Factors for Success of the Internationalization and Exportability of IT Services

EXPORT IT

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DEVELOPMENT SCENARIOS OF INTERNATIONALIZATION IN SOFTWARE AND IT SERVICES

First Results of an Empirical Inventory

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1 Introduction

With the internationalization of the service sector globalization has obtained a new quality. No longer merely wares and goods, but also services are increasingly being distributed on international markets all over the world and can be globally delivered through international division of labor (WTO 2005). Not only low-skilled work is concerned but also and especially high-skilled fields of labor (Boes 2004; Jensen, Kletzer 2005). Today, for example, the international delivery of medical services (e.g. x-ray diagnosis) is not only conceivable but often already customary exercise[1]. The background of this "tradability revolution" (UNCTAD 2004) is in addition to the liberalization of markets (see Fritz 2002) the primary factor in the rise of modern IC technologies. Digitalization and the evolution of information as ubiquitous parameter ("informatization") make it possible that consumption and the delivery of numerous services are no longer spatially bound. At the same pace that the *uno actu* principle loses ground the capability for internationalization of services mounts.

At the core of this development is the IT industry. It is not only the central "enabler" of this new phase of the world economy but the internationalization is being pushed from within the industry itself. In particular, the broad discussion on off- and nearshoring points at the dynamic of this development (e.g. Boes, Schwemmle 2004, 2005; Aspray et al. 2006; Auer et al. 2006; Schaaf, Weber 2005; Schaaf 2004; Mertens 2004) even if without addressing the full scope of the subject. The software and IT services segments are becoming the pioneer and "forerunner" of the internationalisation of services to a certain extent (Boes et al. 2005a). Therefore, in these fields new models of globalization, of world trade and of international division of labor are taking shape along the lines of certain ideal types.

The companies and the workforce of the IT industry are in this respect entering virgin soil and find themselves confronted with completely new challenges during this internationalization process. Also the scientific research which escorts this process of change is facing new problems and research questions. Previous theoretical models and concepts often prove to be less apt to embrace the new forms of internationalization. Finally, the internationalization of services hardly follows the classical model of export any longer. It is no longer about only producing a material commodity nationally and exporting and selling it abroad; rather, it is now essential to deliver a performance in interaction with foreign partners across borders. Here, internationalization hardly gives the impression of a "one-way-route" or simple "stream of goods" but of a complex transnational interplay of different partners.

[1] Numerous examples to be found in Schwemmle/Zanker (2000).

Not only the macro-economic consequences of this development are open (see e.g. Antras, Helpman 2004; Antras et al. 2005; Bhagwati et al. 2004; Samuelson 2004). Factors for the success of a worldwide delivery of IT services need to be identified at a company level as well (see also Amberg, Wiener 2005). In order to address the complexity of the question and to integrate the perspectives of different actors, empirical research projects are indispensable. Only after systematically collecting and analyzing the experiences and learning processes of companies one can develop sustainable strategies for internationalization[2] on the basis of "best-practices".

Taking stock, we present in the following first empirical results of the research project EXPORT IT. The objective is to highlight the conditions and challenges which the IT industry is facing with regard to internationalization. Building upon this, this paper will delineate typical scenarios within which the international activities and strategies of companies in the field of IT services and software development unfold.

The empirical basis is provided by ten case studies which were collected during the project for the initial analyses (see Boes et al. 2005a). In total, more than 35 expert interviews were conducted with executive staff, managers of international projects, employees and – if available – deputies of workers' representation.

Table 1 gives a review of the sample of companies:

Sample company A	Large German manufacturer of standard software, has been active worldwide as a "global player" for decades
Sample company B	Large German provider of IT and outsourcing services, significantly expanding its international activities at the moment
Sample company C	Medium-sized German IT service provider, with a comparably extensive and successful history of internationalization
Sample company D	Medium-sized German manufacturer of standard software, represented worldwide ever since the company's establishment
Sample company E	Independent IT subsidiary of a traditional German major corporation
Sample company F	Small German IT service provider, with scarce international experience as of yet
Sample company G	German subsidiary of a European telecommunications supplier (mainly application development), globally active
Sample company H	Large German IT service provider, having, as a "global player", extensive experience in internationalization
Sample company I	Large American IT service provider (outsourcing, IT services), with very distinct experience in internationalization as well
Sample company J	Large American IT service provider, as a "global player" active worldwide

[2] Sustainability meaning that the internationalization strategies contribute to an increase of added value in the long run and that in this process preferably all partners involved (vendors, customers, employees etc.) can derive profit from the new possibilities of international cooperation.

