

Building the Sustainable Firm

A Framework for Corporate Transformation towards Sustainability

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Dr André Reichel

University of Stuttgart, Institute of Business Administration (BWI)

Keplerstrasse 17, 70174 Stuttgart, Germany

Telephone: +49-711-68583466, Facsimile: +49-711-68583191

E-Mail: andre.reichel@bwi.uni-stuttgart.de

Introduction

Building the sustainable firm is not the sole matter of cash flow, return on investment or profit before and after taxes. Of course, these factors are necessary ingredients to any business enterprise's well-being; but regarding sustainable development they cannot play the central role. Sustainable development is not only an overarching political aim for policy makers, it is also providing a broad visionary guideline for transforming society and economy, thus meeting social-ecological challenges. Firms play one of the central roles in this transformation process. They are providing technical and other innovations, shaping new markets, meeting and creating consumer needs. However, a theoretically sound and practically relevant framework for building the sustainable firm is still missing. A few general remarks can be made about it though: first of all it has to address the firm's economical logic, its rationality; second, it has to incorporate all aspects of sustainable development and translate them for the firm and its context.

The transformation path for the sustainable will then follow a shift in focus from short-term profit rationality to a more long-term rationality, which is still including profit, but laying more emphasis on the sustainability of the firm's resource base as a whole. The narrow view on technical innovations is widened through embedding of existing and new technology (products and processes) into societal discourse. Stakeholder participation is the key means to achieve this. Instead of solely relying on real (and nominal) capital, new institutional arrangements are exploited: innovation networks and stakeholder negotiations, thus creating network capital for the firm (and also shifting the emphasis from product to utility). Finally, the all dominating ends and means of quantitative growth (of real and nominal capital) will then be substituted more and more by a growth in societal legitimacy and societal innovation competence of the firm.

Remarks on Sustainability and Innovation

After two decades of sustainability discourse a certain dissent about the concept remains (Gehrlein, 2000). Pearce et al. (1989) concluded very early in the debate that sustainability is

‘everybody’s darling’ – and in danger of becoming meaningless. One can either lament about the on-going diluting and pocketing of the concept, or take it as an opportunity to get as many ‘non-purists’ as possible under the sustainability umbrella and start implementation on the big scale (Majer, 1995). Meadows et al. (1992) view sustainability as a dynamic maintenance capability, a dynamic equilibrium of a system that ensures the system’s sustainment in the long run. This may sound technocratic and indeed it is a very broad and abstract definition. Nevertheless, in evolutionary economics a similar stance is taken. Sustainability responds to the problem, how relations between a given order (in the von Hayek sense of the word) and its viability have to be designed to uphold this order both materially/energetically as well as institutionally/structurally. Sustainability then becomes closely linked to adaptation and thus change (Herrmann-Pillath, 2002). Sustainable development thereby is not so much a reachable state (‘being’) but moreover a continuous flow of actions (‘doing’) in which societal learning processes are central. Sustainability addresses coupled social-ecological systems in interdependent reproduction. Developing society, economy and people, enhancing their capabilities for and understanding of sustainable development lays an emphasis on social learning processes.

What can sustainable development mean for the firm and how might they be connected? One key feature of firms is the innovative power, their potential to creatively destroy and re-invent industries and markets (and also themselves). If the path to sustainability is paved with innovation (Majer, 1998a) then firms have to, and actually can, play a vital role in sustainable development. The line followed in this paper is, that firms, by means of innovation management can transform themselves along the road to sustainability as well as society and economy. It is argued that the nature of the innovation process, of innovation itself, is already containing enough ‘loose ends’ to be woven together with the general notion of sustainable development. The nature of innovation is associated with the analysis of Joseph Schumpeter. In his eyes everything that contributes to bearing new products, and thus for the ‘creative destruction’ of outdated structures, is seen as innovation (Schumpeter, 1950). The process-view on innovation resembles this classical Schumpeterian approach and comprises the whole innovation cycle from the original idea to bringing a product onto the market. In contrast, the object-view on innovation focuses on the medium of innovation—the new idea itself, a specific new product, an improved production technique or new social behaviours. Among their characteristics, innovations are subjectively new and of economical value. They are the product of coordinated (and intended) action (e.g. R&D and innovation management) and bear an inherent uncertainty about costs, development time, results and utility. In a strict sense, the latter thereby is only valid for the R&D process itself (with the invention as outcome), whereas uncertainty has been greatly reduced at the time of the first economical application (innovation). What remains tentative is the actual implementation of the innovation (diffusion, adoption). The whole innovation process—invention, innovation, diffusion—can be understood as a process of uncertainty reduction. This may look strange at first glance, unless the innovation process is interpreted as an act of external complexity reduction (problem to be solved) to the expense of internal complexity increase (‘problem solver’). For the contemporary understanding of innovations evolutionary and incremental change is of significant importance. Innovations are less dramatic than often depicted in the popular media. They rather are products of continuous, long-term planning and don’t provide for ‘creative destruction’, but for maintenance and advancement. Innovations are not promoted by the few and isolated, but by the many and interconnected (Bullinger, 1994; Warnecke & Bullinger, 2003). Innovation in this heterarchic process-view is more of a complex social process, combining the efforts of many innovators. This means that innovation is taking place in social networks; moreover, these innovation networks are by themselves (social) innovations, fuelling more innovations. Therefore innovations, traditionally viewed

