



The Impact of eBusiness and the Information Society on 'STRATEGY' and 'STRATEGIC PLANNING': An Assessment of New Concepts and Challenges

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Abstract. The current era of Information, Communication and Media Technologies (ICMT) has ushered in the era of eBusiness and the Information Society where traditional managerial paradigms are challenged and new business models are sought. One central area of managerial discourse is STRATEGY. Based upon a pilot study with leading European managers, consultants and academics, we offer a structured perspective on what may be the shape of things to come for STRATEGIC PLANNING in the context of eBusiness and the Information Society. Normative implications are explored.

Keywords: Information Society, eBusiness, strategic planning, strategy, knowledge management, media applications

1. A call for new managerial paradigms

Technological, cultural, political, and social consequences of eBusiness and the Information Society have been prophesized and analyzed widely in the academic, political, business, and mainstream press. These developments have lead many pundits to call for “new paradigms” responding to a “growing unease with existing paradigms of management and organization” [52]. This has ushered in a “desperate quest” for new approaches [12] or new paradigms [20,59]. The dissatisfaction with canonical organizational theory is partially a response to novel organizational models resulting from recent developments in information technology and telecommunications. Despite substantial progress, many factors of Information, Communication and Media Technologies (ICMT) based business models remain poorly understood. Hence, much of the need to expand what some view as rationalistic and unimaginative perspectives that dominate managerial studies to encompass virtual or electronically mediated and eBusiness based organizations is driven by the assimilation and application of ICMT by companies and customers.

However, even the earliest proclamations of the information economy have been plagued with perplexing ambiguity in delineation and content [37]. With questions of definition and semantics set aside, we believe that connotations of the term ‘Informa-

tion Society' – in which eBusiness potentials are embedded – point to some important changes in the socio-economic fabric of our historical era as well as to changes in the area of STRATEGIC PLANNING as it is performed in most 'old and new companies' in the New Economy. Specifically, developments of information, communication and media technologies, and the consequent emphasis on information and knowledge based industries, will redefine our current modes of industrial and economic organization.

The 'Information Society' has been characterized by: (1) ease of information access, (2) interaction richness, and (3) low interaction and information costs [26]. The concept of the information society is the product of the convergence of several distinct forces in the 1990s. Conceptually, these include: rapid technological advances in the information technology sector; the widespread recognition that computers can be used to communicate information, not merely process it; the spread of simple, inexpensive and powerful computer networks; and an economic climate with risk tolerant capital willing to finance venture capital investments into technology based upstart companies. While the Internet was first conceptualized in 1974 as a "network of networks", the building blocks for its exponential growth were not fully in place before 1995 [27]. These components were (1) the diffusion of personal computers to businesses, universities, and homeowners; (2) local area networks made cheaply available by the commoditization of Ethernet technology; (3) the maturation of the standards used to connect disparate communications networks, permitting address assignment, email messaging and file transfers; and (4) the availability of browser technologies that enabled a common, easy to use interface via hypertext markup language. This led to the growth of the Internet, which grew from a 313,000 hosts in 1990 to 43,230,000 hosts in 2000, with an estimated 110 million hosts in 2001 [46].

Moreover, the information technology sector constitutes an ever growing percentage of the US economy, indicating a growth in the significance and frequency of the product use in society. For example, by the year 2000, exports of IT products accounted for 29% of all US exports [32]. In addition, information based products such as television, motion pictures and printed media constituted between 50 and 80 billion dollars in of the domestic US economy in 2000 [9].

Given the significance of these developments, the main research question of this article is what effects will the evolution of the Information Society and the diffusion of eBusiness have on STRATEGIC PLANNING processes in today's organizations?

To address this question, we assume that these changes will have permanent and fundamental consequences for the definition, analysis and application of STRATEGY and STRATEGIC PLANNING as they concern the following four dimensions: (1) the design of legal frameworks and governance structures, (2) resulting management systems as well as (3) mission and policy statements, and (4) strategic programs. We embarked upon a study of current working models on the European continent to trace the challenges of working professionals focusing on models of economic organization, institutions of ownership, accountability, and patterns of incentives and control within these four sub-areas.

One of the primary objectives of this exploration was to establish some distance from the popular discourse surrounding the Information Society, New Economy, and eBusiness, and revisit the banalities and complexities of the clerical and professional workplace. Hence, our task was to ground the impact of eBusiness and the Information Society on strategic governance and control through a focused analysis of what was actually happening in business and industry. In order to address the phenomenon in a direct and timely manner, we designed a research agenda based upon individual interviews conducted with recognized European experts from academia, industry, and consulting.

In this paper, we use the term 'Information Society', although it may be less fashionable or narrow than the terms 'New Economy' or 'Digital Economy'. While we do not contend that the terms are identical, we do find ambiguity in the application of the expressions. Consequently, we refer to the 'Information Society' as the increased application of ICMT by companies as it relates to all dimensions of eBusiness as well as the management of internal, organizational processes.

2. Research background and design

Our study originated under the auspices of the MACIS project (www.hellasnet.gr/macis/) conducted by six top European business schools. The purpose of the project was to develop an innovative, but general management curriculum for the Information Society, focusing on the traditionally predominant areas of managerial education. STRATEGY and STRATEGIC PLANNING are but one of these areas. When discussing the entire realm of strategic governance and control, we do not distinguish between business STRATEGY in companies that operate in traditional sectors with tangible production and services, and those that are active in new business domains driven by the availability of new technologies and electronic mediation. While impacts on corporate control and governance will differ mainly as a matter of degree, it is clear that economic systems will be more impacted in those sectors where products and services are digitizable and complete business transactions are executed via electronic infrastructures.

