BUSINESS ENVIRONMENT – EMERGING EXTERNAL AND INTERNAL PRESSURES FOR SUSTAINABLE PRODUCTION

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Synonyms

Competitive environment; External business environment; Internal business environment; Macro environment; Micro environment; Operational environment; Organizational environment; Sustainable production

Definition

Companies need understanding about their business environment to stay competitive, survive and prosper (Duncan 1972; Dreyer and Grønhaug 2004). Research has developed numerous methods for organizations to scan and build scenarios on their environment (see Amer et al. 2013 for overview). In general, describing the business environment requires analysing the external and internal context in which the company operates.

Companies' external environment includes relevant factors outside the boundaries of the organization (Duncan 1972). These factors can occur generally as macro level trends or as micro level changes in companies' immediate operational environment. There is a dynamic interaction between the macro and micro levels. Focusing on a specific level of analysis gives understanding of the emerging changes in the external environment and the interlinkages between those changes. Organizations can analyse their outside world at the macro level by identifying political, economic, sociocultural, technological, environmental and legislative influences on their business. These influences can occur at different spatial levels, locally, nationally or globally (Capon 2009, p. 5). At the micro level, the analyses focus on the institutions in the company's competitive and operational environment. These institutions include competitors and other stakeholders, such as suppliers, customers, shareholders, media, local communities and nongovernmental organizations (NGO).

The internal business environment describes the relevant physical and social factors within the boundaries of the company. These internal factors influence the decision-making behaviour of individuals within that company (Duncan 1972), and include structures, resources, culture and behaviour in the business organization (Capon 2009, p. 126).

Companies' business environments vary remarkably in terms of complexity, volatility and uniqueness. Neither the internal nor the external factors are stable over time (Duncan 1972), as their dynamics vary in terms of predictability and turbulence (Dreyer & Grønhaug 2004). Some of the key environmental influences are precise, quantitative and predictable (i.e. demographics in a market area), while many other factors are imprecise, qualitative and difficult to predict, (i.e. customers' attitudes, politics and financial condition) (Amer et al. 2013; Huss 1988).

External and internal pressures for improving environmental performance

There is increasing international consensus that human activities are affecting the Earth system to a degree that threatens its ability to support global societal development (Rockström et al., 2009; Steffen et al. 2015). The depleting state of the natural environment has awakened policy, governance, and citizen sectors to put efforts towards global sustainability. The increasing public awareness on climate warming, depleting natural resources and biodiversity loss is gradually affecting also the business world and companies' interpretations of their business environments.

This chapter provides a broad overview on how requirements for improved environmental performance emerge and cut across the levels of today's business environment. Discussing emerging sustainability related changes in business environment helps companies to understand the increasing physical and societal pressure to shift their strategies towards more sustainable use of resources and thus a more sustainable provision of products and services.

The chapter focuses on the environmental dimension of sustainability, contributing to the SDG 12 "Ensuring sustainable consumption and production patterns". Nations measure their achievements in this goal 12 with environmental indicators on energy consumption and production, pollution, waste generation and management and resource efficiency (see e.g. Eurostat 2018). The chapter first describes different external influences and trends that occur in companies' macro environment. The second part discusses the external influences at the micro level, focusing on the stakeholders in companies' immediate business environment. The third part briefly discusses organizational factors that influence companies' internal business environment.

Macro environment

This section discusses different environmental sustainability requirements that emerge in companies' macro environment. Macro environmental analysis describes companies' contextual environment and the general trends occurring in natural and socio-economic systems. Major European and North American strategy textbooks offer taxonomic classifications such as the PESTEL framework for analysing companies' macro environment (Burt et al. 2006). The framework classifies external influences to political, economic, sociocultural, technological, environmental and legal dimensions that can occur at local, national and global levels.

Relatively recent work from environmental economics suggests that companies' macro environment consists of natural, societal and economic systems that are composed of smaller subsystems (Figure 1). In this conception, economy is not considered equal to society or nature, as the dimensions of the PESTEL framework would suggest. Instead, economy is rather a component nested within the larger societal system similarly to other human created systems (e.g., moral, religious, etc.) (Marcus et al. 2010).

