

Consolidation Patterns in the IT Outsourcing Market: Past, Present, and Future

Katharina Grimme and Peter Kreutter

Abstract The IT services industry has already changed fundamentally over the last 20 years and we will most likely see even more structural change in the next 20 years. In our article, we look into the past and—using the example of Germany—examine in a case history the consolidation path on a local level in the industry’s early years. The discussion of more present trends is then based on a snapshot of major strategic acquisitions on a global level in recent years. Here we argue that consolidation in IT outsourcing and services is going to become a global game. As such, it developed in two partly consecutive, partly parallel streams. The first stream of take-over activities focussed on building up or expanding the services offerings in the firms’ product portfolios. Services expansion moves at that time targeted to develop higher margin business compared to commodity hardware, secure direct access to the client bases and thus to expand market share. The second stream concentrated on cross-silo expansion strategies. The objective is to be able to address customers in a holistic way with combined hardware, software, and IT services capabilities. To conclude, we present four major trends, relevant from our point of view, to guide an IT outsourcing provider’s strategic positioning for the future.

1 Introduction

Over the last 20 years, the IT services industry has changed fundamentally. Firms like EDS, which once pioneered the IT services revolution, have been taken over. Local European heroes like T-Systems or Capgemini went through difficult times

K. Grimme (✉)
Pierre Audoin Consultants, Germany
e-mail: k.grimme@pac-online.com

P. Kreutter
WHU – Otto Beisheim School of Management, Germany

and are still far from having reached a safe harbour. Indian firms, like Infosys or TCS, started on a small scale with low-cost labour offerings to Anglo-Saxon countries and now capture market shares in all major IT markets (see Bäumer et al. 2010). However, as hard- and software giants like Hewlett-Packard swallow service providers, European markets become more and more mature and the cheap labour value proposition of offshore vendors loses its attractiveness in the IT outsourcing industry.

We will most likely see more structural change in the next 20 years. In the following, we present some industry history and—using the example of Germany—examine the rules according to which the IT outsourcing industry has consolidated in its early years. Based on the discussion of current market and industry trends, we discuss four major trends that we perceive as relevant to guide an IT outsourcing provider's strategic positioning for the future.

2 The Past: Consolidation Patterns in the IT Outsourcing Industry in Germany Between 1990 and 2005

When Daimler-Benz AG founded its services division Debis Daimler-Benz InterServices AG on July 1st, 1990, it established a new, fourth business line. In contrast to Daimler-Benz's existing businesses, which belonged to the automotive, manufacturing, and high technology sector, Debis was launched to take advantage of the increasing demand for services (see Debis 2000). Debis itself was multidivisionally organized to serve heterogeneous markets such as leasing, telecommunications, and information technology. The goals were quite ambitious at the time: Manfred Gentz, Debis' designated CEO, aimed at setting up one of the largest service companies in the world and Daimler-Benz CEO Edzard Reuter expected a threefold increase in turnover in the foreseeable future. Debis Systemhaus, the Debis division set up to exploit Daimler's in-house information technology know-how in the external market, became a crucial part of the Debis success story.

Much more important in this context, however, is the fact that the formation of Debis Systemhaus marked the start of the IT outsourcing industry in Germany. In other regions, such as the USA or UK, the roots of the IT outsourcing industry can be traced back to the early 1970s. Especially in the USA, it showed a strong expansion from the mid-1980s onwards. When IBM signed a 10-year USD 250 m contract with Eastman Kodak in 1989, the landmark transaction demonstrated how far the industry already had developed in the USA (see Lacity and Hirschheim 1993). Revenue figures of the six leading IT outsourcing companies in the USA were already beyond the billion-dollar mark in 1990.

The situation in Germany at that time was completely different. Of course, there were companies offering services, which can be interpreted in a broader sense as what is defined as IT outsourcing nowadays. Nevertheless, often those services were marginal add-ons to existing hardware, software, and system integration

businesses. An IT journalist concluded after one of the first market studies in 1992: *“The IT outsourcing industry in Germany is still in its infancy!”*

But the industry grew fast. Given the huge success of Debis, several large German companies started to develop similar strategies. Deutsche Telekom took over Computer Service Magdeburg, a formerly state-owned computing centre in 1992. It was re-branded to DeTeCSM (Deutsche Telekom Computer Service Management GmbH) and served as platform on which Deutsche Telekom was to build its IT outsourcing business, at the beginning largely by integrating its existing internal data centre infrastructure. Also in 1992, Siemens created Sietec Consulting aimed at developing project and outsourcing business, not only for SNI (Siemens Nixdorf Informationssysteme) but for non-SNI systems, too. In contrast to the Debis rationale, where internal back-office know-how was bundled and offered to the external market, the Siemens move followed a different path, given SNI was the largest computer producer in Europe at that time.