2.1. Strategic planning

Where a definitive description of STRATEGIC PLANNING processes is difficult, research commonly recognizes conventional methods or types. These include basic strategic planning, issue or goal based planning models, alignment models, scenario planning, and organic or self-organizing planning [57]. Given the heterogeneity of strategic planning processes, opinions vary widely as to its optimal method and benefit. Multiple studies have concluded that there is little correlation between the presence and type of strategic planning processes, and financial performance [17,27,34,44], where other research has found support for the positive impacts of strategic planning on financial performance [25,43,46,58]. As such, research has moved away from a dichotomous view of STRATEGIC PLANNING, towards a greater focus on its benefits that are not easily identified in financial metrics. Many have proposed that STRATEGIC PLANNING improves the

fit between the organization and the external environment [15], where others have suggested that planning aids in the identification of future marketing threats and opportunities, elicits an objective view of managerial problems, creates a framework for internal communication, promotes forward thinking, and encourages favorable attitude towards change [21,28,53].

Variance in the style and character of STRATEGIC PLANNING is best understood by following the evolution in the strategic management literature. In the early discourse in strategic management, scholars generally gave equal attention to firms' strengths and weaknesses versus opportunities and threats in the external environment [2]. Porter's (1985) work emphasized external, industry based positioning issues, a conceptual focus that dominated strategic planning until the publication of Wernerfelt's "A Resource Based View of the Firm" [60], and Rumelt's "Towards an Strategic Theory of the Firm" [45], followed by important works by Barney [3,5], amongst others. Disappointment with the long range planning tools predominant in the 1970s led to an atmosphere receptive to the main argument of the Resource Based View (RPV). This concept states that firms are essentially different, and that the analysis of strategy must begin with this fact, rather than aggregate competitive forces. However, the RBV has proven to have less prescriptive value than originally anticipated. Recent discourse in the field emphasizes its lack of predicative ability, its irrefutability as well as its tautological application in theory and practice [4,39,40].

Thus, while no consensus has emerged concerning the characteristics of STRATEGIC PLANNING processes, influential works by [41,42,57] highlight several salient characteristics of STRATEGIC PLANNING techniques which include: (1) the degree of internal orientation of the system, (2) the degree of external orientation of the system, (3) the level of integration achieved within functional departments, (4) the extent of key personnel involved in the planning process, and (5) the extent of use of analytical techniques in addressing strategic issues [24].

Accordingly, we have adopted a fairly general definition of STRATEGY following [7] and have directed our interest into four major antecedent dimensions of strategic discourse that address internal, external and organizational characteristics that inform a variety of strategic planning techniques. Our dimensions are: (1) legal frameworks and corporate governance, (2) management systems/managerial control, (3) missions and policies, and (4) strategic programs. We suggest the following framework to structure the relevant areas from a STRATEGIC PLANNING perspective within an organization (see table 1). We investigated how the Information Society will influence the future shape of these specific areas as they relate to the practice of STRATEGIC PLANNING.

Our findings are based upon a series of individual interviews and workshops with leading members of the European business, consulting and academic community. We arranged two interview rounds with ten participants each. All participants were highly ranked in their companies holding the position of a CEO or a Chief Strategic Planner. Both interview rounds were organized as a set of individual interviews followed by a three-hour collaborative workshop with all ten participants. During these workshops,

Table 1
The area of STRATEGIC PLANNING in a corporate perspective [7].

Level	Structure-oriented	Action-oriented
Normative	Legal framework corporate governance	Missions/policies
Strategic	Management systems managerial control	Strategic programs

the participants were divided into four brainstorming groups according to the four topics outlined in our framework.

Our basic assumption was that any participant had some general idea regarding the meaning of 'Information Society' and STRATEGY. Having some definition in mind, our leading question was: How will business STRATEGY and STRATEGIC PLANNING change due to existing or impending developments in the Information Society? In other words, has strategic planning been affected or redefined through the ensuing growth of eBusiness and the Information revolution?

Following our overall question, the task for each workgroup was to brainstorm on the changes caused by the Information Society in the assigned sub-dimension of STRATEGIC PLANNING. After the presentation of the workgroup results in the larger forum, participants were asked to comment on any of the other workgroups' presentations. The results were aggregated and sorted according to the explicit questions, as well as the themes that emerged from the responses. These conclusions were audited by an external participant of the research team to ensure the validity of the patterns, themes and conclusions drawn.

3. Results

Although our survey investigated the effects of eBusiness and the Information Society on STRATEGIC PLANNING according to the four dimensional framework, a number of predominant themes emerged that transcended each individual dimension. Our discussion begins by presenting these over-arching themes in section 3.1, and continues with an analysis of the results of each sub-dimension in sections 3.2–3.5.

3.1. General themes

Firstly, ICMT continue to erode geographic boundaries. Not only does this have ongoing ramifications for production and sales strategies, it also complicates issues of corporate ownership, governance, regulation, and taxation. The reduction in geographic boundaries is concurrent with reductions in temporal windows, where we see a higher frequency of ad hoc and short-term corporate structures and legal entities.