The global biophysical environment on Earth is a parenting system for all human created systems, including societal and economic systems (Figure 1). Therefore, the pressures emerging in the natural environment affect the other systems nested in the natural system. Following the view on the nested systems, this chapter first discusses macro environment from the natural environment point of view. After the natural environment, other macro level drivers for improving environmental sustainability are presented according to the PESTEL framework dimensions. The political, economic, socio-cultural, technological and legal dimensions in PESTEL describe general trends in socio-economic systems. (Marcus et al. 2010).

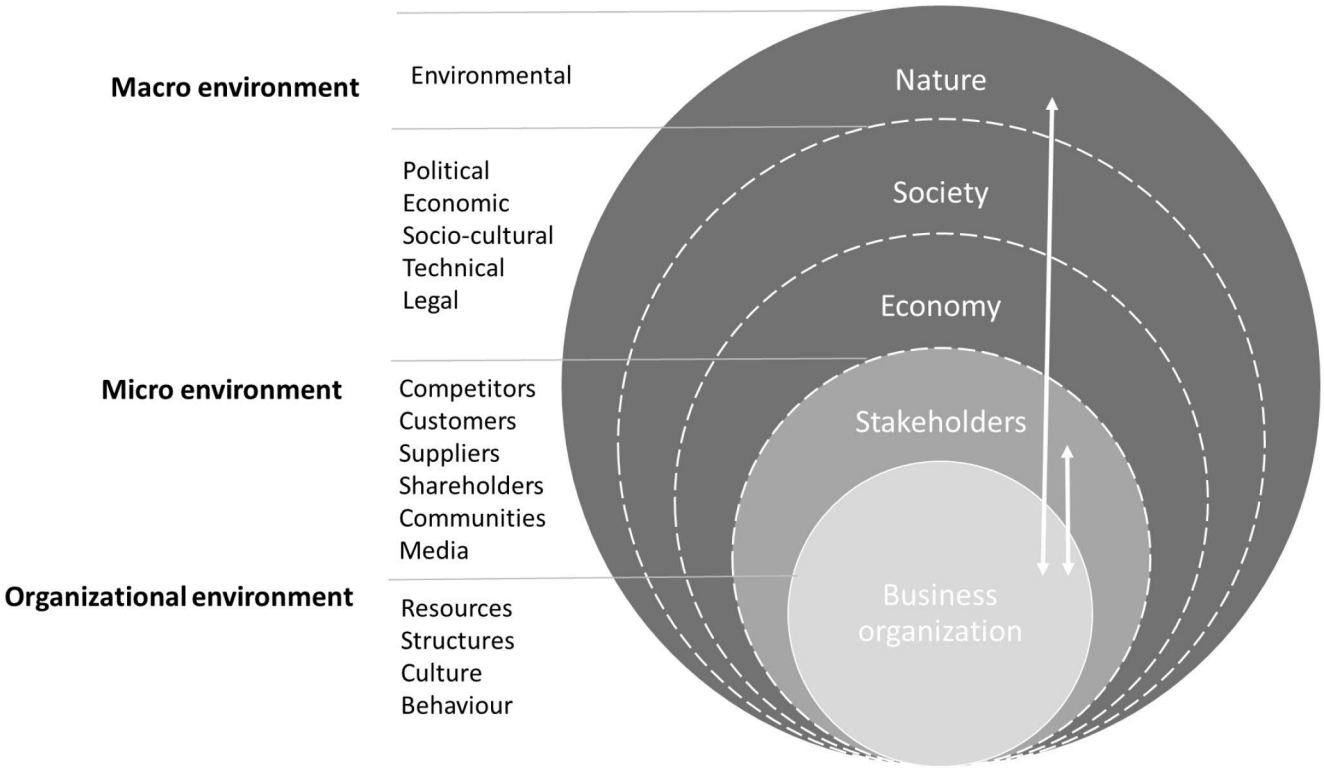

Figure 1 Macro, micro and organizational level business environment (Developed based on the works of Marcus et al. 2010, Freeman 1984 and Capon 2009)

