecological resources are not endless and there is a need for action on all levels in the world society. Businesses can be an active partner in 'green' development, not only by restrictions of use of environmental resources, but also by implementing new business models and approaches with stakeholders. A recent example from the media is:

When Walmart sets a goal, companies usually find ways to meet it. In its bid to promote sustainability, for example, Walmart wanted General Mills, a big food company, to fit its Hamburger Helper noodles into a smaller box. General Mills replaced curved noodles with straight ones, which lie flatter. The switch took 500 lorries off the road each year and freed shelf space for other goods. Walmart worked with makers of detergent to develop concentrated versions, in smaller bottles. Over three years the switch saved more than 57,000 tonnes of cardboard, 43,000 tonnes of plastic resin and 400m gallons of water. (*The Economist*, June 4, 2016)

In this situation, Walmart, a large global retailer, worked with a supplier, a large multinational food processing enterprise, to produce a product that enhances ecological sustainability as well as providing business advantages.

In the proposed SASB framework No. 1 (SASB 2016), environmental impact is described as the use of non-renewable natural resources as input to the factors of production and environmental externalities or other harmful releases in the environment, such as air and water pollution, waste disposal, and greenhouse gas (GHG) emissions. Enterprises generate environmental capital, either positive for a sustainably operated business, or negative for businesses that do not operate sustainably.

Technological resources (TR)

Technological resources (TR) represent one human tool kit used to create goods and services. TR are used from raw material extraction, to production and use and later disposal of products. Human and social resources and ecological resources are used in the process. Some technological use damages human and ecological resources. As in the Walmart example, the use of resources depends on business models and innovations. A ‘smart’ choice is one businesses use to be both sustainable and also generate positive technological capital. In the Walmart example, the choice also enhanced profit potential by reducing costs for General Mills, possibly reducing amounts Walmart paid to General Mills, freeing shelf space for other products, etc.

Business model and innovation are included as technical resources in SASB 4, which addresses the impact of sustainability on innovation and business models including integration of environmental, human and social issues in the value chain, as in the Walmart-General Mills example, as well as product innovation, and impacts on financial assets (SASB 2016).

Value creation and stakeholders

An important element of SET considering the inherent social implications is the perception of value or utility, “utility” as used by economists. Values or utility are

personal beliefs; they can be expressed on various scales in addition to money. Examples can be illustrated as follows in examples in ancient times, value in a market economy and intrinsic value.

In ancient times, a person might think that having a knife would be desirable. The person first needs to find a knife that is desirable and then find someone who would like to trade the knife for something in exchange, for example apples. When the deal is completed with the exchange of the knife for 90 apples, the value of the knife from the buyer's perspective is more than 90 apples and from a seller perspective less than 90 apples. Value could only be expressed in other things before money entered the society.

A second example of value is a more modern:

Person A has a motorcycle and wants to sell it for €1,000. This means that A believes the value is lower than €1,000. Person B would like to buy the motorcycle for €1,000, which means that B believes the value of the motorcycle is higher than €1,000. Both A and B are satisfied with the sale and purchase of the motorcycle that represents different perceptions of the value of the same item.

The selling price is viewed as 'the objective market value' that represents at least two parties with different subjective meanings about the value. The number of willing persons who want to sell represents the supply and the number of persons who want to buy gives the demand on the market, is the basis for the market to function and a perception of value.

A third example is value inbuilt in something, intrinsic value. A piece of land could have a production value for a farmer, but from another perspective, land could have other values. It might be situated in a very beautiful place and have a value from an aesthetical point of view. These intrinsic values also exist in business. A difficult issue of these inbuilt values is how to measure them before assets like the land are sold. A significant part of sales prices on companies' shares is based on the idea of goodwill and other intrinsic values. Rogers (2016 p. 1) argues:

In 1975, tangible assets made up more than 80 percent of Standard & Poor's 500 market value, and intangible assets made up less than 20 percent. By 2015, those numbers had reversed, a trend that's unlikely to change direction. As the industries shaping our economy, such as the internet, media and services,

and biotech, increasingly rely on human capital, technology, and innovation, intangible assets will play a growing role in their success.