Information continues to proliferate and supports a higher level of general social awareness. Within organizations, it becomes easier to register all forms of information,

permitting the continued empowerment of line level employees without sacrificing centralized coordination. Managerial control and feedback systems are changed by new forms of media which revolutionize the standard reporting schemes and facilitate the organic diffusion and growth of knowledge within the organization.

Employment markets are also influenced by these reductions in temporal windows, where more and more employees work under free-lance, short-term agreements. Reductions in temporal perspectives are manifested in the accounting profession and capital markets, where the 'going-concern' consciousness is replaced by a new sensitivity towards short-term, finite corporate entities and business ventures.

Finally, STRATEGY is embarking upon a new era of customer focus, enabled by technological developments that permit the registration of customer preference and price sensitivities. In tact with increasing expectations from customers, companies must take great risks in terms of developing new ways to provide value added products and services to customers. As such, we believe that the trend of experimentation and risk taking will continue to grow.

The more detailed discussion below follows the four-dimensional structure presented above and concludes with some general observations on the changes foreseen for STRATEGY in the information age.

3.2. Impacts on legal frameworks and corporate governance structures

The participants were asked how the evolution of the Information Society would affect corporate governance structures. The responses converged upon nine specific themes which are listed below. An aggregated discussion of the responses follows:

- designing manageable rules for virtual organizations (contracts 'versus' trust);
- developing legal frameworks for tele-working, tele-cooperation and tele-learning;
- creating tele-centers as a new type of organizational structure;
- reconsidering decision and responsibility systems;
- reconsidering control structures, patterns and types (new rules for corporate communications and internal reporting);
- increased social awareness of economic organizations;
- increasing social responsibilities by incorporating various stakeholders into Intranets;
- finding a balanced trade-off between security and efficiency of organizational systems and their activities;
- managing appropriate information and integration of shareholders.

3.2.1. Dissipating geographical boundaries

The Information Society will increasingly lead to organizational structures that are independent of location and time (often referred to as 'virtual organizations'). Traditionally, organizations have been defined on functional and geographical dimensions. This functional dimension seems, in many instances, to be increasingly replaced by 'process

orientation'. But many geographical constraints have decreased due to innovative information and communication technologies. A shift from geographical centralization in headquarters to central and de-central information loci can be observed. Nevertheless, a certain level of 'centralization' will be necessary to maintain a desired level of organizational cohesion and identity. Without any organizational nucleus, there would be no difference between integration versus purely market-based economies, and the benefits of coordination, scope and scale may be forfeited.

Thus, while positive examples demonstrate the benefits of tele-work, the tradeoff between personal interaction and efficiency remains in many traditional work environments. Still, it remains difficult not to have employees nearby. Company examples have shown that leading managers who changed their location of living have subsequently seen the need to leave their company because of the 'distance' between their parent organization and themselves. This 'distance' is usually considered to be a mental distance that, for a good part, results from a spatial one.

The general demand for increased flexibility requires increased mobility of persons, goods, and minds. The demand for 'mobile' personnel will not be reduced due to location-independent communication technologies. The mobility of goods will be required wherever non-digitizable goods are produced and sold, across large regions, whether these are city districts or continents. The mobility of minds, on the other hand, will probably be the hardest to achieve in the effort to prepare for the Information Society. While the need for mobile minds is widely accepted, operationalizing the concept remains an elusive task.

3.2.2. *Dissipating temporal windows*

There is an acute need to develop new legal frameworks and governance structures for virtual organizations and international networks with finite duration. The main issues in this context include:

- appropriate accounting principles that reflect temporary transactional relations concurrent with enduring legal liability;
- adjusted liability principles that provide a sound basis for claims and reclaims with a focus on intangible and volatile products and services; and
- variance in national and regional laws whenever the country of origin is difficult to determine or ambiguous.

The issue of decreasing attention spans of the capital and employment markets is a close cousin to the problem of intangibility. While equity markets have always grappled with the problem of evaluating and pricing future income streams, the accounting and valuation of intangible assets remains a perplexity for the accounting profession. The valuation of intangibles and knowledge based assets is problematic, as their value, like any physical asset, is always dependant upon management's ability and the market's willingness to realize that value at any given time. Accountants of physical assets have resigned themselves to use invoiced value as the correct statistic of an assets value, and have left to speculation whether this statistic is under or over estimated to the capital markets.

However, examples of shares which, in 1999, were trading at 30+ times book value were historically unprecedented, and critics questioned the institution of traditional accounting practices. Thus, numerous experiments have been attempted with knowledge based accounting principles. However, the lack of even an invoice as an indication of the value of knowledge-based assets exacerbates the uncertainties to a degree that may condemn them to a purgatory of dispute.

While companies have to accept the given legal rules in their specific national environment in the medium run, the long-run challenge will be to develop the 'best' legal framework and governance structure that accommodates rather 'unclear', 'ever-changing', and rather 'fuzzy' constraints of national legal practice. On this level, two important operational variables include: (1) changing current managerial mentality, and (2) constructing legal frameworks and governance structures that accommodate such ambiguity.