only as technical innovations, are inseparably tied to social and structural changes. This opens the door for stakeholder participation and emphasises the role of closure and opening of social negotiations (Weyer et al., 1997). Innovation becomes a multilevel process of social constructions in which both the actors' configurations (innovation drivers) as well as applications ("visions of utilisation") change due to their differing motifs, visions of the intended benefits and their reactions on unintended consequences. Social closure is established through stabilising and implementing innovations, whereas their emergence contains an element of openness. The three phases also rely on evolutionary mechanisms and in every phase different social networks are bearers of innovation. By integrating different actors into network interactions, behavioural and institutional innovators (Stakeholders, policy makers) are added to technical innovators, thus increasing the societal reflexivity of the entire innovation process.

Transformation path to corporate sustainability

Business is neither taking place in a vacuum nor in abstract markets. It is following a systemic logic, roughly following the elements of a fundamental paradigm, certain drivers for change, associated media of change, and the outcomes of this logic, feeding back into the entire logical chain, thus enforcing it.

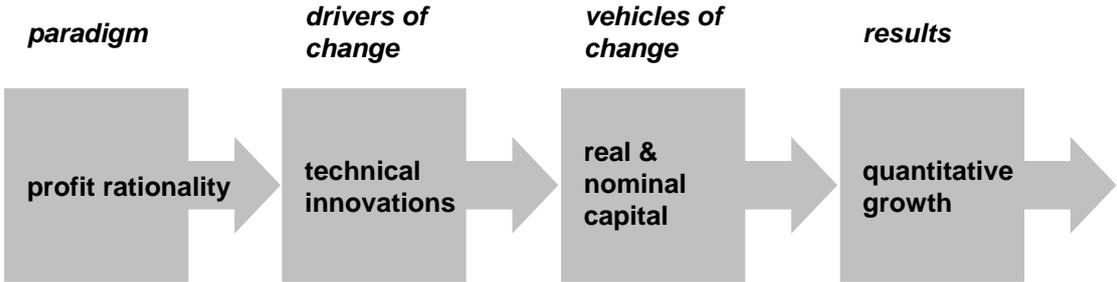


Figure 1: Traditional logic of the firm

The ruling paradigm is that of profit economics. According to Aristotle, profit is both means and ends in itself. On the other hand, household economics is about making profit for sustaining the system: the household itself. How can such a view, such a rationality become relevant for building the sustainable firm? The firm would then have to be viewed as a resource-dependent system in an environment of other resource-dependent systems and the resources themselves: the business ecosystem, which also includes other parts of society and the natural environment (Müller-Christ, 2001). What makes up a resource? In general terms, a resource can be viewed as a means to accomplish a given task. In business terms, everything that constitutes a specific strength (or weakness) is a resource (Wernerfelt, 1984). Moreover, the firm's competitive advantage rests on critical resources (Hamel & Prahalad, 1990). From sociology stems a dynamic 'linguistic' resource concept: resources as a structural property of a system, instantiated in action, both enabling as well as resulting from action (Giddens, 1984). At the core of any activity thus lies a resource ('facility'), constituting the power to act.

Sustainability interpreted as household rationality implies that sustainable business success and the sustainable firm relies on a sustained resource base: people, nature, customers, suppliers, competitors, social legitimation, public infrastructure, political stability, societal cohesion and peace. Instead of focussing on eco-efficiency (EMS) or moral discourse (CSR),

the reproductive ability of the firm's resource base itself becomes central. The success, or selection, criterion for the firm shifts accordingly away from it towards the viability of its ecosystem as a whole: in order to sustain its own business, the firm has to act in a way to enable its ecosystem to become sustainable; the firm's own viability is totally dependent on that. The "charming" side-effects of sustainability as household rationality now become clear. Not out of altruism (or submission to moral discourse) the firm will act in a sustainable manner, but out of self-interest. The upholding of the firm's ecosystem thereby is not something the firm can achieve on its own. It has to connect to other firms and other resource-dependent systems, some of them being resources for the firm themselves, in order to do so. In a business environment, this calls for value creating networks of firms, for closed supply chains and material-flow management (Industrial Ecology). Beyond the business environment, networking with stakeholders especially from civil society, but also governmental bodies, will play a significant role.