There are pressures for improving companies' environmental performance from the **natural environment** point of view. At the macro level, researchers have identified warning signs on the key processes that are fundamental to Earth system functioning and human societies' life on Earth, including business activities and operations. The severe state of these critical processes has been presented with the concept of planetary boundaries (Rockström et al., 2009; Steffen et al. 2015), which include the depleting state of Earth's biosphere integrity, biogeochemical flows (phosphorus (P) and nitrogen (N) cycles), land-system change, freshwater use and atmospheric aerosol loading. Regional level changes in the states of these processes affect the overall Earth system at the global level, climate change and biosphere integrity being the core planetary boundaries through which the other processes operate. (Steffen et al. 2015)

Society's transition towards environmental sustainability seems inevitable from the perspective of limited resources and ecological thresholds (Rockström et al., 2009). At the same time, companies conduct business as part of the economic systems, and their business processes impact the surrounding nature, i.e., air, land and water. Therefore, all business activities result in environmental damage to some extent (Worthington and Britton 2006 p. 452) and affect the ecological degradation in human societies' natural environment.

Recently, research has developed promising approaches to enhance companies' understanding on their dependence and impact on the natural environment. Approaches such as ecosystem services and natural capital (OECD 2011) bridge understanding between business activities and the biophysical limits of the Earth. For example, degradation of natural ecosystems and the free services and raw materials they provide, such as water, affect also companies' costs and access to these inputs. Depleting state of the natural environment can also increase companies' operational risks. For example, climate change may increase the frequency and intensity of extreme weather events at companies' geographical locations.

The **political environment** for businesses holds political institutions and processes in international and domestic systems. These systems are closely interrelated in the globalized world. For example,

implementing the internationally agreed Paris agreement and Agenda2030 affects both multinational and local companies when national governments mobilize their efforts in achieving the goals. Moreover, politic and economic unions can set specific requirements for conducting business within member states. For example, the European Commission has established an action plan for circular economy, involving legislative proposals for waste recycling and management. These Europe-wide attempts to reduce environmental impacts in production imply changes in the political environment for companies operating with plastics, chemicals, waste management, food and critical raw materials (COM 2015). In addition, the existing European Union's directives, such as Eco-design Directive (2009/125/EC), set ecological requirements for products sold in member states. The tightening regulation implies that companies have to create new products or alter their existing designs in order to remain compliant with the policies.

At the national level, public authorities steer the demand side towards sustainable consumption by introducing sustainability criteria to public procurement or intervening consumer behaviour with incentives and taxation (Edquist and Hommen 2000). The political instruments for sustainable production include, for example, producers' responsibility requirements, subsidies for investments in cleaner production, emissions trading and regulation for waste management and use of natural resources. Other steering instruments include allocating national innovation funds for companies' sustainability-driven R&D activities or developing environmental permitting practices for industrial plants (see e.g. Lindström et al. 2003 on considering energy efficiency in environmental permit procedures). At the city level, the municipal authorities can influence the local infrastructure investment decisions and land use planning, which affect the companies' access and possibilities in conducting business in the area.

Economic environment describes human valuations on natural resources, human effort, knowledge and human-made capital used in the production of goods and services. It also refers to human behaviour in the use of scarce resources (Worthington and Britton 2006 p. 82). Depending on where the business activities are located, the company might operate with centrally planned economies such as China, and free-market economies, such as Europe. Operating with several monetary systems causes complexity in the economic environment, since different interest rates, inflation and currencies apply in each system run by each government's fiscal and monetary policies. At the institutional level, key influencers of companies' economic environment include both international economic organizations and national financial institutions and groupings. (Worthington and Britton 2006 p. 80).

In macroeconomic discussions, the environmental impacts of economic growth have become part of the political agenda both nationally and internationally (Worthington and Britton 2006 p. 452). The current economic system aiming at growing consumption and household spending has been criticized for not considering the ecological boundaries of the planet. It is a physically growing subsystem using linear flows of materials and energy in a shrinking parent system, the natural environment (Korhonen et al. 2018). Ecological economists argue that the human economy has passed from an era where human-made capital was a limiting factor in human development to an era where remaining natural capital is the limiting factor (Costanza et al. 1997, p. 97). In order to develop sustainably, nations need to be able to decouple trends of depleting natural resources and rising levels of pollution from economic growth (see e.g., Jackson 2009). These system level discussions have led to also increasing public concern on how companies utilize and extract the real flows (e.g. labour, timber or minerals) in the economy.