Many well-known and generally accepted business activities are – practically speaking – already executed without respect for legal convention. Nowadays, we increasingly observe silent agreement on 'breaking existing rules' for the sake of feasibility and mutual benefits [31]. The more that business environments change and patterns of doing business are adapted to shorter business cycles, the more the value and the feasibility of long-term contractual frameworks will be questioned. Phrasing it even more drastically: As the concept of virtual organizations and institutions gain importance, the greater will be the disregard for static structures, management systems and written rules as codification of accepted managerial procedure.

3.2.3. Growth in information and social awareness

An increase of social awareness is required for a successful transition into an Information Society. Strategic decisions, especially of large organizations, inevitably involve social as well as economic consequences [33]. Implementing IT-based modules to optimize the information and workflow generates social changes: places of work need to be re-defined, new demands on employees and families are made. Supporting, motivating and retaining existing personnel is one of the main tasks of the 'New Economy' managers.

3.3. Impacts on management systems and processes

Concerning the impacts of the Information Society on management systems and processes, participants' responses converged upon ten specific themes which are listed below. An aggregated discussion of the responses follows:

- implementing concepts and processes leading towards learning organizations, knowledge management as basis for both interdependent activities, (1) education and training, and (2) problem solving in business processes;
- mastering implementation strategies (teaching, training, motivating, coaching);
- reconsidering styles of leadership;

- using Business TV as a tool for leadership (managing in knowledge organizations will most likely require managers' TV skills);
- reconciling rational, emotional, and social competence;
- exploiting new chances for 'virtual coaching';
- building new understanding of model building and data mining;
- synergetically integrating technical network management and the management of non-technical networks;
- redesigning control strategies;
- improving flexibility without compromising control.

3.3.1. *Shifting the balance of centralized and local knowledge*

Managerial thinking in the last century has been dominated by early movements in Scientific Management [55], the evolution of the modern corporation [6], as well as the separation of ownership and control and the resulting interest in agency conflicts [23]. While technological infrastructures have always been used to transfer 'factual' information to internal and external business partners, recent developments in information and communication technologies permit faster, better targeted, and richer transportation of information. This has two major effects. The first is a change in the balance between centralization and locally empowered decision making; the second is the manner in which technologies transform the basic needs for technology driven decision support. The question of centralized versus local decision making has been called 'the IS problem' [8] and can be described as follows. When knowledge is requisite in decision making, it follows that there are clear benefits in co-locating decision authority with the knowledge that is valuable in making those decisions. There are two immediate options when attempting to co-locate knowledge and decision rights. One is moving the knowledge to those who make decisions; the other is moving the decision rights to those who have the knowledge [22]. Yet the predominant paradigm in organizations, due to issues such as efficiency and accountability, is the centralization of decision-making authority. As a consequence, management information systems are implemented to aggregate the knowledge and transfer it to those who maintain the decision rights.

Another important question is not whether such knowledge can be transferred, but what the relative costs and benefits of doing so are [29]. Idiosyncratic, context-specific knowledge is almost by definition difficult to aggregate and transfer without a significant loss of depth, texture, and context [54]. In other terms, one may get 'data' at the cost of 'knowledge'. But often an even more significant transfer cost is time. Although technology has almost eliminated temporal problems in electronic transfer, effective transfer from the source to the decision maker remains as problematic today as it has been for previous millennia. As such, human interdependencies pose a continued challenge to accuracy, judgment, and delays. Stated intuitively, it takes time for people to absorb information [22]. Therefore we emphasize the difference between, on the one hand, transferring data electronically and, on the other hand, effectively transferring knowledge, such that people are equipped to act upon it.

The strategic use of IT and thus an effective transfer of knowledge depend largely upon the interaction between ICMT expertise and the knowledge controlled by senior management [48]. The fusion of managerial skills and IT understanding is a requirement for successful leadership in the New Economy.

3.3.2. *New media*

Without doubt, management will need to be able to do business via new media. New internet-based networks offer voluntary and involuntary contact with 'new' people. These contacts require new communication skills that have not traditionally been part of managerial education. Managers need to learn the application of the new media; when, and how the technology offers alternative modes of communication or threats of alienation. With Business TV as one of the new media that is rapidly gaining importance, it becomes clear, for instance, that not only the content of business TV programs is important, but also the general presentation style – internally and externally as well.

The new 'video' or 'gameboy' generation has grown up expressing themselves in hypermedia and visually driven environments. In the reports from consultants as well as sampling of in-house correspondence, longer texts are being replaced by several transparencies including pictures, drawings and text components in metaphorical form. Loyalty to any single form of communication and expression may be too narrow in scope and forfeit opportunities and potential.

Despite the evolution of ICMT, humans have maintained a relatively constant need for human interaction. Technological infrastructures will be used mainly to transfer 'factual' information to internal and external business partners. However, recent developments in information and communication technologies permit faster and better targeted transportation of information. As it will remain difficult and uncommon to develop trust and establish reliability and competencies via technological infrastructures alone, any efficient and effective relationship will require a specially designed mix of face-to-face meetings and the application of information, communication, and media technologies. For instance, a growing number of companies primarily use face-to-face meetings, such as annual company-wide Christmas parties, weekend excursions or other social events, to establish and strengthen social bonds, esprit-de-corps and trust within the company or business network. Once social bonding exists, the actual 'factual' or more procedural business discussions can be executed via technological infrastructures.

