Organizational Culture Toward Sustainable Development

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Introduction

Sustainable Development (SD) is intensively discussed in politics and macroeconomics, but rarely on the level of business processes. Since Sustainable Development is focused on the rudimental aims of a business company such as economical, ecological aspects and innovation, it is important for both future legislative conformity and strategic market position. To achieve these aims, three basic organizational variables are available: Organizational structure, formal management instruments and organizational culture. While coordination by structure and formal management instruments seems to be successful under stable market conditions and with product portfolio characterized by long life cycles, corporate culture plays an increasing role whenever organizational flexibility and innovation is required.

In this paper organizational structure, formal management instruments and organizational culture are described. In particular, the relation between organizational culture and business strategies for Sustainable Development is discussed. Five business strategies for Sustainable Development representing different intensities of Sustainable Development can be divided. These strategies are discussed on the bases of organizational culture and hypotheses are proposed for following research.

Relevance of Sustainable Development

The concept of Sustainable Development came in mind by the Brundtland report (World Commision on Environment and Development 1987, p. 43). The definition of Sustainable Development in this report is an ethical standard which has to be translated into a manageable standard. The following principles describe Sustainable Development in detail and build up a framework for implementation (Robert et al. 2002):

1. Eliminate contribution to systematic increases in concentrations of substances from the earth's crust. This means substituting certain minerals that are scarce in nature with others that are more abundant, using all mined minerals efficiently, and systematically reducing dependence on fossil fuels.
2. Eliminate contribution to systematic increases in concentrations of substances produced by society. This means systematically substituting certain persistent and unnatural compounds for ones that are normally abundant or break down more easily in nature, and efficiently using all substances produced by society.
3. Eliminate contribution to the systematic physical degradation of nature through over-harvesting, introductions and other forms of modification. This means drawing resources only from well-managed eco-systems, systematically pursuing the most productive and efficient use both of those resources and land, and exercising caution in all kinds of modification of nature.
4. Contribute as much as we can to the meeting of human needs in our society and worldwide, over and above all the substitution and dematerialization measures taken in meeting the first three objectives. This means using all of our resources efficiently, fairly and responsibly so that the needs of all people on whom we have an impact, and the future needs of people who are not yet born, stand the best chance of being met.

To meet these principles two general mechanisms can be used, such as dematerialization and substitution. Dematerialization deals either with resource productivity or reduction of waste. Substitution differs within each system condition. For condition 1 and 2 substitution means using more abundant materials from the earth´s crust or compounds that are occurring naturally. For system condition 3, substitution of certain activities, which identified as nature destructing, is the task. And condition 4 includes health aspects through ecological pollution, availability and distribution of resources (Robert et al. 2002 and Baumgartner 2003, p. 188).

To achieve the aims of Sustainable Development three basic variables are available: organizational structure, formal management instruments and organizational culture. Within the organizational structure responsibilities, tasks and procedures for Sustainable Development have to be defined. Formal management systems and instruments support the management executives. For example, the standards for environmental management like ISO 14001 or the European EMAS scheme or standards for quality management can be used. Useful instruments for these purposes are Balanced Scorecard (Kaplan and Norton 1992), Sustainability Balanced Scorecard (Arnold et al. 2001, Dyllick and Schaltegger 2001), life cycle assessment and ecological evaluation (Baumgartner 2003, Narodoslawsky and Krotschek 1996, Goedkoop et al. 2000). Organizational structure and management instruments are more formal variables for the management. Application of them can be planned in more detail and is more rational. Organizational culture is the third basic variable for managing Sustainable Development. It is more informal and less rational than the variables previously discussed. The focus in this paper is on the relationship between Sustainable Development and organizational culture.

The relevance of Sustainable Development for companies seems to be rising because of increasing demands of stakeholders like suppliers, customers, the public or legislators. Application of Sustainable Development therefore gives the opportunity to gain operative and strategic advantages – but how is this application encouraged or inhibited by the organizational culture?

Business Strategies for Sustainable Development

As presented above, Sustainable Development can be defined with four principles. Two general actions are possible to serve these principles: dematerialisation and substitution. Substitution and dematerialisation alone are not business strategies; they have to be combined with the general aims of the company in order to build an integrated sustainable business strategy.