The growth phase continued and was even strengthened in the years following 1994 with IT outsourcing remaining at the forefront of growth industries in Germany. Many German blue chip companies developed their IT departments into new business divisions [see for such early developments in the USA, Soden (1972)]. Even companies active in more traditional industries, like construction and steel, were seeking to take advantage of the emerging IT outsourcing industry. For instance, Hochtief launched Hochtief Software AG, which despite its name delivered IT outsourcing services, too. Similarly, steel giant Thyssen established Thyssen Informatik in 1994 by carving out its Thyssen Stahl AG’s data centre employees, assets, and know-how. Based in the Rhine-Ruhr region, one of the strongest economic areas in Germany, and equipped with Thyssen’s premier brand, the new company soon established a good position in the industry and entered into an aggressive growth path under the guidance of its CEO Peter Chylla. When having had the chance to interview Peter Chylla on his personal experience, his analysis of the competitive situation in the industry at that time is highly interesting: *“When recalling those days, I remember that despite EDS, Debis and IBM already having some strong footprints in the market, our company was driven by the entrepreneurial spirit to explore and capture the opportunities in an emerging industry. The well-known Thyssen brand along with a ‘local neighbour’ touch became a valuable starting point and key differentiator in the market. The know-how and economies of scale achieved through our internal business were the proof of concept, that we were able to handle those tasks reliably and in a professional manner.”* (Chylla 2007).

The need for a “local touch” seemed to be identified from newly arriving US companies. In contrast, e.g., to IBM and Hewlett-Packard, which could look back on decades of presence in Germany and were considered “the guys from Stuttgart and Böblingen,” companies like EDS or Computer Sciences Corp. had to overcome a “cowboys from Texas image” as a seasoned Chief Information Officer of a German bank stated. Among others, it may have been for this reason that Computer Science Corp. acquired in late 1994 a majority share in Ploenzke AG, despite having sealed an IT outsourcing contract with Ford, Cologne, earlier that

year and being successful in Germany already. In fact, in the industry and among clients it was “Ploenzke” rather than CSC, which became the dominant part in the newly established brand CSC Ploenzke AG for many years.

Entering a 10-year agreement with Gothaer Versicherungen, IBM was the first to reach the “mega-deal” mark of DM 1 billion (about EUR 0.5 billion) total contract volume in Germany. It was the largest deal IBM had signed in Europe until then. From an IBM perspective the deal, moreover, underlined the result of its decision to transform itself towards becoming more a service company, thereby reducing the former dominance of its hard- and software leg. As IBM’s German CEO Bernhard Dorn concluded in an interview in mid-1995, he saw the transformation in general finalized, since becoming the leading IT outsourcing company in Germany only 2 years after starting its operations.

As with the success of Debis in the early years, the successful entry and expansion of IBM motivated new entry as well as put pressure on incumbents (e.g., Siemens) for further strategic moves. While initially being departed from diversifying its SNI hardware business, Siemens decided in 1995 to reorganize and scale-up the existing IT outsourcing activities by integrating large parts of its internal support function “Rechen- und Kommunikationsdienste.” Siemens Business Services was created as the new legal entity in October 1995 and the expectations were articulated as to leapfrog Debis and to become a leading European IT services player within 5 years (see Pierre Audoin Consultants 1999).

By the turn of the century, most important actors in international IT outsourcing were now active in Germany, with followers like Atos Origin and Logica having entered in 1999 and 2000, respectively. But from 2000, despite the bright predictions made for a rising demand in IT outsourcing over the next years, a change in industrial dynamics became apparent. Over the following years, a wave of concentration, consolidation, and repositioning set in (see Venkatraman 1997 for an academic perspective). First, ThyssenKrupp Information Services (TKIS, formerly Thyssen Informatik) bought Hightech International Services (HiServ) from its parent company Aventis. The transaction was well received by the industry analyst-side because TKIS expanded its non-ThyssenKrupp business significantly in volume as well as paved the way for cultivating a new customer industry: pharmaceuticals. Moreover, it brought TKIS close to the top-ten ranks in German IT outsourcing. The really important point, however, was the clarity with which TKIS pointed out the need for further large-scale acquisitions to succeed in the industry.

A second transaction in 2000 reverberated the industry even more strongly. Deutsche Telekom acquired a majority share in Debis Systemhaus, effectively taking over the entire company since the deal included the obligation to acquire DaimlerChrysler’s remaining minority share in the future. In terms of industry impact, the Debis acquisition was a “game changer” and immediately turned the pecking order upside down.