3.3.3. *Continuous learning*

The need for continuous learning on both the individual and the organizational level is widely accepted in most companies today. Currently, enterprises face the challenge of deciding from whom and where to learn and what to offer to employees as a basis for learning. While there seems to be agreement that security concerns should not, and cannot, stop learning initiatives, practical implementations of learning structures are often hindered by security constraints. These issues gain further importance in environments where employment relations are volatile and turnover is high [29]. Finally, the gains from organizational learning should outweigh the additional expenses that such initia-

tives cause. Many consulting companies, large multinationals, and business networks have begun to establish knowledge management as a core business process. Several have already created the position of a 'Chief Knowledge Officer'. These initiatives are seen as major steps to prepare a company in any business sector to successfully compete in the Information Society. However, cost effective, pragmatic management of these processes remains a significant challenge.

The increased richness of managerial control systems permits higher levels of centralized control, thus allows for a greater level of controlled, local decision making authority. Moreover, managerial control systems are designed with greater levels of decision support, fostering higher levels of centralized coordination in parallel with a local decision mandate. As a consequence, the workforce on the operating lines is becoming more empowered, but not necessarily at the expense of central control. Hence, the traditional trade off between local decision making and high levels of agency costs [18] is being challenged. It becomes possible to permit higher levels of locally empowered decision making without the consequent problems of agency and divergent incentives. As the decision making frontier shifts further away from the organizational core, the requisite levels of control and security can be maintained [51]. Thus, the previous control paradigm of one-way, serial information flows and feedback will be replaced by a structure of organic knowledge creation on all levels and corners of the organization.

3.4. *Impacts on corporate missions and policies*

The participants were asked how recent and foreseeable IT developments affect corporate missions and policies. The responses converged upon eight themes. These were:

- rethinking of the role of corporations in the Information Society;
- creating and abolishing 'ad hoc corporations'/'stand-up corporations', which are established for 'new tasks' on a temporary basis;
- benefiting from globalization and designing strategic alliances;
- redefining a company's own industry position;
- redefining shareholders' roles;
- accepting that almost all companies are becoming heavily IT-based;
- realizing that software – in terms of value added – may reach 50% of traditionally material products ('Will this trend lead to new concepts of firms?');
- triggering IT-based business transformation.

3.4.1. *The rise of free-lance and the fall of the going concern*

The current corporate environment is facing several paradoxical challenges to its identity. One is that the era of the enduring 'going concern' is being questioned, if not partially replaced by our ever-diminishing social perception of time. Recent patterns emerging from the high-tech labor market have redefined the normal duration of employment rela-

tions, with average duration falling to as little as 60 days for contract based employment. While these examples are extreme, representing the characteristics of the programming profession, the effects have seeped into more traditional industries [31]. Some of our respondents suggested that tenure of over three years at a given job signals passivity and a lack of knowledge concerning current technology. While this does not exactly undermine the institutional culture of corporations with a rich historical identity, it is a symptom of the changing socio-economic environment in which companies function. Dramatic increases in speed and visibility in almost every respect are the major characteristics of this arena.

Diminishing temporal windows have also spawned growth in temporary or ad hoc corporate entities. While the phenomenon is not entirely new, the frequency of it is. Thus the purveyors of corporate names and logos are busier than ever, and society is bombarded with an ever-heightened number of corporate identities and reputations to assess. The role of reputation in reducing contracting and monitoring costs, as well as credit expense, cannot be underestimated. While information technology enables greater levels of monitoring, the attention and consciousness of the citizen remains constant. Thus, skepticism may increase as more corporate reputations request the attention of society in general. Current movements towards registration and quantification will be increased, where polls, surveys and metrics will become a greater surrogate for societal consensus.

Virtual organizations may not be considered as 'organizations' in the sense of the traditional business and management literature. With this acknowledgement, concepts of management systems and processes developed in the organizational literature and practice may not be applicable to virtual organizations. If virtual organizations are one of the more visible consequences of the Information Society, and if STRATEGY is about a STRATEGY for organizations, one has to ask what characterizes an organization. While rhetorically open-ended, such a question may foster theoretical developments which can motivate the very pragmatic task of STRATEGY formulation in the Information Society.

3.4.2. Dispersions in ownership and accountability

One manifestation of the greater aggregate level and velocity of information transfer is that corporate assets are no longer the domain of the elite institutional investment community. The wide spread proliferation of on-line trading has dispersed a larger proportion of corporate equity in the hand of the common individual. Market access, information, and analyses, have empowered non-finance-professionals to pursue trading activities which approach professional levels of sophistication. The greater dispersion of corporate equity has made companies both more visible and legally accountable to individuals and society by and large. While social and environmental accounting has long been a mainstream concern in Continental Europe, the pressures of accountability to both shareholders, employees, regulators and the local environment will only increase in all regions of the international economy.

3.5. *Impacts on strategic programs*

Important challenges resulting from recent and foreseeable IT developments for corporate missions and policies include:

- exploiting and benefiting from companies' competitive advantages in society;
- developing customer relations and new logistic strategies;
- developing and implementing change strategies from manufacturing to service organizations;
- balancing competence driven, versus market driven, strategies;
- managing changes in value chains (outsourcing versus insourcing, horizontal versus vertical cooperation/integration);
- applying data-mining, search models and intelligent STRATEGY development tools;
- re-evaluating R&D activities with growing IT-components in a company's own intelligent products.