Looking at the financial capital flows in the economic system, the providers of the financial capital, such as shareholders or owners of the business, generally hold influence on the business decisions. (Worthington and Britton 2006 p. 452) There is a growing interest among investors in Western Europe and USA towards considering environmental, social and ethical aspects in their investment decisions. Socially responsible investment has become a more mainstream investment alternative, especially among institutional investors such as municipalities, labour unions and pension funds (Jansson, M., and Biel, A. 2011). Alongside

responsible investors, also lending institutions have become increasingly aware of the environmental responsibilities and risks related to polluting industries (Worthington and Britton 2006 p. 459). Incorporating environmental risk potential into lending policies puts pressure on businesses that seek funding for their investments. Investors and lenders push companies to develop strategic plans and scenarios for climate change by asking for disclosures on climate-related transitional and physical risks (FSB TCFD 2017).

Understanding how environmental concerns emerge in companies' **socio-cultural environment** helps companies in predicting future behavioural patterns and preferences in the consumer population, and public acceptance of business operations. Companies can analyse trends in their socio-cultural environment by describing the demographics of a population, the ways the population behaves and the ways the culture of the population develops. Demographic factors include information on population age and structure, while social factors include information on the levels of education and inequality of income in the society. Cultural factors hold information on the norms, values, language, religion, and lifestyles in the society (Capon 2009, p. 54). In the globalized world, companies meet and collaborate with people from different national cultures that act in the roles of local communities, customers, suppliers, competitors or public authorities. However, access to travel, global brands and communications media have changed societies in a way that socio-cultural influences are less bounded to the nations' geographical location. Lifestyle messages and other socio-cultural influences reach people globally to greater extent. (Capon 2009, p. 134)

When analysing emerging values in society, commitment to pro-environmental behaviour and environmental protection seem to appear more among younger, higher educated people (Klineberg et al. 1998). Additionally, pro-environmental values partly originate from childhood, as people care about the nature more when they are more familiar with it (Lekies 2006; Chawla 1988). The global trend of urbanization might make this opportunity less and less available in the future. On the other hand, improving economic prosperity can imply higher levels of education and thus improving environmental awareness in the future. The discovered connection between gender and environmentalism also suggest that improvements in gender equality may increase environmentalism in future societies (Nordaard and York 2005).

The technological environment for business describes the advances in artefacts (such as tools, products and their components) and processes that are innovated to assist people to fulfil their needs (such as food, shelter, health, mobility and communication). Together these technologies form engineering systems that aim at fulfilling important functions in society, such as energy production and distribution or water treatment (de Weck et al. 2010, p. 167). In these systems, companies act as both technology users and providers. As technology providers, companies innovate, develop and manufacture technological solutions for society's needs by collaborating and competing with other technology providers. The level of technological performance sets standards for industries, affecting the customers' and society's expectations on cost, quality and environmental performance.

The megatrend of digitalization is one example of a change that occurs in companies' technological environment and has implications for environmental sustainability. Digitalization is currently reshaping companies' information and communication systems and structuring its stakeholders to three groups: big data generators, collectors and utilizers (Lock and Seele 2016). Digitalization has opened new ways to shape, communicate, monitor and govern information on sustainability (Seele and Lock 2017), which has implications to organizations' digital surveillance. The improved metering technologies and big data analytics enable improving the transparency and accountability in business world. Digital technology enhances analysis on data generated from companies' money, information and knowledge flows in social networks and financial systems. Moreover, the generated emission and material flows in supply chains can be analysed in more detail. Making the most of digital data promoting sustainability, digital solutions bear potential in promoting company-stakeholder dialogue for example by facilitating public e-participation (He et al. 2016). In the future, both the technical development in reporting and laws requiring more detailed environmental information

disclosure (Gunningham et al. 2004) can empower environmental groupings and local communities even more.

