CONTROLLING: A TOOL FOR CORPORATE RESPONSIBILITY
A SYSTEMIC APPROACH

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Abstract

Corporations use resources provided by society and constitute their economic support. Corporate performance and corporate products shape life style, societal structures, processes and rules. The interdependence between corporation, natural environment and society originates mutual responsibility. Increasingly authoritarian government, also in basically democratic constitutions, has one-sidedly emphasized the responsibility of the corporation. The argument embarks on the fact that the economic and business sector chiefly contribute to exploitation of natural resources and contamination of natural environment by operation and products. For changes based on technology and economy/business as Information Communication Technology (ICT) companies are also mainly held accountable. Companies, on the other hand, have often, if not neglected yet insufficiently accomplished, the social and environmental obligations of the enterprise. As history tells, the mutual responsibility has been noticed from the beginning of entrepreneurship. Leaving aside examples from classic times (as water pollution by processing purpurea snails), already in the early 19th century and, in waves, in the 20th century, the topic has been dealt with by both legislation and company efforts to make corporate responsibility as part of company policy. Attempts on the level of company information and control systems led, for example, to ‘social’ and later, in addition, to ‘environment’ balance sheets. Economically, beginning with the 80ths of the previous century, increasing competition and global change in addition stimulated a dynamic conceptualisation of ‘control’ and ‘controlling’. Control gradually was shaped as tool of ‘evolutionary’ leadership towards active and planned change. The creative and innovative attitude replaced the hitherto prevailing ‘accounting’ matching obligations to government, shareholders etc. Controlling, in tendency and as an ideal, has developed into a tool focusing on growth and future potentials. Control extends into, represents, and practices not only the responsibility of the corporation as a member of the society. Controlling also serves the responsibility for a sustainable, worthwhile future. The issue is expressed e.g. by the integration of leadership, management, strategic business policy, embodied in social and environmental reports. Appropriate tools for an encompassing controlling were introduced. As to be expected, in everyday practice of control a variety of often different manifestations of control systems can be observed. Personality, history, culture, developmental phase form control as well as the absolute/relative size or business branch the actual company belongs to. In its economic and business version the quest for responsibility can be seen as a paradigmatic answer to the actual pressures sustainable entrepreneurship is confronted with. First, the resource base from human resources (education on all levels), raw material, energy and natural environment become scarce or are endangered. Second, the outer environment grows tougher including markets, government, hedge funds or unions. Often the attitude to industry, business and working in companies appears grossly ignorant and in consequence sometimes hostile. Motivation and mobilisation are constrained ‘to do one’s job’. Third, competitiveness and future can be secured but worldwide (global and local) and by an evolving company, a policy aware of the responsibility to innovate continuously. Thus, controlling constitutes an
Prologue: Mutual Responsibility from Interdependence

As in developed countries and increasingly also in developing areas, the company on first sight represents the main institutional embodiment of economic performance. Its conduct is essential for, to quote Adam Smith, ‘the wealth of the nation’. From this point of view it must be seen, that the corporations and their environments, that is in particular the society, are mutually interdependent. Such interdependence concerns the co-operation of the corporation with its ‘inner’ environments as well as the co-action with its ‘outer’ environments. The inner environments encompass the technical, operational, but in particular the social and personal domains. The outer environments are constituted by the society in general and its various domains. The resources, processes and institutions of economic performance in the corporation itself rely on resources from the surrounding society: material, personal, institutional, natural environments; they profit from or are hampered by the societal infrastructure. In reverse the company, its rules and rhythms directly or indirectly shape the society. In times of rapid and fundamental change also this relationship acquires a dynamic quality. In consequence the corporation and its surrounding society, economic unions (e.g. EU) and recently global areas are forced to co-evolve or will suffer serious imbalances if not decline. As the corporation is responsible for their social and societal environments, so the society is answerable for the conditions under which a corporation can perform adapt and develop.

From the beginning of the industrialisation the close mutual dependence has been observed by industry and government as well. Early attempts focused on the company as a social institution, including the families of the employees and the surrounding communities. From the societal side statistics graduated into socio-economic accounting, for example of the GDP and its constituting factors. Early attempts in industry going back to the first decennia of the 20th century mainly gave short notes ‘below the balance sheet’ concerning the employees, their social background and the local community. From the mid 50th of the 20th century reports could be found often accompanied by quantified data of a ‘social balance’, also mostly restricted to the inner environment and sometimes stating the company performance for the society. Questions concerning proper indicators and quantification could but incrementally and partly be resolved. Only after WWII environmental issues became part of the responsibility agenda. Generally they were handled by companies in a similar way as the social ones.