2 A new stage of internationalization in the IT industry

Our previous empirical research has documented the increasing significance of internationalization in software and IT services. In almost all companies the topic is figuring prominently in the corporate strategy and significantly influences strategic planning. Those responsible are becoming aware of a distinctly changed starting situation. They are confronted with completely new challenges, options and obligations to act with regard to the internationalization of their industry.

At first sight, these findings seem to be astonishing and surprising. For unlike many other service industries, the IT industry may be rated as a highly internationalized economic sector. Many pioneers of current corporate globalization strategies (see Lüthje et al. 2002) are to be found not only in the hardware sector. It is also in the field of software and IT services that many companies have had global experience, in many cases even for decades, because they had begun very early to become globally active.

It is revealing, however, that here we see delineated a development in no way devoid of disruption. Rather, companies in the fields of software and services are facing a new development "threshold" – indications point to a new stage of internationalization (Boes 2004, 2005). This is marked by a world market ever becoming more homogenous and by new possibilities of "global sourcing" (off- and nearshoring). While the internationalization of the industry so far has been one determining factor amongst many, with the consequence that even large companies could endure on the market with a largely national profile, now it is becoming the influential factor determining the strategy, a development which not even small IT service providers are able to evade. In other words: Internationalization is growing from an eligible business policy to a strategic must.

2.1 Standardization, industrialization and the historical development of the industry

In order to discern the different stages of the development in the field of IT services and in order to understand the scope of the new stage of internationalization it is helpful to analyze today's situation against the background of the historic-technical development of the IT industry.

With a view to the significance of services within the industry and their position in the respective value-added chains roughly three stages can be distinguished:

- In the first stage, hardware took center stage. Services merely were an insignificant appendix.
- The second stage was characterized by the rapid growth of the IT service business. Services were becoming the growth engine of an expanding sector.
- In the now conceivable third stage, IT services are forming high up on the value-added chain and are becoming themselves the object of a new type of industriali-

zation. Ensuingly, now their internationalization is taking place (Boes 2004, 2005; Boes et al. 2005b).

In the first stage the dominating proprietary standards of the manufacturers of mainframe computers shaped the industry. This entailed segmented markets. For example, the software of IBM computers could not simply be ported to Siemens computers. At the same time, the diverse product ranges were also shielded against each other (e.g. personal computers against mainframes). Against this background, a unitary world market for IT services could not easily evolve.

It was not until the connection of personal computers and mainframes in the client-server-concept and until the implementation of technical standards that were independent from the manufacturer that the ground for a more homogenous international market in the second stage was prepared (Boes 2002). Especially the rise of the internet finally accelerated and intensified the spread of standards worldwide. The increasing (global) implementation of open standards connected therewith thus unlocked new growth opportunities for IT service providers and especially for producers of standardized software. While the fields of software and services were still an insignificant appendix of the hardware industry in the '70s, they now increasingly become market-dominating for the development of the IT industry as a whole.

In the customer-oriented companies at this point standardized software replaced the individual software. Through it, the guiding concept for IT changed profoundly. In the course of the '90s an extensive transfiguration of IT to standardized components began. The department for systems development effectively no longer programmed itself but concentrated on the in-house project management and the supervision of external IT service providers. These, in turn, no longer produced a specific solution for every problem, as they used to. Instead, they utilized concepts of standardized software and, building on that, developed customer-specific solutions from there. The data processing centers of the customer-oriented companies were gradually disintegrated or outsourced. The performance on infrastructure and consulting was then provided by external outsourced specialists. For these again this performance was paying off as they were anxious to provide it uniformly for many customers. To the same extent that standardized solutions dominated in customer-oriented companies the market for services in outsourcing and computer centers grew.

On this basis now a new stage is beginning to emerge in which IT services form higher up on the value-added chain and become an autonomous object of industrialization processes (Boes 2004, 2005). Standardization of products on the part of software and IT service providers is now being followed by a standardization of their operational procedures and workflow. The cost pressure increasedly noticeable at the beginning of the millennium and the ensuing destructive competition have enhanced this trend since the breakdown of the new market. However, as the logic of the classic "industrial mass

production" can hardly be transferred to the segment of software and IT services, the development presently is leading to an industrialization of a new type (Boes 2004, 2005).