The legal environment for business influences companies though laws, juridical decisions of the courts and statues enacted by governments. It offers a framework that constrains and regulates companies' operations and competitive environment, but can also enable certain entrepreneurial activity. The laws evolve over time in response to changing social, economic and political circumstances and pressure coming from different interest groups (Worthington and Britton 2006 p. 172). Each nation has its own legal system that establishes minimum standards and rules for establishing the organization (company laws), acquiring resources (planning laws and property laws), conducting business (employment laws, health and safety laws) and selling outputs for consumption (consumer laws) (Worthington and Britton 2006 p. 179).

The globalization of business means that organizations operate in different countries with differing environmental standards, legislative controls and requirements. There is an ongoing discussion whether the laws and regulation provide a greater level of corporate responsibility. Alternatively, the companies can voluntarily change their actions to meet societal expectations (Worthington and Britton 2006 p. 453). One regulatory approach to environmental responsibility is the polluter pays principle, where causing environmental damage increases costs in running the business (Worthington and Britton 2006 p. 456).

Altogether, the environmental, political, economic, socio-cultural, technological and legal dimensions are strongly interlinked in companies' macro environment. The dimensions have causal relationships (Burt et al. 2006), as the elements of modern society are densely interconnected and interdependent (Astley and Fombrun 1983). For example, rising public concern on climate change and biodiversity loss can affect international and national political environment. The more pro-environmental political attitudes can cause changes in national innovation policies that again have effect on the nation's long-term technological development.

Microenvironment

At the micro level, the analytical focus is on the organizations, institutions and relationships in companies' immediate business environment. In the micro level investigations, relevant individuals and organizational actors are company specific, whereas the above discussed macro level trends influenced business organizations in general. Related concepts for describing the external environment at the micro level include competitive environment, operational and collaborative environment.

Traditionally, Porter's five forces (Porter and Millar 1985) have been used to describe competition in an industry or sector where the company operates. These forces cover companies' current and potential competitors, maturity of the market as well as bargaining power of suppliers and customers (Capon et al. 79). Stakeholder theory (Freeman 1984; Palmar et al. 2010) extends the analytical focus from competition to collaboration and legitimacy, as it covers also interest groups that do not hold direct transactional relationship with the company. The theory identifies the institutions, individuals or groups that "affect, or are affected by, the achievement of an organization's mission" (Freeman 1984, p.52). Such stakeholders cover shareholders, customers, suppliers, regulators, the media, local communities and non-governmental organizations (Capon 2009, p.376; Worthington and Britton 2006 p. 450). Each group can have different expectations regarding companies' social and environmental performance, and their motives for pressuring companies to engage in responsible practices vary (Aguilera et al. 2007).

Customers are one of the key influencers in companies' immediate business environment. As buyers, they have power to require better environmental performance from products and services. Customers can be public or industrial organizations or individual consumers. Public sector is responsible for a substantial level of consumption, and public organizations' rising interest on green public procurement (Ambec and Lanoie 2008) indicates that more tendering processes will include environmental criteria in the future. These

requirements shape the market conditions under which the companies operate, giving competitive advantage for greener products in the market. Together with green consumers (Peattie and Charter 2003) these customer groups can form more environmental aware income flows, providing companies with a way for differentiation and premium pricing.

Consumers constitute an essential part of the market forces in immediate environment, either directly as companies' customers or indirectly as customers' customers. Many of the contemporary environmental problems are rooted in unsustainable consumer behaviour, which makes consumers a crucial customer group having impact on the ecological degradation. Research disciplines such as environmental sociology and environmental psychology offer approaches to understand consumers' pro-environmental attitudes and behaviour and the structures hindering them (see e.g. Fransson and Gärling 1999; Kemmelmeier et al. 2002; Steg and Vlek 2009; Gifford and Nilsson 2014). In practice, understanding consumers' pro-environmental actions can help companies in explaining or intervening green buying behaviour. Examples from public sector and forerunner companies point towards adapting sustainable choice architectures that can nudge (Thaler and Sunstein 2008; Gunn and Mont 2013) consumers towards proenvironmental choices.