With the relative decline e.g. in Germany the social responsibility of the company has been expanded to the communal and national economic domain. Companies transferring business activities into countries with cheaper wages face the image of defectors. Positively and generally it is expected from business that it revitalizes economic/social fallsows by entrepreneurship and innovation - and balances the failures of governmental policy. In emerging countries as India and South Africa companies more or less are forced to take over the development of the community they are working in. That ranges from infra-structure (housing, schooling, medical aid including aids) consulting the local government, where central government fails. Active investment and innovation are expected.

In the early 80th an increasing awareness of environmental challenges – natural, social, communal, societal – driven also be ‘green’ and like political movements - led to new
demands on environmental company reporting. Quests were met by growing social and environmental concern in the corporations – leaving aside here the response from the anthropologies. As earlier social issues environment became favoured domain of ideologies and incompetent politicians - one had to be only against pollution and the bad capitalistic companies. Of rather different origin, topics from technology to the personal/social practice and policy were discussed and increasingly professionally and also reported. For example: employment policy, the corporation as part of the community, stakeholder against shareholder value, sustainability of company policy, preservation of natural environment (prevention of pollution before or after the pipe), exhaustion of environmental resources, interference of government. As countermeasures the cultivating of ‘relations’ gained momentum: public, government, union, employee, customer, competitor (!); [in Germany Works Council (‘Betriebsrat’) and Works Constitution ‘Betriebsverfassung’]; and so on. Typically these endeavours reflect as well responsibility as enlightened selfishness of the companies or strategies for sustainable development, caring for favourable environmental conditions also politically for future company development.

In the course of globalisation responsibility of the corporation expanded from the national market to international operations. Well known are the cases of children’s work, contaminated or in generally poor working conditions and too low wages. E.g. the green movements, NGO’s and ideological groups sometimes developed into pressure groups to enforce ‘responsibility’ by boycott and image destruction. On the global level the competition for energy and raw material resources leads often to new form of exploitation in emerging countries. Typical seems the case where dictatorships are more or less openly supported and bought to gain favourable contracts. If at all, the population profits but in a very small degree.

1. Controlling the Enterprise System(s)

The above brief and non-conclusive overview sets the stage for the recent development as far as the topics and the focus of reporting and controlling are concerned. Reporting no longer took place only below the balance sheet, but graduated into specific quantified ‘environmental statistics’ or environmental balances. Decisive proved the gradual development from the traditional ‘accounting’ focused on the past performance, to ‘planning and controlling’ for the future. More precise: with the rise of modern controlling practices the focus of reporting shifted from the meticulous ‘accounting’ following governmental prescriptions (protection of the shareholders) to ‘controlling’, directed to potentials of future development (long term protection of the stakeholders). On the base of EDP assisted controlling Management information systems emerged. This approach is by nature open for a holistic, comprehensive, potential and future oriented view of the company. Company reporting and planning was supported and reinforced by controlling systems, in the beginning following the comprehensive American example. Methodically/systematically it was backed by the sophisticated application of the systems approach to the company as well as concomitantly to its social and natural environments. In addition, the focus shifted from the quantitatively accountable results to the qualitative factors influencing, from the symptoms the causes (causal networks) of these results, enabling causal analysis backing causal responsibility. Quality, Continuous Improvement, in particular Continuous Innovation, Value Analysis, and other aspects, became essential parts of the controllers set of instruments and report. They represent operational functions which are horizontal and dynamic’ in complement the ‘linear’ operations view in particular determine the long term and over all efficacy of the operations, Following the systems principle: ‘process before structure’, operation and in
general business processes were analysed and optimised. From the process-oriented view in tendency organisational structures were re-designed. Methodically the ‘Soft Systems Approach’ directly and indirectly provided appropriate methods. Globalisation and the accompanying challenges stimulated the procedural (e.g. virtual, temporary, project organisation) design of organisation. The cultural aspect of the company is addressed from two sides. The need for a creative innovative atmosphere demanded an according cultural company environment, in particular cultural co-operation and leadership, expressing the cultural responsibility of the corporation. Mergers and world wide business activities had (responsibly) to integrate different company, business and national, ethnical and often religious cultures for co-operation.

Complementing the traditional accounting as well as integrating strategy planning and reporting on basic world wide environmental conditions, controlling developed a host of quantitative and qualitative instruments becoming the professional nucleus of corporate responsibility. They emerged as a differentiating and holistic system of informational description system. They supported leadership, management and control in general, but gave rise also e.g. scorecard, benchmarking, expectance on experience, portfolio, scenario techniques etc. Details are elaborated in any controlling textbook.