This industrialization process forms the basis for a new quality of the internationalization of software and IT services. In this, industrialization and internationalization are reciprocal conditions for each other. So, the standardization of products and services, procedures and qualification profiles is the crucial precondition for being able to provide service development processes in an international dimension (Boes 2004, 2005; see also Sahay et al. 2003; Flecker, Huws 2003). At the same time, the internationalization is increasingly issuing vital impulses for the industrialization process as well. The pressure of new global competition forces the software companies virtually "at the penalty of their doom" to restructure and industrialize their procedures and workflow (Boes et al. 2005b). Ultimately, industrialization and internationalization can be seen as the two faces of a new stage in the development of the IT industry.

2.2 Shift of the strategic working environment

The development described signifies a profound shift of the strategic working environment for the companies of this industry. This process of change affects especially the implementation of globally valid norms of production and exchange (Aglietta 1979; Röttger 2003) as well as the emergence of a global IT job market.

Products and services: IT becomes a commodity

One vital result of the industrialization processes described above is that the products and services of the IT industry increasingly lose their individual characteristics. Not only the products in standard software but also the IT services themselves are, with the ongoing standardization, becoming uniform goods. According to Nicholas Carr IT becomes a "commodity" (2004). Ensuingly, specific competitive advantages which have been oriented towards the quality or singularity of a performance forfeit their value. It is especially through the homogenizing effect of the world market that national specifications also become less important. As a consequence it becomes harder and harder for the companies to maintain their unique selling points and to stay competitive solely on the basis of quality. Thus, the price becomes more and more the decisive parameter. To the same extent that this effect will hold sway, effects of scales and sizes will increasingly become the factor to dominate competition (see also Carr 2005).

Market and competition: Leveling of price and profit

The more global competition unfolds and the more similar or the more comparable the products offered on the world market become, the more the price and cost levels are assimilating. Firstly, more often now competitors from countries with low cost structures

are entering formerly secured markets. Their prices and costs then are standing as benchmarks which become referential also for the domestic offerors. Additionally, the growing production capacities in off- or nearshore regions set the global cost arrangements under pressure to adapt even within globally acting companies. With regard to the high profitability and to the low cost at the offshore locations, cost-cuttings at the locations back home may seem inevitable. Ensuingly, the cost level in offshore countries in a way becomes the ubiquitous global standard towards which also high wage locations have to orient themselves. This can go as far as the customers declaring a certain part of the product as "offshoreable" in advance and assessing costs accordingly lower. It is then left to the offeror whether and in which way he will be able to meet the cost targets.

In this way a downward levelling process regarding costs and prices is taking shape. At the same time, return assumptions of shareholders rise. Under the pressure of international stock exchanges the margins and returns are assimilating "upwards". The profitability of the (mostly US) market leaders is becoming the benchmark for all companies. The one who does not meet the standard is not only at risk of losing his competitiveness but can rapidly become a bankruptcy case or a candidate for a take-over.

Labor market: Emergence of a global job market

Finally, increasingly homogenous qualification requirements and job profiles are forming the basis for the emergence of an international job market in the field of software and IT services (Boes 2004, 2005). Especially during the last years the contours of this global job market took shape. The job market for highly qualified software developers is now by no means limited to the centers of the "first world". It also extends to relevant parts of the periphery. In offshore and nearshore regions like India and China, but also in Eastern and Middle Europe a tremendous pool of optimally qualified software specialists has arisen in a comparably short period of time (Aspray et al. 2006). Even if here a development of slowly rising wages is indicated (Farrell et al. 2005) they often are willing to work for a fraction of the payment of their colleagues in the US, England or Germany. While initially there were attempts to use these labor resources via "body-shopping" or green card, numerous IT service companies eventually started up own branches in offshore regions. Unlike in former times, these are no longer designed as mere distribution sites but are being integrated as "points-of-production" in the development networks of many IT companies (Boes, Kämpf 2006). Now, also without migration this "world market of manpower" (Potts 1988) can be tapped for a service industry. International labor division and cross-border cooperation can now be realized in the "informational space" (Baukrowitz, Boes 1996) of international information and communication networks.

2.3 Changed starting situation for IT companies – New possibilities and increased market pressure

This new stage of internationalization involves a significantly changed starting situation for IT companies. It is essentially characterized by two intertwined processes: on the one hand by an ever more homogenous global market which is becoming the decisive operational motivation for the industry, and on the other hand by an "extended space of possibilities" (Dörre et al. 1997) in the sense of global sourcing. Even when considered separately both developments are remarkable and rich in consequence. They are constituting a new stage, however, by their combination and mutual diffusion.