Today companies compete with their rivals in a globalized world. Enhancing competitive advantage over **competitors** is increasingly rooted in location related capabilities, such as access to skilled workforce, wise use of material resources and technology cooperation in cluster areas (Porter 1998, Hart 1995). If a company makes an early move or a large-scale move towards resource efficiency, it can gain competitive advantage from the gained cost reductions. The improved environmental performance can also set new standards for the industry or gain better access to critical raw materials, locations, production capacity or customers (Hart 1995). Moreover, better environmental performance of a product may reduce threat for substitution (Peattie and Charter 2003, p. 732).

The power of **suppliers** on a company depends upon the nature of the products being supplied. For example, highly specialized products or reliable services can make the suppliers more significant to the company. Reducing stock levels can make companies more dependent on supplier relations, while having competencies to make components within the company can reduce suppliers' power. (Worthington and Britton 2006 p. 356) The pressures for improving environmental performance in supply chains are often discussed from a top-down perspective, as a wish from the customer company to green its supply chain. In this approach, suppliers develop more environmental friendly technologies as a reaction to customer needs (see Vachon and Klassen 2008 for the role of upstream and downstream collaboration in greening the supply chain). Green delivery companies have proved that the pressure can also emerge bottom-up, when offering their services to companies that are followers in environmental issues.

Alongside regulation, **community, environmental advocacy groups and media** act as effective watchdogs that demand companies to be accountable for pollution and waste issues. Today companies are often expected to go beyond compliance with regulation in order to sustain their social license to operate in society. Instead of only avoiding legal penalties, the focus is increasingly in meeting the expectations of society and in avoiding activities that society deems unacceptable. The social license emerges from the demands and expectations of neighbourhoods, environmental groups, communities and other levels of surrounding civil society. Social license demands, if not met, can be translated into new legal requirements or threaten a company's access to essential resources (permit to build, operate and access to energy, water and natural resources). Good reputation for environmental citizenship is also risk management for companies, as it can be beneficial in gaining fast tracked permit applications, access to resources, minimizing disruptions from NGOs or boycotts, and minimizing risks in violating unexpectedly the permitted pollution levels. (Gunningham et al. 2004)

As indicated above, different stakeholders can influence the practices of companies by exerting pressures on them. The degree to which the company is dependent on the interest group and its resources

defines the power the group has on the organizational outcomes (Kassinis and Vafeas 2006). For example, poorer communities may be more dependent on the company for its resources (such as jobs and taxes), but as nations reach greater prosperity, their citizens demand that more attention to be paid on environmental standards and stricter enforcement of environmental laws (Grossman and Krueger 1995).

Organizational environment

The organizational environment describes the relevant physical and social factors within the boundaries of the company. These internal factors include structures, resources, operations, culture and behaviour in business activities (Capon 2009, p. 126). Such organizational activities can be divided according to various structures depending on the size of the company and the nature of business. In general, the activities may take place in different business functions, such as marketing, finance, accounting, purchasing, research & development, operations and human resource management.

Organizational studies have applied different approaches to study the internal environment, some examples being resource-based, knowledge-based and competence-based views. From the resource-based perspective, internal business environment represents the entity where tangible, intangible and human resources are acquired, and thus processed and converted into outputs that are delivered to customers (Capon 2009, p. 107). In this view, managerial attention is in finding a unique bundle of idiosyncratic resources and developing the resource base for the future (Barney et al. 2001; Grant 1996). The competence-based view concentrates on the human resources and human capabilities in selecting, developing and utilizing the other resources in companies' asset base. Managerial attention is finding unique, valuable and meaningful competences for companies' success. (Mosakowski and McKelvey 1997) The knowledge-based view focuses on companies' knowledge requirements and knowledge integration mechanisms. The approach sees knowledge as the most strategically important company resource and the issues of creating, acquiring, storing and deploying knowledge as fundamental organizational activities (Grant 1996). Overall, human resources and interactions have a central role in all three views (Barney et al. 2001; Mosakowski and McKelvey 1997).