If in the beginning but quantitative and in a wood cut fashion, accounting embodied simple forms of informational modelling (in Euro) of the company performance. Planning incorporated simulation on the same restricted base, projecting the models of future states. The combination of the systems approach to the company and the factors influencing its base and performance gave raise to sophisticated simulation models analysing the companies’ potential futures. Responsibility here takes the form of securing the sustainability of the company existence and growth. It is, in particular, concerned with the human and natural resources, with the immediate stakeholders and the society as an entirety.

2. Integrated Guidance, Leadership, Control and Management

Controlling in the above described quality has become an essential integrated function of Top Management. Control represents mutuality, interdependence, comprehensiveness, and (requisite) holisticity. It embodies the mutual responsibility between the company as the, in many ways representative, institution of the society, and in reverse the fact that the society relies on a healthy economy. Economy in turn is carried by profitable and socially responsible corporations, including their world wide networking. It is an interesting question, whether the information, evaluations and resulting prognoses, assumed potentials, derived action and option spaces for policy can be integrated to those which are produced by the various private companies, think tanks and official institutes.

According to the characteristics of the systems to be controlled, controlling will be differently constructed and integrated into the overall management. It will vary in governmental institutes, social institutions, and business companies. Size plays a role as well as the targeting or the particular phase of development e.g. of a company. A start up needs a controlling different from a well matured company, which may be faced with problems of missing innovative zeal. It must be repeated here that control or, in business, controlling, is not only a paradigmatic tool, but also an integral part of leadership. Control means always not only operation and, on sight, investment into to future. It implies crucially strategy considerations for the future; its quest being to prevent closing future potentials but to look out and to open them instead.
In fact controlling has acted as an integrating force, amalgamating political guidance, leadership, controlling (in the restricted meaning here) and (operational) management. They represent the aspects policy, comprehensive control of preconditions and performance, human resources and operation. They all are parts of a holistic institutional learning. Their close cooperation does not preclude, but in contrary presuppose that each function operates, if connected yet focused and with sufficient free space in its own domain. From the beginning controlling systems need to maintain and regain a sophisticated balance between the aforementioned overall and comprehensive functions of controlling representing the company as an entirety and functions oriented specifically to actual units, aspects and performance. That is valid also for top management itself. The controller is the (most?) important source for information and knowledge (also knowing?) of the CEO. He is not the secret top management himself. Contrariwise, he has to avoid all conduct that may give rise to suspicions of that kind.


However gravitating differences may turn out in the actual case, decisive shared qualities also need be acknowledged. Salient quests common to all companies and control functions in living and social/societal systems need be conformed to. As aforementioned, control needs be understood holistically, including all aspects of the life system; and its functions as directed to survival, development and thriving (or maintaining competitiveness etc.) in the future. Such holisticity and future orientations are essential features of systems control in times of rapid and fundamental change. Not only must flexible passive response to challenges be possible. Important is active, continuous learning, individual and institutional, to adapt long term to change in the relevant inner and outer environments. More important, control needs actively to scan the expected future for weaknesses, potentials and chances to realize them. The controlling tools mentioned above carry out these path paving and creative functions. Controlling acts as a tool for active and learning systems evolvement. Controlling systems themselves accordingly are designed as systems learning and supporting learning. To this end factors significant for the long term company development are identified: productivity, flexibility, investment, growth rate, new products, and specifically innovation. Controlling systems use quite sophisticated index systems to depict the survival and development potential of the corporation. Not least this holistic approach opened the awareness to cultural – and even religious factors (Islam) - and how to meet the responsibility to acknowledge these ‘environmental’ problems in advance and not when they are already pressing. In analogy to life systems controlling systems are designed as anticipating systems.

The evolutional turn of controlling functions must be seen as a response to the rising challenges and dangers of change. In reverse the quality of the control determines the chances of a controlled system to meet the demands of change sufficiently early enough to be able even to profit from them. (Who comes late is punished by the market and the competition). Controlling systems especially support the necessary base of a grounded, active corporation policy. To that end the actual controlling system must not be rigid an inflexible. It must be able to adapt itself to altering preconditions. It must be open to acknowledge, observe and control new factors not accounted for so far. It must actively control and develop itself in the mode of meta-learning. In reverse obsolete structures need be discarded. Control itself need be flexible and thus an instrument furthering a learning discourse. Or in the negative: it must not degenerate into bureaucracy, rigid rules and regulations closing down any space for self-
organisation, stifling option/action space and motivation, impeding mobilisation. The adaptive, innovative and evolving company rests on the human resources it owns and on the ability to set free creative human potentials. Creativity, innovation needs a free action/option space, innovative leadership and control; that is leadership/control, which systematically encourages and sustains human creativity and inventiveness. If necessary, it must actively remove existing discouragement and other obstacles. Such motivation and mobilisation of the employees appears a task of personal leadership as well as of organisational and material support, devising an open atmosphere.