In order to fully understand the consequences of this process of change in the field of software and IT services an integrated perspective is highly necessary. Especially in the debate in the US on internationalization, the discussion is often reduced to off- or nearshoring alone. The consequence is not only a slightly one-sided and rarely inventive discussion about the consequences of job relocation and the use of comparative cost advantages (see e.g. Kirkegaard 2004, 2005; Baily, Lawrence 2005; van Welsum/Reif 2006; Amiti, Shang-Jin 2004; Mankiw, Swagel 2005). Rather, the scope of the development passes from view. When internationalization is understood merely as a short-term strategy to lower costs the dramatic consequences are overlooked (see also Blinder 2006) and its complexity is underestimated. Simple scenarios of cost-benefit or winner-loser can hardly be conceptualized in order to estimate the effects. Thus both developments, i.e. global sourcing and homogenous global market, produce by their coaction a far more complex dichotomy of chance and risk. The dynamics of the development disclose new growth opportunities but at the same time also growth obligations.

New opportunities and chances arise from this development especially through increasing marketing opportunities abroad. While many markets in highly-industrialized countries are widely saturated the emerging markets especially offer new growth potential to globally active IT companies. Market growth in the field of ITC averaged only 2.5 %, 1.1% and 1.8% in Europe, the US and Japan between 2002 and 2005. In the rest of the world, however, average market growth can be estimated at 6.2 % for the same period of time (BITKOM 2005; EITO 2005). But next to the development of new markets, new possibilities of international cooperation are also presenting themselves. Through global sourcing not least cost advantages can be utilized. The set-up of foreign locations and of global development networks, however, can also promote the transfer of knowledge in the international space. In this way, for example, the know-how of foreign clusters of expertise can be integrated into the knowledge base of a company.

At the same time, however, new risks arise. These result especially from an intensified competition and an increased pressure from competition. As internationalization is not a one-way road, it does not, in fact, contain merely a potential extension of operational area but equally an increased market penetration through foreign competitors.

In a global market with barely remaining national niches new growth opportunities can rapidly switch into obligations. Companies which are falling short of global standards with regard to their returns and their growth in turnover get under enormous pressure. In case they do not succeed in gaining ground towards the global players they are facing a downward spiral and the loss of their capacity to act. Especially if internationalization is exlusively performed in order to lower costs, even the formerly non-conflictual IT industry might experience social distortion of a new quality[3]. Finally, the global transfer of know-how bears risks as well. As knowledge does not only flow in one direction, the possibilities go far beyond merely gaining new stocks of knowledge. Rather, own skills and expertise are at the same time given away to foreign partners and may possibly be lost. The consequence can be an erosion of know-how which may put the own innovation base at risk.

3 Facing a new stage of internationalization – Different starting situations and challenges for IT companies

For all companies of the IT industry this new stage brings with it dramatic consequences. With regard to their international activities they simply cannot go on as they used to. Rather, they have to adapt their strategy for internationalization in all its facets to the new working environment. Thus, the new stage of internationalization necessitates a reformulation and update of the strategy therefor. Due to the profound change in the industry we assume that for the companies it is often not a matter of merely gradual change but that they are facing capital qualitative changes. They have to pass a new "threshold" of internationalization. Only the ones who adequately prepare for the new stage will be successful in the medium and long term.

This threshold and the challenges connected therewith, however, are not the same for all companies. Even though the IT industry has been very international from the beginning, there exist large differences within the industry with regard to internationalization and the capacity to implement it. On the one hand there are companies with very far-reaching and long term experiences in the international business, but on the other hand there are also companies which have so far – with success – concentrated on certain national markets. Against this background it becomes evident that the stages of development, i.e. the major tasks which companies are facing today in order to cope with the evolving stage can differ significantly.

Therefore, it should be explained how the companies differ with respect to their stages of development of internationalization. On the basis of our empirical research the following differentiations seem to be vital.

[3] Especially the controversies in the US on offshoring pointed at the enormous potential for conflicts and the "explosive power" of this topic (Schwemmle 2004).