Sustainability is another example of an intrinsic value. As discussed above, value is determined by individual persons. However, a group of persons might have the same value preferences. Stakeholder theory gives directions for which groups surround an enterprise. Donaldson and Preston (1995 p. 87) argued that “the stakeholder theory is managerial and recommends the attitudes, structures, and practices that, taken together, constitute a stakeholder management philosophy. The theory goes beyond the purely descriptive observation that organizations have stakeholders. In stakeholder theory, there is a difference among various groups of stakeholders. One group, the narrow group, have direct transactions with an enterprise and are in that way important both short and long term. A second group, the broader group of stakeholders, do not have an impact from transactions with an enterprise, but often interact on a long-term basis. This social contract between enterprise management and stakeholders needs to be adjusted over time. Contextual changes in society have an impact on social contracts. It is more difficult to make a new social contract compared to maintaining ongoing social contracts (Suchman 1995; O’Donovan 2002). An enterprise must act in an acceptable way for stakeholders in order to gain legitimacy (Gray *et al.* 1996). This notion is discussed in legitimacy theory in which some light is cast over the issue “why enterprises voluntarily publish environmental reports”. Enterprise managements do not like to have a legitimacy gap between the business and its stakeholders (Ljungdahl 1999; O’Donovan 2002; Campbell, Craven and Shrivess 2003, Hinson *et al.* 2010).

In sustainable enterprise theory, value creation and stakeholders are linked. Suojanen (1954) argued:

Recent years have witnessed a considerable discussion by corporate management of the social responsibilities of the institutionalised corporation. A study of the published annual reports of large corporations indicates that there is a definite trend towards a social concept of the firm. (p. 391)

Suojanen was early in his development of enterprise theory and the notion of an enterprise as a social activity concept. Examples of value from an enterprise from perspectives of various stakeholder perspectives are presented in Table 2:

Stakeholder group	Group	Good value from the enterprise
Shareholders	Narrow	Stable secure return of investment (dividends and value growth) but also a guarantee of sustainable operations ('green' investments)
Employees	Narrow	Good working conditions (sustainable) security and good salary – pension etc. and a guarantee of sustainable operations
Creditors	Narrow	Stable secure payment of interest and amortisation of loans, but also a guarantee of sustainable operations ('green' investments)
Costumers	Narrow	Good quality products for a good price, but also values like guarantees of sustainable production and products
Suppliers	Narrow	Good quality products for a good price, but also values like guarantees of sustainable production and products, payments on time
Society	Narrow	Good tax payers and high social responsibility, but also sustainable business enterprises
Environmental organisations	Broader	Demands for responsible sustainable business enterprises

Table 2. Value expectations from various stakeholders

As presented in the table, value has different focuses in various stakeholder groups; it is not limited to production and sales. Sustainability responsibility covers the enterprise, but also the sustainable area of the enterprise operations including suppliers, customers, and disposal contractors. From a sustainable enterprise perspective, product value is measured in terms of resources sacrificed that give the product cost compared to market price, which is the revenue for the company, often less sales cost. Revenues less costs result in profit. Revenue (prices) for products is based on customer's preferences. Factors other than product quality are included in customers' preferences. A sustainable product might have a higher selling price if sustainability is important for the customer.

Some values leave the enterprise when products are sold, but an important part of value creation is not limited to values reflected by actual sales. Some value creation stays inside the enterprise or is shared with stakeholders. These intrinsic assets are hard to quantify, but in a good enterprise, values like human capital, social capital, ecological capital, technological capital and financial capital are present. This internal value creation has a long-term impact on the value of the enterprise and its products.

The Sustainable Enterprise Theory Model

The SET model is presented below. A business enterprise uses resources in the production of goods and services. The output is delivered to a market in which customers buy the output and give a flow of monetary resources back to the enterprise. Some of the value creation stays within the company as intrinsic assets: human, social, ecological and different types of technological capital are some examples. There is an obvious a need for development of a model that is broader than traditional financial and managerial accounting to include sustainable

indicator accounting both for internal and external information purposes. Also in the traditional financial accounting, steps can be made. Suojanen argued; “If the enterprise is considered to be an institution, its operations should be assessed in terms of its contribution to the flow of output of the community. If the income generated in the enterprise is to be analysed on the basis of social considerations, then the traditional type of income statement is insufficient.” (1954 p. 395). As a supplement to the income statement (profit and loss statement), enterprises also present a value added statement. This statement shows how values generated during the period are distributed for different purposes such as purchase from suppliers, employee remunerations, dividends and net interest paid, tax payments, cost and investments for environment, costs for research and development and retained in the company.