In terms of systems: Change demands not stability, but ultra-stability of the life carrying performance and exchange processes and the structures supporting. Control systems need accord. They should give orientation, information on dangers and chances, on potentials and shortcomings, and on the option and action spaces to meet them. Control ought to provide and keep the (actually) right balance between rules securing sufficient stability on the one hand and free space for self-organisation on the other hand. Life systems co-live and co-evolve with their environmental conditions. Thus each life unit i.e. the corporation is responsible for itself, but also for the co-living systems and for its own as well the common environments. Control must be designed to meet this responsibility. It can be done but from a comprehensive, holistic and future oriented stance.


Rather regularly ‘Concepts of Corporation’ are designed and duly re-designed with changing preconditions for corporation performance. Let us sum up the above argumentation: the corporation in an ever more differentiating and finer networking is conceptualized in analogue as a living system, evolving and therefore as future oriented and anticipating. Seen itself as a life unit, the concept includes the environments the enterprise co-evolves with: inner environments and outer environments. Corporate responsibility connects to the basic commandments for life systems originating in co-evolvement. It concerns the proverbial TIT for TAT: let live that you can be alive yourself, grow and rejuvenate. The ethics of business related to the concepts cannot be discussed here, but they necessarily must evolve accordingly.

Life is learning; controlling in its comprehensive form essentially is learning, too. It needs to be responsible learning, and therefore must be continuous learning, co-learning with all its environments. This necessity now, as intent and quality, forms the shortly the aforementioned tools of controlling, accounting systems and the qualitative/quantitative tools complementing accounting and statistics.

A first purpose behind is directed to derive short, middle and long term auspices from the frameworks of reporting. From accounting, for example, the cash flow as indicator one shows the short term survival capacity. Lack of cash means bankruptcy. The second indicator, operation and overall profit, signifies the capacity to provide funds for future oriented investments. Potentials open in the future, third, are derived from networking particular indicators including qualitative ones from all functions of the company performance.

A second instrument focuses on the state of performance as compared with optimal possible states and that accomplished by the best competitors. In benchmarking optimal performance is analysed and compared with own indicators. The emphasis lies on the argument that it is not sufficient to be well positioned at the moment. The optimal position must be attempted. The company must not be but good, it must be excellent. There is always a gap which continuously ought to be bridged. From the controlling side the so called cross-
over functions support: namely quality and total quality, logistics, steady improvement, value analysis and others. Enmeshed in those and other controlling instruments is the critical view to the future. Planning, for example, distinguishes the short ‘controller’ period usually of one (calendar) year focussed on the generation of ready cash and profit. Tactical planning spans the time span of investment – for example 3-5 years. Strategy planning extends to product cycles, usually redesigning (up to 3 years), major new products (5-10 years) and radically new technologies (as killer technologies) around 10-20 years. A case in point comes as the electrical tube followed by transistor, microprocessor and eventually nanotechnology. To decide on the appropriate policy the enterprise must position itself on each of these curves at a given time. It may at the actual moment stay at a short-term declining curve, but a rising long-term curve. Naturally the time spans depend from the branch the enterprise belongs to. From the resource aspects long range planning centres on energy, raw material, but also on qualified supplier market, on human resources (shortage of qualified engineers at the moment), environmental legislation (car exhaust), etc. The results serve both as a constraint and as a chance, in any case a directed necessity to innovation. The framework for this kind of exploration of future potentials is given by assumptions on local as well as global general development of wealth and power distribution (India, China), societal states of balance or disturbances, in particular gaps (two-third-society), worldwide oil and gas resources and so on. ‘Hard’ facts are assessed from ‘Soft’ facts, propensities and trends extracted. Behind intricate modelling and often highly developed simulation instruments (systems dynamics, agent based, swarm etc.) are employed. The resulting information networks, for example world wide business reporting, must be continuously updated. They provide no fixed base, but grounded information on structured probability fields, frames of references concerning what the potentials are likely to develop and which action/option spaces open for policy decisions.