- Company size and market position
- Different spectrum of products and services
- Scope of experience and maturity of internationalization
- Internationalization as part of a strategy for company growth or company consolidation

3.1 Company size and market position

Striking differences with regard to handling internationalization result from the size and the market position of the IT companies. Here, it can be seen that the more secured the market position of a company is on the current markets at home and the larger a company, the easier it will be to utilize the advantages and opportunities of internationalization. Firstly, larger companies are more likely to have adequate resources at their disposal in order to become active in new, international markets (employees, social networks, customers and capital already active on an international level). Additionally, their projects and procedures will sooner amount to a "critical mass" (von Campenhausen 2005) which is necessary for organizing internationally distributed development processes in a profitable way. Thus, scale effects and with it the size of a company are returning as an important competitive factor. At the same time it is, of course, also true that the pressure for internationalization on the "big players" strongly continues to increase – strategies focussing on national niches will hardly be successful for the companies on the global IT market in the long run.

For small companies, on the other hand, the situation often is quite different. They often experience the new stage of internationalization primarily as an increase in competition as foreign competitors become active in their traditional markets. Now, the more the products and services of the IT industry become a standardized commodity, the harder it will be for small companies especially to maintain their unique selling points. Compared to larger competitors massive disadvantages may arise as competition will be fought out over the price. At the same time, they will often have difficulties to utilize the chances of internationalization and to expand their operational area due to a lack of capital and a small workforce.

3.2 Different spectrum of products and services

Another crucial criterion concerning the capacity for internationalization and the development stage of the aspirations for internationalization of IT companies is their different spectrum of products and services. After all, the IT industry is a very complex industry which comprises companies with differing objectives and operational fields.

This requires a differenciated approach – we must distinguish between:

- Producers of standard software (e.g. SAP, Microsoft; development of standard software products)
- IT service providers (e.g. IBM, T-Systems, SBS; performance of customer-specific services, systems integration, frequently on the basis of standard software)
- Outsourcing and the maintenance of data processing centers (e.g. EDS, CSC; outsourcing of IT-based corporate functions)

The three areas differ significantly in their pivotal challenges for internationalization. Thus, a producer of standard software is facing different problems and tasks than a provider of only IT service. Internationalization for the producers of standard software with their product-based business model is still coming closest to following the line of classical export. The IT service providers, however, with their people-based business model are facing a particular challenge: the international performance of customer-specific solutions and services. This is true also – albeit with slightly different focus – for the outsourcing business and the operating of computer centers. Here, IT functions (e.g. allocation of computing power) or IT-based service fields (BPO) in a global context (see also Allweyer et al. 2004) have to be made available to customers.

When determining the factors for success of internationalization these differences have to be accounted for.

3.3 Learning experience and maturity of internationalization

There is another striking difference between IT companies which is closely related to the actual business segment, and that is the duration of their experience in handling the challenges of internationalization. The analysis of IT companies with a long experience in internationalization shows that the conversion of processes and products, the education of employees and not least initiating relations in international markets contain and presuppose considerable learning processes. These frequently stretch for a long period of time. Thus, time gains significance for the capacity of companies for internationalization: the longer the duration of a company's previous learning experiences, the better the basis is for utilizing the new stage of internationalization as a growth opportunity.

It is the big producers of computers like IBM which have the most experience with handling internationalization. These companies often built up international distributive structures as early as the 1920s for being able to distribute their office machines worldwide. Since the 1950s they also have used this distribution network for selling computers and additionally have built up production capacity in various regions of the world (Boes 2004; Boes, Baukrowitz 2002). Simultaneously, many of these companies have grown to become market leaders for providing IT services. Their worldwide experi-

ence and "advance input" in the hardware business can now be very useful for the internationalization of their services. Even if this advance may not be projected par for par to their know-how in handling the global provision of services, it is that these very companies will have advantages in their capacity for internationalization.

Also the independent producers of standard software like Microsoft, SAP or Software AG have rich experience with internationalization at their disposal. As soon as these had created an executable product they endeavored to distribute it beyond national borders as well. Accordingly, they have been active on international markets since the 1970s and '80s. These companies utilize the comparably high degree of standardization of their products and services as an advantage for international action.

In contrast, internationalization for most independent IT service providers began significantly later. Exceptions aside, it was not until the '90s that the decisive preconditions were set in order for internationalization to become a serious option for these companies. Here, the prevalence of standard software as a guiding concept is of particular importance. For it was only on this basis that the performance of the providers of systems integration services changed. Processes and procedures were intensely harmonized. With the ensuing homogenization of the infrastructures of customers, a sufficiently large market developed for the performance of the providers of services for computer centers. Within the group of independent IT service providers the subsidiaries of the large international corporations have the most experience. This applies to companies like EDS, T-Systems or Lufthansa Systems. These have had to offer worldwide service to their parent company since the '80s and are able to access a comparably established network of international locations. On this basis they can be held as forerunners or pioneers of internationalization in this segment of the industry.