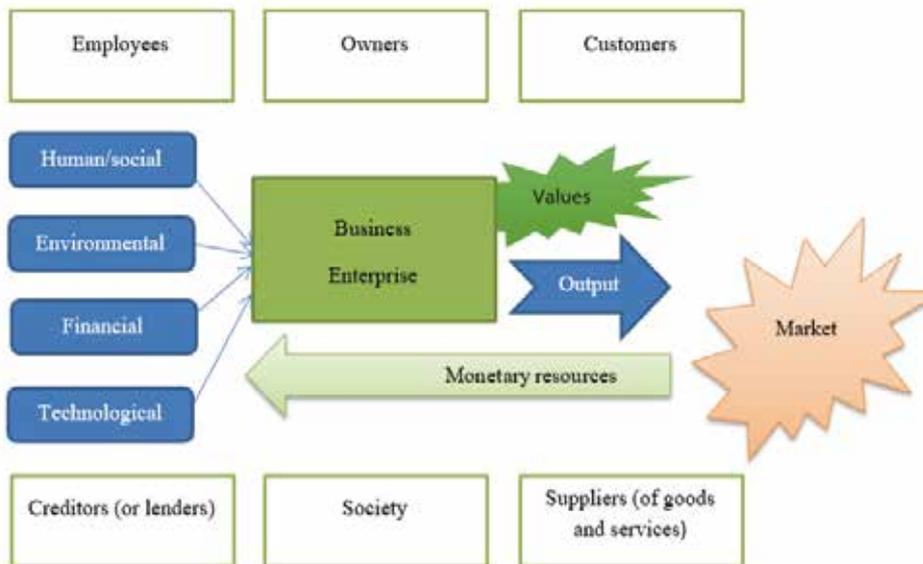


Figure 1. The sustainable enterprise theory model

As presented in the model, resources are used in the enterprise in a lean mix. During the production process, values are created, some leave the company in terms of sold goods and services; other values stay in the company as intrinsic values of various types. The output of goods and services meets clients’ desires and sales transactions occur. Revenue generated provides enterprises monetary resources. Stakeholders have their shares of the values the enterprise generated. The value the enterprise generated is in short-term monetary resources and also in different kinds of intrinsic capital or values. In a longer term, these intrinsic values have an impact on monetary flows for enterprises and their stakeholders.

A final point in the SET model is sustainability is inbuilt not only in enterprises' own operations but also includes full responsibility for all activities in the sustainable area described below.

Implications of the SET model

The SET model is an extension of the theory of the firm from enterprise theory presented by Suojanen (1954). His model used stakeholders as a part of value creation and not limited to human capital. The sustainability demand on business gives the SET model an even broader base than views on ownership, i.e. shareholders, vs. stakeholders' influence. It includes responsibility and benefits from activity areas inside and outside an enterprise. An enterprise that applies SET theory finds solutions to many areas of concern. Some examples are:

- Make good contracts with all major stakeholders and agree to include a new dimension, sustainability.
- Make agreements with suppliers to work in a sustainable way and also to share information about sustainability as in the case of Walmart and General Mills.
- Build a sustainability information system based on accounting concepts including sustainability information after the sale of a product or service during the full product use including recycling and disposal.
- Focus both on short-term value generation and on long-term value generation of intrinsic capital in the enterprise.

To make contracts with stakeholders on sustainability is not an easy task. To change a political tradition of debate among various stakeholders about their share of the value generation in enterprises takes some effort. It is outside the scope of this paper to go further on this issue.

SET demands enterprises take sustainability responsibility over the full life cycle of its products.