The evolution to the Information Society – the rise of electronic networking, office automation or computerization of service delivery – offers a breeding-ground for the development of completely new business concepts. Since innovations are crucial for the preservation of a firm's competitive advantage [35]. There is constant pressure to perpetually increase the scope of creative and innovative processes. However, competition becomes more global and thus the competitive pressure increases [56]. The organizations have to quickly respond to opportunities and threats, improve their customer service, and enhance the product quality. Despite transformations and mutations of ensuing organizational forms, three core business processes will persist: information logistics, financial logistics, and physical logistics. The challenge remains to consecutively optimize all three logistic types. From a strategic viewpoint, new approaches to overall optimization need to be identified and implemented. Even the most ingeniously designed information logistics do not pay off if the corresponding material product streams are sub-optimal. For example, certain forms of industrial gas cannot be sold worldwide due to transportation limitations, despite the feasible cultivation of global customer relationships through the Internet.

3.5.1. *New era of customer relations*

The shift from a manufacturing organization towards a service oriented company culture is ubiquitous, since ICMT alters the architecture of service production and service delivery dramatically [35]. The customer is integrated in the service rendering and delivery process and may take over the role of a co-producer. The possibility of accessing internal information pools enables the members of a value chain to optimize the business processes and develop stronger communal spirit and customer loyalty.

The application of technology should, and will, be used primarily to strengthen a company's customer orientation. Fostered customer orientation will be expressed via improved market research as well as more targeted public relations and marketing ac-

tivities. Furthermore, the increased customization of products will require digitizable products that can be specifically designed upon demand and according to a small customer group's or individual's needs, and an overall product packaging and product design that can be customized to a rather high degree for non-digital products. Product packaging includes financing options, delivery arrangements, guarantee commitments, etc.

3.5.2. *Era of experimentation*

The willingness to experiment with new business areas will have to be fostered. If the application of information and communication technologies becomes a new major competence, companies need to find out which new business sectors they can afford to enter. A political and social environment which supports a 'trial and error' mentality, such that companies can afford failure and learning, would also be beneficial. Otherwise, the willingness to try innovative bundling of products and services will be limited, and important market opportunities may be missed. While STRATEGY should foster the harvesting of advanced information and communication technology applications and expertise, the environment needs to 'permit' mistakes when providing the necessary venture capital.

One potentially interesting area for the use of ICMT applications is the management and development of creativity. Fundamentally creative processes have historically been difficult to analyze or replicate, and the potential of technology to support or augment creativity is debatable. While most business and economic (micro- and macro-perspective) theories and concepts are targeted towards the design, production and sales of physical products, these business activities account for a diminishing percentage of GNP in most industrialized countries. However, creative products have not yet become the focus of mainstream business thinking. Consequences of the increase in creativity over mass production include: (1) economies of scale lose importance, (2) the trade-off between capital and labor needs to be reconsidered, and (3) traditional accounting principles do not reflect the true value of companies with a concentration of intellectual capital and intangible products.

Despite the ability to manage internal, intangible resources, uncertainty will remain the main challenge in developing and implementing business strategies. While new information, communication and media technologies provide access to an enlarged set of information, the traditional challenge for STRATEGY makers, i.e., decision under uncertainty, cannot and will not change. A large amount of historical data allows for statistically robust predictions, but cannot foresee the 'unpredictable'. As broad analyses based upon historical data become commonplace, the value of the accordant strategic decision will be much lower where the overall benefit in any market environment lies in knowing more, or acting earlier, than competitors.

On the whole the quantification, or even definition of an ephemeral concept like creativity is difficult, but nonetheless, its significance to STRATEGY will continue to grow in the future.

4. Summary and outlook: prospects for STRATEGIC PLANNING in the context of eBusiness and the Information Society

The focus of managerial and strategic discourse on carrot and stick incentive structures through the 1970s and 1980s has led to a variety of criticisms of the limited scope of the broader theoretical paradigms dominated by managerial economics, an important theoretical foundation of strategy [11]. Agency theory's 'master and slave' perspective and 'transaction cost economics' (TCE) 'opportunism with guile', combined with a tendency to oversubscribe these theories [13], have left the social sciences fatigued by the 'dismal' perspectives [16]. However, an even more significant criticism is the 'black box' problem. The fact that managerial economics has viewed firms as little more than production functions has caused a reaction to the working assumption that businesses are primarily homogeneous entities [45,60]. By acknowledging that there are systematic differences across firms to the extent that they control resources, and that these resource endowments can cause performance differences, the main goal of STRATEGY 'before, during, and after the Information Society' is to 'account for the creation, maintenance and renewal of competitive advantage in terms of the resource side of firms' [14]. This emphasis on the coordination of skill and productive knowledge is in marked contrast to managerial economic theories which are primarily concerned with the alignment of incentives and questions of centralization. Instead, a large part of managerial thinking and STRATEGIC PLANNING has grown away from managerial economic paradigms, and is now characterized by the rhetoric of resource creation and management. However, in order to be prepared for the managerial challenges within STRATEGIC PLANNING a return to the classic paradigms of managerial economics may be necessary. The challenges of employee motivation and monitoring are greater than ever in a society characterized short-term employment relationships and distance contracting. The issues revolving around corporate governance, regulation and taxation are exacerbated in an arena where geographic, national, legal, and temporal boundaries are diffuse. In a sense, the focus of STRATEGIC PLANNING on resource creation, experimentation and learning will remain prominent, but will need to be bounded by the necessities of coordination, regulation, positioning, and control in a global business environment where distance is reduced, time frames are shorter, and information and social awareness become increasingly prevalent.