3.4 Internationalization as a part of a strategy for company growth or company consolidation

Finally, the "strategic embedding" of the activities for internationalization has to be kept in mind. According to the ideal type this could be either part of a strategy for growth or for consolidation. Even if these two versions are hardly distinguishable in practice we do see different strategic baselines which in each case have a different focus and different preconditions for these activities. (see also Flecker, Huws 2003; Flecker, Kirschenhofer 2002).

As a part of a strategy for growth, internationalization is being pursued as an expansion of corporate activities. The basis for this always exists considerably in the previous successes of the company. It is indeed possible that the objective of lowering costs is being pursued as well – the focus of the strategy, however, normally lies on opening up additional markets. The build-up of foreign location especially is taking place additively and

complementary to the capacities already existing. Even if we often record an asymmetrical i.e. more rapid growth of foreign subsidiaries the domestic jobs are not under consideration. Consequently, the employees hardly experience internationalization in a negative way as they are not running the risk of being replaced by off- or nearshore workers in the near future. These are rather needed in order to be able to cope with a growing operating volume, to compensate obsolescence of staff and to create space for innovative activities which in the long run can boost the added value (Hoch 2005).

Conversely, if internationalization is primarily carried out in the sense of a strategy for consolidation cost reduction is frequently prominent. Global sourcing and the build-up of international development locations can then take place as a substitute (Flecker, Huws 2003). Now the consequence is possibly not only stagnation but also a diminishment of domestic staff through job cuts (see also Gerstenberger, Roehrl 2006). The engine of such strategy is not corporate success but rather the need to catch up with competition due to increasing pressure. Against this background specific risks arise. Thus, the immediate pressure can lead to cost reductions which overshadow other important facets of an integrated strategy for internationalization. Through this the necessary "long wind" or endurance is jeopardized. This is important as the chances of internationalization can not be realized as effectively in the sense of a short-term and immediate cost reduction. Rather, activities for internationalization must be perceived as a long-term investment which initially even can be accompanied by increased financial expenditure and the advantages of which will take effect most of all only in the medium term.

Additionally, it bears the danger of the employees experiencing internationalization as a threat. Without their commitment, however, it is hardly possible for the companies to utilize the growth potential of the new stage of internationalization. It is especially in the area of intense knowledge of IT services that a lack of dedication on the side of the staff can jeopardize the success of strategies for internationalization. Therefore, international projects depend on the co-workers and their active compliance to an extraordinarily large extent. Without them passing on their knowledge and their experience, which often has grown for years, a successful cross-border cooperation of different locations can not be well established. If the personnel cannot recognize a perspective for them in the strategies for internationalization and instead rather is dreading "uncertain times" it is plausible that they will hoard their knowledge rather than reveal it. It secures their non-substitutability so-to-speak and in this way becomes their individual insurance against unemployment. In this situation, many employees may even view a motivated implementation of the strategy for internationalization and a dedicated global cooperation as "biting the hand that feeds you" (Boes, Kämpf 2006; Boes et al. 2005b).

4 Development scenarios of Internationalization – Challenges, development thresholds and factors for success

The heterogeneity und the simultaneously dynamic development of the industry form the context in which companies start to encounter the new stage of internationalization strategically and to draft (updated) strategies for internationalization.

On the basis of different development stages, the companies are facing different starting situations from which they have to react to the new stage of internationalization. Consequently, for companies in an earlier stage of the process it cannot make sense to simply and rapidly imitate the internationalization efforts of already successful global players. The strategies of these can hardly be reproduced without problems under today's conditions. Rather, these companies have to find their own ways with which to meet the new requirements. At the same time it is also true that for the already successful global players a mere "way to go for us!" will not be sufficient to defend the acquired position on the world market.

Our empirical inquiries show that, as a consequence, the concepts, strategies and activities used to answer to the new requirements of the globalization of the IT industry differ highly from each other. They vary according to market segment and spectrum of products, size and market position of the companies, experience with internationalization etc. When generalizing these differences and comparing them to ideal types one encounters different scenarios of development in the IT industry for handling the strategic challenge of a new stage of internationalization.