The full lifecycle includes both risks and opportunities. New demands create new business opportunities. The lifecycle is illustrated in the figure below:

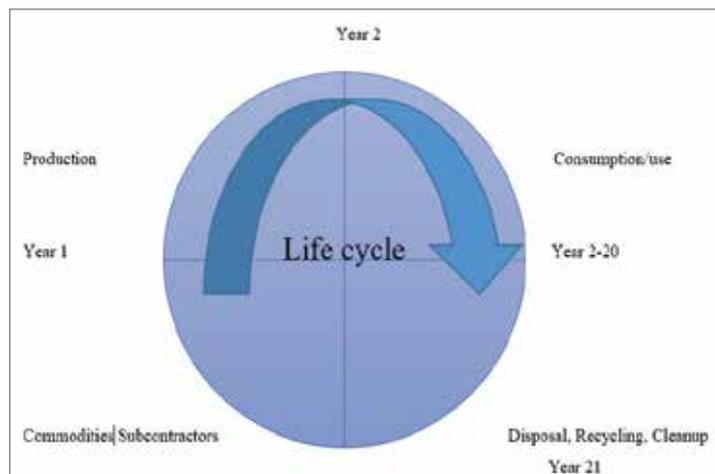


Figure 2.
Product life cycle

As an example, the figure shows a life cycle of 21 years of sustainability responsibility, but actual life cycles could be longer or shorter. Another difficult issue is that many parts of the product life cycle are outside the direct control of the enterprise. Lack of direct control requires enterprises to use indirect control over suppliers, customers, recycling and disposal firms.

The SET model has implications for both management of businesses and accountability to all stakeholders. Financial reporting business activities are based on assumptions (postulates) about the way enterprises' activities are measured in accounting systems. SET changes these assumptions and introduces accounting and management systems for 'green' enterprises.

The first assumption is **the going concern postulate** based on the premise that an enterprise continues its activities for the foreseeable future, is able to complete its planned financial activities and meet its financial obligations. The concept affects the valuation of assets and liabilities. When the going concern assumption does not apply, other valuation methods must be used. Continuity can be interrupted voluntarily by closure of the business or voluntary bankruptcy and involuntarily through legal action. Sustainability in principle is based on the same concept as the traditional continuity postulate, but the period is extended to include the time necessary to complete sustainability objectives including product service and disposal, environmental clean up, etc. If an enterprise has trouble meeting its obligations related to the resources that are linked to the enterprise's sustainability in terms of social and human resources, environmental resources, and technological resources, the business cannot continue for the foreseeable future. The continuity postulate in a sustainability context is defined by Fagerström *et al.* (2016) as:

The continuity postulate is based on the idea that operations should continue for the foreseeable future and that the enterprise can meet its commitments, both financial and sustainability, including but not limited to product life cycle, recycling, disposal, and clean up.

This postulate means that the focus of sustainability accounting is to provide a basis for professional assessments of an enterprise's risks and opportunities concerning all aspects of its activities. This period would sometimes be longer than the period of continuity for financial reporting, especially if there is a long product life cycle and requirements for clean up, disposal, and restoration at the end. The continuity postulate also has an impact on capital maintenance. Companies must have enough capital to cover both financial risks and sustainability risks.

Financial and management accounting's **postulate of accounting unit** is based on ownership and control. The accounting entity postulate gives focus to the accounting unit. In financial accounting, an entire enterprise is treated as

an accounting entity and usually is a consolidated group. Financial accounting's entity concept provides a basis for methods used in traditional financial reporting including assessing risks associated with assets, liabilities and liquidity. In sustainability accounting, which is focused on assessment of risk associated with an enterprise's use of resources, the same concepts as in financial accounting cannot always be used. Risks regarding an enterprise's use of resources start with raw materials and proceed to transportation of raw materials and production. After production, products are used and ultimately are disposed of, often recycled, and may require clean up, which are also associated with risk. The entire life cycle is an area with different types of risks, called the **sustainable responsibility area**. To make a systematic assessment of risk and opportunities possible, the following definition of sustainable business entity is made by Fagerström *et al.* (2016):

A sustainable business entity includes all activities over which an enterprise has some form of control. Control regarding sustainability can be exercised directly by an enterprise's or group's own operations and indirectly through an enterprise's responsibility to choose suppliers that meet its demands for sustainability. Indirect control also means that an enterprise or group is responsible for products the enterprise or group has sold. The responsibility covers products' life cycles, which include recycling and disposal.