In literature, five basic types of strategies for Sustainable Development are evident (Hardtke and Prehn 2001, p. 98):

- Introverted
- Extroverted
- Conservative
- Visionary
- Transformative

Introverted strategy is characterized by one central question: Is action for Sustainable Development necessary and useful for the company? Focus of all activities lies on legal compliance. Action in the light of Sustainable Development is made only if new market or legal standards force an organizational answer. An example of this type of strategy is the substitution of certain materials forced by legislation.

Extroverted strategy focuses on the external relationship of a company. The focus lies on public acceptance and the so called "license to operate and grow". Stakeholders are informed about all relevant activities in order to generate a trustful relationship. Those companies create ambitious environmental programs, but effort and progress in the light of Sustainable Development is still minimal. There seems to be more "green" communication than real activeness. Examples of this strategy are the publication of environmental or sustainability reports.

Conservative strategy focuses on eco-efficiency. Products and services are provided with low costs and low consumption of materials and energy. Emissions and waste are avoided. Efficient production processes lead to competitive advantages while environmental impacts are reduced. Frequently cleaner production activities are aligned with a conservative strategy. Opportunities due to Sustainable Development are detected systematically. This strategy has a strong internal orientation.

Visionary strategy focuses on sustainability issues within all business activities. The number of companies dealing with this strategy is small at the moment; they incorporate Sustainable Development in vision and strategy. Competitive advantages are derived from differentiation and innovation, offering stakeholders unique advantages. For example new "product to service solutions" can be named here. While a visionary strategy is still based on given market conditions, a transformative one interacts with the market and tries to change market conditions actively. This strategy aims to create new market opportunities in the light of Sustainable Development, including elements of the extroverted, conservative and visionary strategy.

Organizational Culture

Each group or human society has different mechanisms to coordinate the individual doings of their members. Beyond this, other social mechanisms play an important role for social systems which are based on shared ways of thinking, feeling or doing. Common assumptions, shared values and norms, same understanding of symbols, same ways of interpretation and rules of communication function as social adhesives in human organizations (Weik and Lang 2001, p. 203).

All these phenomena are subsumed in the concept of organizational culture, which seems to be one of the most complex fields in the science of economics.

In economic research, organizational culture is relatively new and first came up at the end of the 70s. At this time, the Japanese economy boomed and their industrial working practice was seen to be more successful than the working style in the USA or western Europe. In a further step, the relevance of organizational culture for economic success has been recognized and many studies comparing different national cultures have been performed (Heinen 1987, p. 4).

During the 80s, the concept of organizational culture become increasingly established. The enormous interest of industries encouraged scientific discussion. The most important authors in the early stage were William G. Ouchi, Thomas J. Peters and Robert H. Waterman and Terrence E. Deal and Allen A. Kennedy (Weik and Lang 2001, p. 208).

The best known theoretical models for organizational culture are proposed by Schein, Hofstede, Peters and Waterman, Ouchi, Deal and Kennedy (Tuppinger 2003, p. 122 and Hofstede 1982).

Since the word "culture" is used in many scientific disciplines, a large number if definitions exist. Neubauer (Neubauer 2003, p.15) found more than 160 of them in literature. Besides all these different scientific traditions and definitions, Schreyögg summarizes the most relevant elements of the concept of organizational culture (Schreyögg 1991, p. 1526):

- Organizational culture is mostly an implicit phenomenon consisting of shared beliefs, which determine self image and definition of the own organization
- Organizational cultures are kept alive and its sense is not self reflected
- Concept of organizational cultures subsumes shared orientations and values. It is a collective phenomenon influencing strongly individual doings and is the basis for uniformity and coherence in organizational doings.
- Organizational cultures result from a learning process of organization in interaction with its internal and external environment.
- Certain doings historically successful in problem solving build up the basis of common accepted behaviours.
- Organizational culture brings sense and orientation into a complex world in the way as it supports selection and interpretation.
- Organizational culture is transferred in a process of socialization and is not learned consciously.

The concept of organizational culture represents a meta system of a company (Heinen 1987, p. 32). Two basic prerequisites build up organizational culture in a social group: structural stability of a group and integration of single items in a bigger paradigm (Schein 1995).

Two basic functions of organizational culture are the survival and adoption to the external environment and internal integration (Schein 1995, p. 59). In the following table positive as well as negative effects of strong organizational cultures are listed.