4.1 Capacity for internationalization: Challenges for all companies

Certain "basics of internationalization" are fundamental for the different scenarios. They apply to *all* companies willing to succeed on the global IT market in the medium and long term. The companies have to become *capable of internationalization*. These capacities correspond to some extent to the general requirements for the actors in a globalized IT world. The ones willing to become capable of internationalization have to "do their homework" in the following crucial fields. The activities in these fields are of great urgency and by no means banal – they are forming the basis for being able to act in the new stage of internationalization.

The capacity for internationalization comprises:

- modularly designed products and services
- internationally marketable offerings and solutions
- standardizable processes and procedures

- competent and dedicated personnel which is motivated and qualified for working in internationalized structures, processes and contexts
- efficient systems of governance and guidance which are adequate for international corporate structures and distributed operating procedures
- international structures of information and communication
- international structures of distribution
- sufficient resources and capital for international involvement

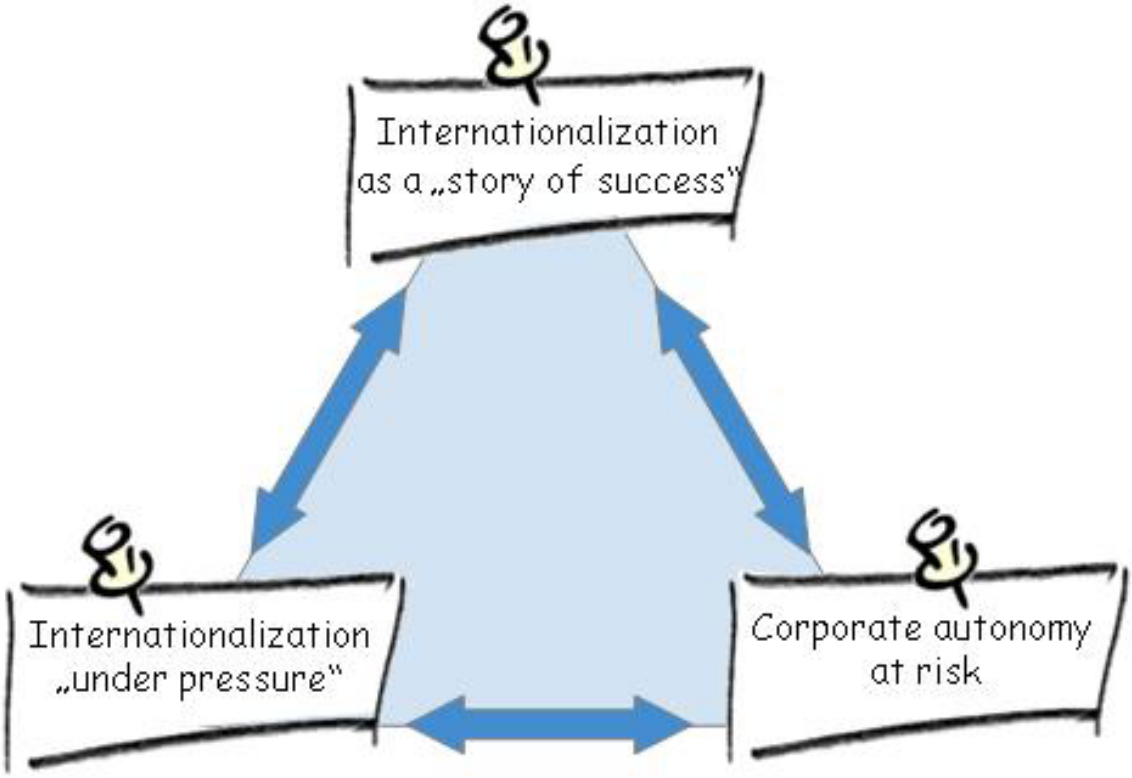
Depending on the level of experience, market position, size and business model, however, different emphasis and focuses are ensuing for the companies within these fields. For every company specific new challenges arise: Depending on their level of development the companies are facing different thresholds of development which are to be passed. This results in different development scenarios.

4.2 Development scenarios of internationalization

On the basis of our empirical inquiries we can distinguish three development scenarios of an ideal type. These are:

- "internationalization as a story of success": This scenario determines especially the development of internationalization for large corporations with a long experience with the internationalization of their business
- "Internationalization under pressure": This scenario is often seen in companies whose internal structures have been developed insufficiently so far. They are under massive pressure with regard to time and costs in their ambition to open up new markets.
- "Corporate autonomy at risk": This scenario is often to be found with small companies or companies with a comparably weak market position.

These "ideal types" are not directly represented in reality but are understood as theoretical models of the cases found empirically. Neither are the types clearly delimitable from each other but rather characterized by fluent transitions. Thus, they are forming the borderline points of a dynamic triangle, as it were, inside which the development of IT companies takes place with regard to internationalization (see image).