Traditionally, the drivers of change are technical innovations. It has been argued that a more holistic understanding of innovation and its drivers is necessary to facilitate sustainable development and truly sustainable innovations (Majer, 2004). Beyond technology, which remains to be needed for efficiency gains and developing substitutes, institutional and organisational as well as behavioural innovations are needed (tbi-innovations). Sustainable innovations, then, are comprised of

- the activity field of the triple-bottom line,
- a long-term perspective,
- embedding technical innovations in institutional and behavioural innovations (Majer, 2002),
- knowledge and value judgements of diverse stakeholders.

Sustainability innovations "happen" in stakeholder networks, which provide the learning space and experimental laboratory for holistic innovations. Here, managerial concepts like organisational learning, network and stakeholder management are of importance.

Closely connected to drivers of change are there media on which they rely on, while at the same time constitute them. Technical innovations under the paradigm of profit and efficiency have real and nominal capital as their media: they rely on the existence and transformation of real and nominal capital, producing (if successful) more real and nominal capital. Sustainability innovations, on the other hand, rely on network and social capital. The specialty of this type of capital is that no one can "own" it like one can own real and nominal capital. Moreover, a third party is always needed to produce and use it (Jansen, 2006). This echoes the described innovation process as open and interdependent. Network and social capital are both the foundation for these networked innovation processes as well as their outcome.

Real or network capital itself may be the results and foundations of innovation drivers, the results of the entire business logic are the results of corporate activities in general, i.e. the outcome of the system we call economy. Today, this "logical" outcome is steady quantitative growth, an accumulation of real and nominal capital, of "things", a depletion of the natural resource base, the decay of ecosystem services, the gap between rich and poor as well as between North and South. The transformational path towards corporate sustainability has a different "logical" output, another type of growth and that is in societal legitimation ("license to operate") as well as societal (holistic) innovation competence. This defines the ability to create sustainable problem solutions, new products and services, new institutional and

organisational arrangements and new consumptive behaviours within a network of diverse stakeholders, thus ensuring long-term reproductivity of the firm’s resource base.