From the systemic point of view the quintessence of all controlling approaches and controlling instruments amounts to, to repeat, a comprehensive learning and meta-learning. Where is the enterprise at stake positioned, which are the potentials and the resulting action and option spaces? What and under which presumptions should be decided? Which will be the consequences for the existing potentials? Will new ones be opened or the actual ones closed? Concerning policy: which are the best modes, point of times and intensities to interfere? Which will be the consequences not only for the company but for its stakeholders and relevant environments? In terms of systems controlling as a learning approach is used as a means of ‘focusing and targeting’ to cope with complexity and uncertainty (of the future as well as of the possible/potential reaction of the relevant systems).

Guidance, leadership, controlling and management; or in other words policy, strategy, tactics and operation can, if much simplified, be depicted in an integrated model of controlling. The procedural logic (process before structure) begins with orientation, scanning the environments for potentials and chances. On that base targeting, option and action spaces are identified. In the next step they are transferred into measure networking ‘plans’, usually within the company planning systems. Implementation results are compared with values planned, the difference stated and evaluated as to their causes. It is decided then what kind of interference seems feasible, and whether the information base of planning needs to be adapted for the next controlling cycle. In short: assumptions are made, actual results compared with planned values, and the difference used for learning interference and adaptation for further controlling.

Controlling adopts a heuristic quality. This concept of learning goes back to the early 60th and the author’s first position in company planning and control and christened Guided Evolutionary Control Learning (GECL). It should be stressed here that the learning cycle
proved a success in well-established companies. It may also well ground business plans for start-ups, and complement the customary financial planning instruments. It provides also an excellent base for project-oriented planning.

Epilogue: Controlling for Motivation, Mobilisation and Commitment

Mostly under the title of ‘Integrated Management’ the integration of the different aspects of leading a company has been emphasized: Guidance and Strategy, person-oriented Leadership and economically oriented Control. The concept of controlling as presented above does not try to add a conceptualisation of ‘Integrated Controlling’. Departing from the point of entrepreneurial and corporation responsibility, it rather intends to make visible that controlling necessarily needs to permeate all aspects and levels of an integrated management. Even more, it can be seen as the connecting glue, the base of company (institutional) leaning. This approach expressly includes the human side of the enterprise, the controlling of human resources. Often ‘controlling’ is depicted as the economic, the business part of integrative management and as such separated from the complementing ‘leadership’. To discern so under practice auspices is usual. The practice signifies, however, less a practical separation than a focus, again. It constitutes in the personal department an institution where a specific responsibility for the personal administration (mostly just that) can be assigned to. Similarly, controlling as practised in the ‘controlling department’, focuses on economics.

Controlling as a corporate learning concept as above includes the human resource aspect. The necessity leads to the function of personnel controlling. In addition, controlling necessarily controls human performance and human propensity to act, to be creative, to co-think or just to do the job. Too tight controlling may leave too narrow space for self-organizing when optimizing processes. It may dampen motivation and demobilize qualities and capacities of employees, not to mention the propensity to self-responsible action. The first rush of controlling practices has clearly shown such negative effects. Negative effects cause abandonment of the personal responsibility for the quality of personal performance and even more for its improvement, or the avoidance of negative side effects. Tight controlling may well contradict any movements for incremental continuous improvement, qualifying as the foremost killer of creativity and innovation. Sometimes the impact is not seen or neglected, which the measurement values and scales exert, by which the performance of the employee is assessed and made the base of his or her remuneration: wage and bonus. The connection does not apply to higher echelons only, for example whether and in what degree management may participate in the success of the company and what the consequences are, e.g. concerning the long term responsibility and commitment of the managers. Any measure stick by its specific design shapes the optimizing performance response of the measured person. When in doubt, the position on the measuring scale is optimized, not the performance itself.

Again a balance must be struck between regularity, actual measurement on the one and stimulation on the other hand by free space and challenge to improve to the best, not only to the acceptable performance. ‘Hard’ systems approach will provide the technical and economic data for optimal measures indicating optimal performance. ‘Soft’ systemic knowledge e.g. on performance behaviour will complement concerning motivation and mobilization in particular of the creative capacities of human resources.

Selected References
The paper rests on the authors practice experience from controlling, teaching and consulting. It appears futile to select references from the abundance of literature and personal contacts. I acknowledge my indebtness to all sources. The vital structures of the paper are my own responsibility. In case I overlooked a particular debt I shall be glad to be informed and to comply accordingly.

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