In many respects, it may be obvious that STRATEGY and STRATEGIC PLANNING need to embrace greater flexibility, customer orientation, and international coordination and to nurture creativity and innovation. In those business sectors that are based on 'digitizable' products and location-independent services, the Information Society will bring shorter product and planning cycles with high requirements concerning customization and price-sensitive service quality. The application of innovative ICMT will change the way management systems and STRATEGIC PLANNING processes are implemented. Faster and more accurately targeted internal and external communication will allow the growth of new market opportunities and business partners.

Thus, professionals and managers in the Information Society need to develop a holistic and integrative perspective. STRATEGIC PLANNING will continue to require the

ability to recognize the application of methods and recipes, the mental flexibility to shift between paradigms, an analytical and critical mind that can see the limitations of simple formula, and a culturally adaptive mind. None of these requirements is new, but in many instances, the demand for such qualifications may be even stronger and harder to achieve with the evolution of eBusiness and the Information Society.

References

- [1] A. Alchian and H. Demsetz, Production, information costs and economic organizations, *American Economic Review* 62(5) (1972) 777–795.
- [2] K.R. Andrews, *The Concept of Corporate Strategy* (Dow Jones-Irwin, Homewood, IL, 1971).
- [3] J. Barney, Firm resources and sustained competitive advantage, *Journal of Management* 17 (1991) 99–120.
- [4] J. Barney, Is the resource based “View” a useful perspective for strategic management research?, *Academy of Management Review* 26(1) (2001) 41–56.
- [5] J. Barney, Strategic factor markets, *Management Science* 32 (1986) 1231–1241.
- [6] A.A. Berle and G.C. Means, *The Modern Corporation and Private Property* (Macmillan, New York, 1932).
- [7] K. Bleicher, *Das Konzept Integriertes Management*, 4th edn. (Campus Publishing House, Frankfurt am Main, New York, 1996).
- [8] E. Brynjolfsson and H. Mendelson, Information systems and the organization of the modern enterprise, *Journal of Organizational Computing* 3(3) (1993) 245–255.
- [9] Bureau of Economic Analysis, Industry Accounts Data: Gross, Domestic Product by Industry, <http://www.bea.doc.gov/bea/dn2/gpoc.htm> (November 2001).
- [10] B. De Wit and R. Meyer, *Strategy, Process, Content, Context, An International Perspective* (Teaching Guide Minneapolis, St. Paul, 1995).
- [11] H. Demsetz, The firm in economic theory: A quiet revolution, *American Economic Review* 87(2) (1997) 426–429.
- [12] R.G. Eccles and N. Nohria, *Beyond the Hype: Rediscovering the Essence of Management* (Harvard Business School Press, Boston, MA, 1992).
- [13] S. Fischer, Long-term contracting, sticky prices, and monetary policy – comment, *Journal of Monetary Economics* 3(2) (1977) 317–323.
- [14] N. Foss, *Resources, Firms and Strategies: A Reader in the Ressource – Based Perspective* (Oxford University Press, Oxford, 1997).
- [15] Y.M. Godiwalla, W.A. Meinhart and W.A. Warde, General management and corporate strategy, *Managerial Planning* 30 (1981) 17–29.
- [16] S. Goshal and P. Moran, Bad practice: A critique of transaction cost theory, *Academy of Management Review* 21(1) (1996) 13–47.
- [17] G. Greenley, Does strategic planning improve firm performance?, *Long Range Planning* 19 (1986) 101–109.
- [18] V. Gurbaxani and S. Whang, The impact of information systems on organizations and markets, *Communications of the ACM* 34(1) (1991) 59–73.
- [19] J. Habermas, *Theorie des Kommunikativen Handelns*, Vols. I and II (Suhrkamp Publishing House, Frankfurt am Main, 1981).
- [20] G. Hamel and C.K. Prahalad, Strategy as a field of study: Why search for new paradigms, *Strategic Management Journal* 15(Special Issue) (Summer 1994) 5–16.
- [21] J. Hausler, Planning: A way of shaping the future, *Management International Review* 2 (1968) 12–21.
- [22] M. Jensen and W.H. Meckling, Specific and general knowledge, and organizational structure, in: *Contract Economics*, eds. L. Werner and H. Wijkande (Blackwell, Oxford, UK, 1992) pp. 251–274.