The sustainable responsibility business area requires that an enterprise contract with its suppliers and recycling companies to exchange information regarding sustainability indicators. Furthermore, products in use among customers must be followed up. The follow-up of products being used is one part of an enterprise's sustainability responsibility, which is why product use must be followed until disposal, any recycling and any environmental clean up. This information then forms the basis for sustainability disclosures regarding the sustainable responsibility area. Figure 3 below illustrates the entity concept of sustainable business:



Figure 3. Sustainable business enterprise, a sustainable enterprise concept

Because the life cycle of many products is long, it may be difficult to implement the ‘costs attach’ principle¹ of resources for different parts of the life cycle from raw material to disposal, recycling and clean up. To aggregate all aspects of sustainability from raw materials to recycling, extension in time and space can be difficult.

Management and stakeholders of enterprises need an additional accounting system in order to get information about possibilities and risks in the sustainable way of running an enterprise, often using values other than money. Even “soft” values can be measured and accounted for. Rogers (2016 p. 2) argues: “Sustainability accounting can help complete the picture that conventional accounting has begun. It can extend accounting structure to capture the sustainability factors that are likely to have material impacts on a company”. Steps are taken in sustainability reporting by organisations such as GRI and SASB in the US. However, there is a lack of a systematic accounting approach of sustainable indicators. An outline to a systematic accounting approach is presented below:

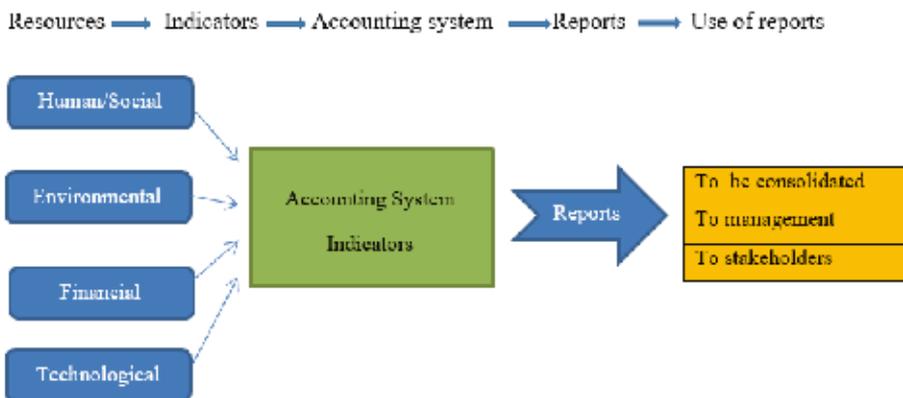


Figure 4. Sustainable indicator accounting SIA (Fagerström et al. 2016)

In the figure, the function of sustainable indicator accounting (SIA) is visible. This system outline is presented by Fagerström *et al.* 2016. Accounting for sustainable indicators is not enough, however; as Suojanen (1954) suggested there is a need for a complement to the profit and loss statement in the financial accounting system, a value added statement that shows the distribution of financial capital among different stakeholders. Stakeholders are the major interest groups and it is time for a shift from shareholder value to stakeholder value with a sustainable emphasis.

From Table 2 it is possible to see expectations of the transition of business to a sustainability focus. A major demand is change of focus of SET to include not only

¹ The costs attach principle means that all different types of cost should be attached to the total product cost.

financial capital but also intrinsic capital including sustainability. Maximisation of return is changed to maximisation of stakeholder wellbeing over the long term. Prosperity is the aim of the business as benefit to the society. In SET theory, efficiency is not only measured in monetary items but also by multiple criteria.

To conclude, the SET model gives directions how to organise business in a reformed circular business model based on Suojanen (1954) in which he argues that an enterprise is a social institution. His model is further developed by sustainable responsibility for the enterprise and by thoughts on intrinsic values and their importance for long-term prosperity of business and their stakeholders.

Discussion questions

1. Identify and describe values, both objective and intrinsic, that can be generated by sustainability in enterprises.
2. Divide values generated by sustainability activities into categories: those controlled by the enterprise and those controlled by other stakeholders.
3. Explain how the SET model can be used to describe a circular economic view of activities of a sustainable enterprise.
4. Describe the sustainable responsibility area of an enterprise.

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