To measure intensity and characteristics of a specific organizational culture Schreyögg and Hofstede propose measurement instruments (Schreyögg 1991, p. 1530).

Table 1: positive and negative effects of strong organizational cultures (Schreyögg 1991, p. 1532)

Positive effects	Negative effects
Low efforts for regulations	Tendency to sequester from environment
Fast decision-making and implementation	Low flexibility
Low effort for monitoring	Emotional barriers
Motivation and team spirit	collective avoidance

Schein´s concepts of organizational culture

Schein proposes a model which seems to be the most popular in literature. In this concept, culture is structured into three levels representing different levels of cultural evidences. These levels range from the very tangible manifestation to the deeply embedded, unconscious basic assumptions (Schein 1997, p. 16):

- Artifacts: visible organizational structures and processes (hard to decipher)
- Espoused values: Strategies, goals, philosophies (espoused justifications)
- assumptions: unconscious, taken-for-granted beliefs, perceptions, thoughts and feelings (ultimate source of values and action)

Artifacts. At the surface of an organization there is the level of artifacts including all visible hearable and perceptible phenomena. Artifacts include products, office arrangement, architecture, documentation, language, technology employed, clothing style, myths and stories about the company, rituals and ceremonies. This level of culture is easy to observe but very difficult to decode because the sense of artifacts can be found in deeper levels of culture only (Schein 1997, p. 17).

Espoused Values. Single actions and behaviors of individual members if successful in the organization become benchmarks on which other members refer to. Such historical actions and behaviors become organizational sheared values. Gradually these values become transformed into non-discussable assumptions supported by articulated sets of beliefs, norms, and operational rules of behavior. Values at this conscious level help to interpret level of artifacts. Organizational values arise and have a certain historic development and are difficult to change or prescribed (Schein 1997, p. 19).

Basic Assumption. Basic assumptions are so self evident in an organization, that only little variation within a cultural unit will be found. Basic assumptions are implicit assumptions guiding individual behavior, and tell group members how to perceive, think about, and feel about things. This level is very difficult to change. Since the human mind needs cognitive stability, any challenge to, or questioning of, a basic assumption will release fear and defensiveness (Schein 1997, p. 21).

Organizational culture is a sample of shared basic assumptions, and manifests itself at the level of observable artifacts and shared espoused values, norms and rules of behavior. To understand a specific organizational culture, shared basic assumptions

have to be elaborated on, and a learning process on how such basic assumptions are to be established has to be identified. Leadership is originally the source of beliefs and values. If what a leader proposes, works and continues to work, it will become a shared assumption (Schein 1997, p. 26).

Schein sees an important correlation and interdependences between culture and leadership. On the one hand, executives have to respect cultural conditions, on the other, it is the executives` commission to develop a convenient culture (Schein 1997, p. 209).

Sustainable Development and Organizational Culture – relationship and hypotheses

Evaluation of the strategies

In a next step the authors refer single Sustainable Development strategies to the following three items: Orientation on Sustainable Development, risks and opportunities for a company. In the following subsection these single items are combined and discussed in context. The result in total is presented in the following table.

Table 2: evaluation of business strategies (0: no relationship; +: correlation; ++: high correlation; +++: very high correlation)

	Sustainable business strategies				
	introverted	extroverted	conservative	visionary	transformative
orientation on Sustainable Development	0	+	+	+++	+++
risks	+	+	0	+	+++
opportunities	0	+	+	++	+++

Introverted strategy was found not to be referring to the principles of Sustainable Development; there is hardly any relationship. There may be some risks in following this strategy type. Changes of market condition or legal situation could be recognized too late leading to competitive disadvantages as a consequence. No opportunities resulting from this strategy can be identified.
Extroverted strategy refers to principles of Sustainable Development, thus the relationship is not very strong. There may be some risks in the fact, that this strategy tempting to "green" communication activities without any link to core business activities. As soon as customers and public recognize this mismatch, organizational reputation may be damaged causing competitive disadvantages. However, some opportunities of this strategy can be identified in the case of activities related to Sustainable Development.
A conservative strategy is based on principles of sustainability and can be applied without nameable risks. Due to rising efficiency in internal processes, competitive advantages can be gained.