- [23] M.C. Jensen and W.H. Meckling, Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics* 3(4) (1976) 305–360.
- [24] J. Kargar and J.A. Parnell, Strategic planning emphasis and planning satisfaction in small firms: An empirical investigation, *Journal of Business Strategies* 13(1) (1996) 1, 42–64.
- [25] D.W. Karger and Z.A. Malik, Long range planning and organizational performance, *Long Range Planning* 8 (1975) 60–64.
- [26] B. Kim, A. Barua and A.B. Whinston, Virtual field experiments for a digital economy: A new research methodology for exploring an information economy, *Decision Support Systems* 32(3) (2002) 215–231.
- [27] B.M. Leiner, G. Vinton, V.G. Cerf, D. Clark, R.E. Kahn, L. Kleinrock, D.C. Lynch, M. Leontides and A. Tezel, Planning perceptions and planning results, *Strategic Management Journal* 1 (1980) 65–75.
- [28] B.J. Loasby, Long range planning in perspective, *Journal of Management Studies* 4 (1967) 12–21.
- [29] C. Loebbecke and P. van Fenema, Virtual organizations that cooperate and compete: Managing the risks of knowledge exchange, in: *Knowledge Management and Virtual Organizations*, ed. Y. Malhotra (Idea Group Publishing, Hershey, PA, 2000) pp. 162–180.
- [30] C. Loebbecke, P. van Fenema and P. Powell, Co-opetition and knowledge transfer, *The Data Base for Advances in Information Systems (DATABASE)* 30(2) (1999) 14–25.
- [31] T.W. Malone and R.J. Laubacher, The dawn of the elance economy, *Harvard Business Review* 76(5) (1998) 144–152.
- [32] R. Mark, US high tech exports surge, *New York Times* (29 March 2000).
- [33] H. Mintzberg, *Mintzberg on Management* (Free Press, New York, 1989).
- [34] J. Orpen, The effects of long-range planning on small business performance: A further examination, *Journal of Small Business Management* 1 (1985) 16–23.
- [35] J.M. Pennings, Innovations as precursors of organizational performance, in: *Information Technology and Organizational Transformation: Innovation for the 21st Century Organization*, eds. R. Galliers and W. Baets (Wiley, Chichester, 1998) pp. 153–178.
- [36] M.E. Porter, *Competitive Advantage: Creating and Sustaining Superior Performance* (Free Press, New York, 1985).
- [37] M. Porat, *The Information Economy: Definition and Measurement*, Washington, DC, Office of Telecommunication, US Department of Commerce, Special Publication 12 (1977).
- [38] J. Postel, L.G. Roberts and S. Wolff, A Brief History of the Internet, <http://www.isoc.org/internet/history/brief.shtml> (2000).
- [39] R.L. Priem and J.E. Butler, Is the resource based “View” a useful perspective for strategic management research?, *Academy of Management Review* 26(1) (2001) 22–40.
- [40] R.L. Priem and J.E. Butler, Tautology in the resource-based view and the implications of externally determined resource value: Further comments, *Academy of Management Review* 26(1) (2001) 57–66.
- [41] V. Ramanujam and N. Venkatraman, Planning and performance: A new look at an old question, *Business Horizons* 30 (1987) 19–25.
- [42] V. Ramanujam, N. Venkatraman and J.C. Camillus, Multi-objective assessment of effectiveness of strategic planning: A discriminant analysis approach, *Academy of Management Journal* 19 (1986) 347–372.
- [43] L.C. Rhyne, The relationship of strategic planning to financial performance, *Strategic Management Journal* 7 (1986) 423–436.
- [44] R.B. Robinson and J.A. Pearce, The impact of formalized strategic planning on financial performance in small organizations, *Strategic Management Journal* 4 (1983) 197–207.
- [45] R. Rumelt, Towards a strategic theory of the firm, in: *Competitive Strategic Management*, ed. R. Lamb (Prentice-Hall, Englewood Cliffs, NJ, 1984) pp. 556–570.
- [46] P. Samuelson and H. Varian, The “New Economy” and Information Policy, Mimeo, University of California, Berkeley (18 July 2001).

- [47] R.W. Sapp and R.E. Seiler, The relationship between long-range planning and financial performance of US commercial banks, *Management Planning* 29 (1981) 32–36.
- [48] H. Scarbrough, Linking strategy and IT-based innovation: The importance of the management of expertise, in: *Information Technology and Organizational Transformation: Innovation for the 21st Century Organization*, eds. R. Galliers and W. Baets (Wiley, Chichester, 1998) pp. 19–36.
- [49] M. Scott Morton, The effect of information technology on management and organizations, in: *Transforming Organizations*, eds. T. Kochan and M. Useem (Oxford University Press, New York, 1992) pp. 261–278.
- [50] C. Shapiro and H. Varian, *Information Rules: A Strategic Guide to the New Economy* (Harvard Business School Press, 1998).
- [51] R. Simons, Control in the age of empowerment, *Harvard Business Review* 73(2) (1995) 80–88.
- [52] K. Starkey, What can we learn from the learning organization, *Human Relations* 51(4) (1998) 531–546.
- [53] M.E. Stern, *Marketing Planning: A Systems Approach* (McGraw-Hill, New York, 1966).
- [54] G. Szulanski, Exploring internal stickiness: Impediments to the transfer of best practice within the firm, *Strategic Management Journal* 17 (1996) 77–91.
- [55] F. Taylor, *The Principles of Scientific Management* (Harper, New York, 1929).
- [56] J. Turner, The role of information technology in organizational transformation, in: *Information Technology and Organizational Transformation: Innovation for the 21st Century Organization*, eds. R. Galliers and W. Baets (Wiley, Chichester, 1998) pp. 245–260.
- [57] R. Veliyath and S.M. Shortell, Strategic orientation, strategic planning system characteristics and performance, *Journal of Management Studies* 30 (1993) 359–381.
- [58] J.B. Welch, Strategic planning could improve your share price, *Long Range Planning* 17 (1984) 144–147.
- [59] K. Weick, Jeffrey Pfeffer: New directions for organization theory: Problems and prospects – A review, *Administrative Science Quarterly* 44(3) (1999) 639–642.
- [60] B. Wernerfelt, A resource-based view of the firm, *Strategic Management Journal* 5 (1984) 171–180.