Human resources are the critical organizational resources that make the difference in identifying, interpreting and responding to companies' external pressures. Internal factors, such as organizational culture and identity, shape both interpretations of the external pressures and organizational responses to them (Howard-Grenville 2008). Therefore, shifts in employees' and management's values can internally create pressure for change. Analyses on cultural and behavioural environment focus on better understanding the nature of the human resource, meaning the people conducting the organizational activities (see e.g. Howard-Grenville 2008). These studies investigate the cultural or behavioural aspects of individuals, groups and organizations, involving insights on skills, habits, norms, power structures, values, attitudes and worldviews.

Currently, the increasingly environmentally aware younger generation is joining the work life, shaping the value base of companies' human resources. These young employees appreciate working for an environmentally friendly organization (Senge et al. 2010, p. 111) and the prospective job applicants are more likely to pursue jobs from socially responsible firms than from firms with poor social performance reputations (Greening and Turban 2000). Companies can adopt green human resource management practices (Renwick et al. 2013; Tariq et al. 2016) to attract the young talent. The changes in values and practices indicate changes to the organizational environment. In the long run, the attitudes of the young indicate the future orientation of the whole business community (Shetzer et al. 1991).

Key Issues

As illustrated above, the internal and external influences on a company are interrelated and interdependent. The environments at different levels are not separate entities, and the interaction between the internal and external environment is a two-way influence. For example, the macro level changes in the natural environment put pressure on society and political decision-making, which have impact on companies' inputs, processes or outputs. Changes in companies' internal factors, such as available inputs, may engender further changes to customer or supplier relations at the micro level. (Worthington and Britton 2006 p. 13)

Companies can control the internal organizational changes to some extend but their chances are limited in steering the trends occurring at the market or societal level. On one hand, the influences emerge through intentional actions, e.g., when public authorities push companies towards sustainability through regulation instruments, subsidies and public procurement. On the other hand, some influences are more latent, e.g., when younger generations shape the business community internally by entering the work life with stronger pro-environmental values than their preceding generations.

Integrating environmental thinking into business studies and decision-making faces limitations in practice. The limitations stem from dominant institutional structures, norms and expectations. (Marcus et al. 2010) Business textbooks represent one example of such dominant worldviews that hinder the integration: Even though research disciplines such as ecological economics recognize that socio-economical systems are nested in nature, the shrinking parenting system,, many business strategy textbooks treat the natural environment as a comparable dimension to the economic environment. Taking steps toward the more sustainable production of goods and services requires overcoming such practical limitations.

Future Directions

The fundamental societal level changes towards environmental sustainability imply fundamental changes also within businesses. Companies are increasingly motivated to incorporate environmental sustainability into their strategic management. This way companies can build resilience towards the economic and social trends that stem from the ecological degradation.

Companies can increase their ability to adapt to the emerging changes and interruptions by proactively acknowledging and acting on them. This strategic behaviour can range from reactive and adaptive to proactive and transformative approaches (Boons 2009). The businesses can create sustainable strategies by linking economic profit essentially by creating social and ecological value instead of only mitigating the negative impacts of the existing production systems with efficiency efforts (Loorbach and Wijsman 2013). Examples of such sustainable strategies include incorporating sustainability into business models and R&D operations (Bocken et al. 2014).

Steering companies' strategic thinking towards sustainable production requires support from institutional structures in the society. Alongside regulation, education plays a crucial role in creating and shaping such institutional structures. Business schools can be understood as management education systems that socialize students into belief systems and then acting according to those beliefs (Ferraro et al. 2005; Khurana R. 2007). Supporting sustainable production requires a pedagogical shift in business and engineering schools towards a more critical and interdisciplinary view. In practice, such shift means reflection on the frameworks presented in business textbooks. Currently the frameworks rely on key metrics on economic growth, markets and return on investment. (Kurucz et al. 2014) The 21st century management education needs to be able to discuss the challenges related to climate warming, depleting natural resources and biodiversity loss, and what these challenges mean for companies.

Cross references

Carrying capacity; Circular economy; Competitiveness; Corporate social responsibility; Green finance; Sustainable procurement; Sustainable production

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