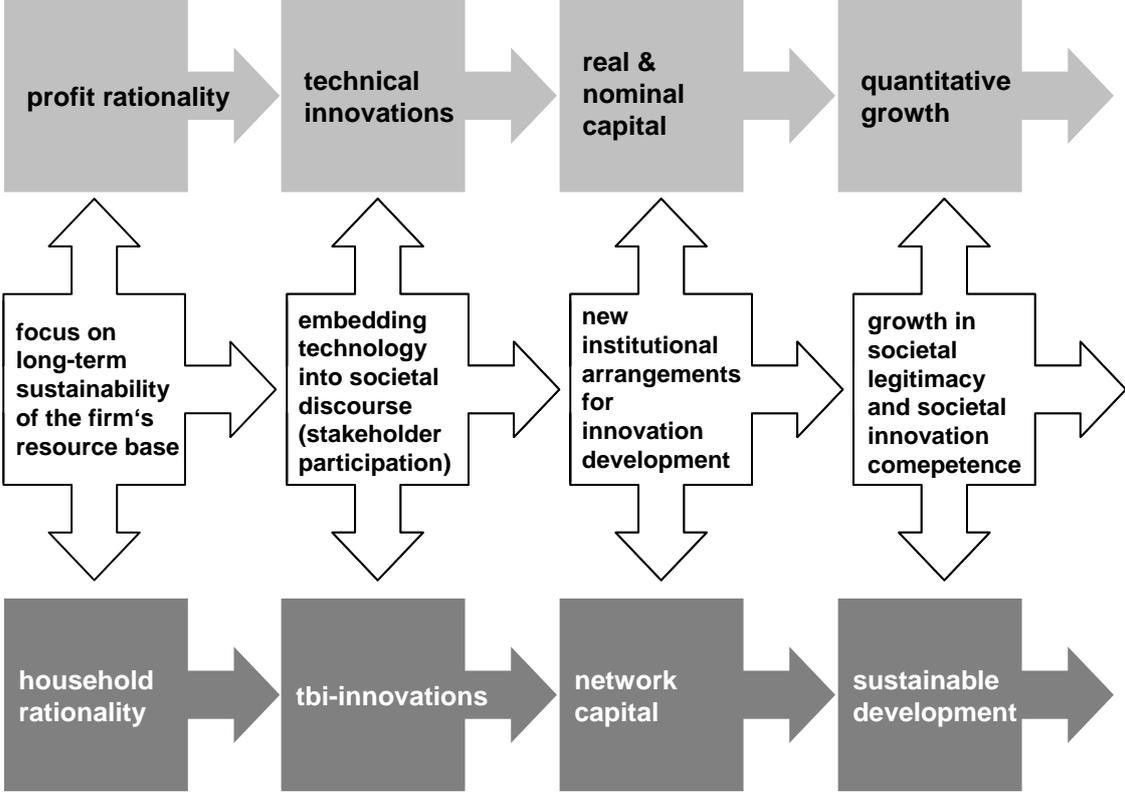


Figure 2: Transformation path to corporate sustainability

Possible applications

Instead of reacting passively on social-ecological pressures, this conceptual model of a transformation path to corporate sustainability is aiming at the core of the business model in order to turn these pressures into sources for future competitive advantage (Porter & Kramer, 2007). This implies change of the entire business, tackling the factual goal of the firm: production of concrete products for concrete customers. To focus on product development might be the most feasible start for transformation. On the one hand R&D activities are “one step” away from the day-to-day operations of the firm, and do not interfere with them. Measures aiming directly at line operations are rather risky and put at risk failing due to internal opposition of line managers (Cramer et al., 2004). However, on the other hand product development is located at the interface between customers, societal stakeholders, the firm’s production management and interfirm supply chain management. For firms, handling these different actors is not a new problem, they are already doing it. At the same time, the grounds for later change in operation activities (new productions processes, new products, new customers, and new partners) are prepared without interfering with them in their regular conduct.

Regarding the firm’s environment societal stakeholder groups can put pressure on the firm’s legitimacy, its “license to operate”. This societal pressure is just as relevant as competitive pressure from market rivals. With stakeholder dialogues this pressure can be channelled and

made productive for building up societal competitive advantage (Fichter, 1998). Stakeholder dialogues, as the starting point for new institutional arrangements for innovation development, are voluntary and open. They are providing for trust and are a necessary step in the creation of network and social capital. Their first and foremost intention is to open up the firm and its core processes (as well as its business logic), thus changing both its self- and other-reference. External standpoints can be incorporated into the strategic focus of the firm, into its core processes and products, embedding them into the wider societal discourses on risks and opportunities of business behaviour. Needless to remark, this is a top management task, requiring the management of the paradoxical situation within stakeholder dialogues: there is a mutual dependency on each other and therefore mutual interest to arrive at common grounds, but at the same time the mutual interest is not singular but pluralistic, shaped by different views and a heterogeneous discourse field (Calton & Payne, 2003). Traditional predict-and-control approaches in management science are of no use here.

Critical reflexion and outlook

The sketched path to corporate sustainability is, despite the efforts of grounding it within the reality of the firm, an ideal case. It resembles a prescriptive action and transformation model. Nevertheless, it is argued here that the most feasible way to start is right in the middle. Neither paradigm nor the results of business logic can be changed at once in actually existing firms, operating in competitive market environments. The elements in the middle of the path, on the contrary, are known to managerial theory and practice: management of interfirm networks, stakeholder dialogue, organisational learning and knowledge management, innovation management, network and social capital. As described above, the transformation path can be traced from already existing products and innovation projects. Innovation efforts would then need to be embedded in societal discourses about risks and opportunities already existing or initiated by the firm. These can be accompanied by a holistic view on innovation, asking questions about how institutional, organisational and behavioural innovations enable more sustainable technical innovations, or – and this might be unfamiliar in the traditional logic – if technical innovations can be made dispensable, e.g. by imitation, renovation or exnovation (Paech, 2005). Existing products would then not only be changed on the technical level, but on an architectural level, with added services providing for new and more sustainable utilisations (hybrid products). Of course, this is a big wager on the actual possibility of sustainable transformation: to facilitate sustainable change in paradigms and outcomes through concentrating on already known tools, measures and processes and their application in existing contexts. In other words: to change the game from within. Nevertheless it has to be noted that the existing business logic accomplishes something very similar. The focus on technical innovation and real and nominal capital generates quantitative growth, thus enforcing the existing profit economy paradigm. This is a vicious cycle with strong positive feedback (Forrester, 1961; Richardson, 1991). To turn this into a virtuous cycle leading to a more and more sustainable economy with sustainable firms is the intention behind this paper.

The construction of a sustainable firm is an evolutionary process, starting in the here and now of existing firms operating in an existing economy. With this paper a conceptual model has been formulated in order to define an “option landscape” grounded on a rich empirical-theoretical fundament. Its heuristic value is pointing future research towards integration, or better: synthesis of different already existing managerial approaches in innovation, network and knowledge management, providing a foundation for a sustainable stakeholder management. At the same time, the implications and interdependences of sustainable innovation processes and the building of network and social capital need further research.

This research cannot be restricted to management science or any other social science, but needs to be inter- and transdisciplinary, transgressing discipline boundaries and firmly grounding itself in the reality of the firm. Only thereby the necessary tools for the “field pack” for the long journey towards the sustainable firm can be developed.

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