Scenarios of internationalization

Internationalization as a "story of success"

These companies often have wide international experience and global structures (often distribution and production) as a rule at their disposal. So far, their process of internationalization has been a story of success.

Also for these companies new challenges arise in the sense of a new stage of internationalization. They must not "rest on their laurels" but have to intensify their efforts in order to maintain and extend their strong international position – thus, their market position has to constantly be defended against new global actors which on their part intensify their global involvement (e.g. Indian service providers). It will be the focal strategic objective for these companies to grow towards a uniformly acting world corporation. Until now, these companies have grown internationally step by step over a long period of time without necessarily systematically adapting the organization to their growing operational field. They now have to consistently orient their structures and processes towards the requirements of their international network and its governance for being able to act fast, to plan but also to be flexible all over the world.

The risk for these companies is of sliding downwards in international competition – then their ability to act strategically is at stake and they will run the risk of being drawn into the undertow of a "cost spiral".

Internationalization "under pressure"

For these companies international involvement so far has not been a focus of their corporate strategy. They are facing now a particular challenge: They have little international experience but must at the same time enlarge their international involvement significantly more than their experienced competitors. From market perspective their international business has to grow exponentially (especially in emerging markets) while from the cost perspective they are increasingly under pressure from international competitors.

The particular challenge consists in developing a strategy which solves the paradox of lacking experience and increased pressure in a productive way. It is about finding ways which meet these paradox requirements, i.e. which allow for utilizing the chance of internationalization step by step. One possible strategic objective may be to focus on certain regional markets and serve these selected market segments only. In this, it is important to expand the international operational area on the basis of existing strengths. The very fields in which special expertise already exist may prove to be appropriate starting points for an extended internationalization.

It is a vital danger for these companies to make, in the face of market pressure, three steps at a time. Especially the strategic sustainability of internationalization can then be jeopardized by a one-sided orientation towards the costs and by action too rapidly carried out.

Corporate autonomy at risk

Especially small companies are increasingly finding themselves exposed to the problem of their "autonomy being at risk"[4]. On their domestic markets, international competition is augmenting. But due to their disadvantages in size it is for them also more difficult to seize the chances of international markets. Therefore, the new stage of internationalization means an aggravation of competition for these companies in their domestic markets, while at the same time they cannot easily profit from the new possibilities. First, they often are cut off from the over-proportional growth of the global IT markets due to their limited resources. Additionally, for them the ever more important "economics of scale" can also hardly be realized. Consequently, also the advantages of global sourcing can be utilized to an only very limited extent.

In this scenario of development it is important to acquire the ability to also act in international space. Therefore, these companies have to find ways to extend their own resource bases because especially the lack of capital greatly limits the global opera-

4 For the term „autonomy" see Bechtle (1980).

tional field. At the same time, international relations of cooperation and partnerships have to be established without losing the corporate independence. In order to be able to finally endure on the international market, unique selling points have to be extended and, if need be, transformed into systematic strategies building on niches.

If they do not succeed in utilizing the advantages of the global market appropriately in this manner, they will run the risk of perishing in destructive competition or of being swallowed by a larger global player. This scenario especially applies to but is by no means limited to small companies. Our findings show that it is an enormous challenge also for comparably large companies to become capable of action in the global IT market and to preserve the autonomy in the international context. Also for them there is always the additional risk – especially if the company is successful – to fall prey to a take-over.

5 Closing

This typology builds a systematic starting point in order to examine internationalization in the field of IT services and software development in a differentiated way. In this process it becomes evident that flat statements and generalizing forecasts hardly do justice to the heterogeneity of the industry. Rather, the complexity of the development and the diversity of the companies are to be taken into appropriate account. The very existing diversity and the different challenges which IT companies are facing with regard to internationalization demonstrate that in this process additional empirical analyses which are closely oriented towards the corporate practice of internationalization are highly necessary.

Therefore, in the next phase of the project EXPORT IT the empirical findings up to now are to be furthered. On the basis of the different scenarios, the activities for internationalization of selected companies will be scrutinized specifically and in detail in so-called experience-analyses in the framework of intense case studies. On this basis best-practices are to be identified and to be generalized. The learning processes of the pioneers of internationalization in the IT industry may then be a useful wealth of experience also for service providers in other industries and may contribute to the capacity for internationalization of the entire service industry.

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