A visionary strategy shows a very high correlation to Sustainable Development including a high amount of opportunities. Risks arising with this type of strategy seem to be manageable. There are no revolutionary changes necessary. A visionary strategy offers high opportunities together with a great contribution to sustainability principles.

High correlation to Sustainable Development is performed by transformative strategies. But defining a new organization and creating new markets, is linked with very high risks which can be hardly managed. On the other hand, this strategy offers the highest amount of opportunities and allows a company to define markets on their own vision. This risky strategy type has to be decided on with great care.

It is the individual decision of a company to choose and adopt a single type of strategy. The presented evaluation (s. Table 2) aids management executives to characterise and classify different Sustainable Development possibilities.

Relationship between strategies and organizational culture

The relation between these strategies and organizational culture is discussed in the next sub-section.

A business strategy always relies on organisational culture. Different strategy types influence organizational culture respectively requires a specific organizational culture. In order to determine the relationship between sustainable business strategies and organizational culture, Schein´s concept of organizational culture is applied (see Table 3). In the following paragraphs all five basic strategies for Sustainable Development are systematically discussed in the context of organisational culture.

Table 3: Sustainable business strategies in the light of organizational culture (0: indifferent, neutral relationship; +: positive relationship, precondition; -: no relationship, not necessary)

	Sustainable business strategies				
	introverted	extroverted	conservative	visionary	transformative
artifacts	0	+	+	+	+
espoused values	-	0	+	+	+
basic assumptions	-	-	-	+	+

An introverted strategy requires no basic assumptions nor espoused values about Sustainable Development. On contrary, basic assumptions about the relevance of Sustainable Development could be dissenting. Artifacts related to this strategy types are not linked with organizational culture and occur due to external pressure.

An extroverted strategy leads to artifacts such as environmental reports. Sustainability values are indifferent and basic assumptions are not necessary for this strategy.

A conservative strategy leads to artifacts such as programs for eco-efficiency or cleaner production. Espoused values are necessary and refer mainly to the principle

of efficiency, which is enlarged on environmental aspects. This strategy type can be applied without basic assumptions on Sustainable Development.

A visionary and a transformative strategy need basic assumptions about Sustainable Development. They build the basis for developing and applying advanced sustainability strategies – and makes their application more difficult.

Since the cultural level of Schein represents organizational depth, the results in table 3 correlates Sustainable Development strategies with organizational anchoring. Introverted strategy does not tangle with culture while visionary and transformative initiatives strongly interact into the core of organizational culture. As seen before, espoused values and basic assumptions are difficult to change. As a consequence, all types of strategy interacting into "depth" levels of organizational culture are difficult to implement, and will require a long time for sustainable integration.

Relationship between strategies and organizational culture-hypotheses
On the basis of these ideas eight hypotheses are elaborated. These sentences are generated from a systematic combination of strategic and cultural aspects. In future research, these hypotheses have to be proved:

H1: A visionary strategy requires specific basic assumptions about Sustainable Development within an organization.

H2: A visionary strategy requires specific espoused values about Sustainable Development within an organization.

H3: A transformative strategy requires specific basic assumptions about Sustainable Development within an organization.

H4: A transformative strategy requires specific espoused values about Sustainable Development within an organization.

H5: A conservative strategy requires no basic assumptions on Sustainable Development.

H6: A conservative strategy requires specific espoused values about Sustainable Development.

H7: There is no relationship between an introverted strategy and organizational culture.

H8: An extroverted strategy requires no espoused values and basic assumptions about Sustainable Development.

This hypotheses builds the basis for further research on application of Sustainable Development in profit organizations.

The hypotheses show possibilities and risks related to specific organizational cultures. Ambitious sustainability strategies can only applied if the formulated requirements can be fulfilled.

Summary
Sustainable Development can be realized in profit organizations with different business strategies. Aspects of organizational culture in relationship to these strategies are not discussed and reflected upon. This leads to inadequate solutions. In this paper, relevant strategies for Sustainable Development are discussed and evaluated in terms of orientation on Sustainable Development, risks and opportunities. The concept of organizational culture is presented with the main aspects.

In the next step the relationship between sustainable business strategies and organizational culture has been evaluated. For this purpose, Schein´s model of organizational culture has been used and hypotheses have been developed. This hypotheses builds the basis for further research.

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