Also smaller players became acquisition targets (see Kroker 2003). HochTief put its HochTief Software on sale in autumn 2001. Officially for reasons of a stronger concentration on core competencies, the industry magazine Computerwoche saw

doubts regarding the further growth perspective to be the more likely reason for the sell-off. Capgemini absorbed Hochtief Software and was being awarded an additional outsourcing contract with Hochtief AG. Systematics, which entered the industry only 3 years before with notable success, became a victim of its own growth strategy. When having acquired competitor MSH in 2000, the plan was to finance the deal via issuing new equity in the stock market shortly after. But with a deteriorating stock market, the placement scheduled in autumn 2000 was revoked. As the capital market environment in 2001 became even more hostile, the financing gap forced Systematics to look itself for a strong partner. EDS took the opportunity to expand its IT outsourcing business in Germany and to close up to leading T-Systems and IBM via a Systematics take-over.

Shortly afterwards, the Düsseldorf-based technology and defense conglomerate Rheinmetall restructured its portfolio under pressure from the US investor Guy Wyser-Pratte, famous for its aggressiveness. Rheinmetall Informationssysteme (RIS) GmbH was one of Rheinmetall's portfolio companies to be divested and was auctioned in autumn 2002. RIS had specific SAP know-how and a strong focus on the German SMEs, which was seen as one of the fastest growing segments in IT outsourcing. Many competitors saw those two factors as a highly attractive complement or extension for their existing business, and participated aggressively in the auction. IBM won the contest outbidding EDS, ThyssenKrupp's Triaton (formerly TKIS), and others. The sale of RIS was the starting point of an additional take-over wave, during which even larger players like Triaton or Volkswagen's gedas came up for sale (see Grimme and Kreutter 2006).

The widespread interest in an acquisition of those firms came from two directions. First, incumbents like CSC or Capgemini saw the opportunity to significantly improve their position in the German market. A second group of potential buyers aimed at entering the industry instead of expanding an already existing position. There were still a few large IT outsourcing companies throughout the world, which had a strong presence in other global regions but have not arrived in Germany with their IT outsourcing businesses yet. As Germany was the largest single market for IT outsourcing in continental Europe at that time, a presence was important for strategic reasons (see Stiehler 2007). Recognizing the difficulties many companies had to ramp up operations from scratch in Germany, they were seeking acquisitions to build a beachhead, relatively large and with a well-established brand. US-based Affiliated Computer Services (ACS) and India-based Tata Consultancy Services (TCS) were the two most prominent companies belonging to this group and which were also reported as participating in the action of TKIS (see Middelman and Helmes 2005). The fact that TKIS was acquired by Hewlett-Packard and gedas by T-Systems illustrates the end point of the first consolidation wave (see Schlaberg and Kreutter 2005).

To sum up the consolidation patterns in the past, we see the development in Germany as anecdotal evidence for basic evolutionary patterns. What started out as a predominantly local business model with a strong presence of local players changed radically over the years. By the end of 2006, many national markets mirrored more or less the overall global landscape in the industry. Many local players, in particular captives, had been taken over (see Corbett 2004).

The rankings for Germany found global firms like IBM, Hewlett-Packard, Capgemini, and Accenture in leading positions. As the industry moved from a growth industry with double digit growth rates to a mature industry, in which we see growth rates below the five per cent level, the consolidation pressure increased and worked at a global level (see Pierre Audoin Consultants 2005).

3 The Present: The Shift Towards a Global Consolidation Game

Already in 2002 there were signs that consolidation in IT outsourcing and services would become a global game. As such, it developed in two partly consecutive, partly parallel streams. The first stream of take-over activities focused on building up or expanding the services offerings in the firms' product portfolios. Services expansion moves at that time targeted to develop higher margin business compared to commodity hardware, secure direct access to the client bases, and thus to expand market share.

This was a new type of deal as takeovers previously often took place "in the same silo," e.g., Hewlett-Packard taking over Compaq to expand its position in the PC market. In 2002, IBM took over PwC in an acquisition worth USD 3.5 billion, adding 30,000 PwC employees to IBM's workforce. The deal gave additional weight to IBM's services business and was the culmination of Lou Gerstner's strategy to reposition IBM after its close-to-bankruptcy situation in the mid-1990s.

Hewlett-Packard made its mega services deal 6 years later than IBM, when acquiring EDS in a deal worth USD 13.9 billion in 2008. EDS gave Hewlett-Packard the scale it needed to challenge IBM Global Services for tier one infrastructure outsourcing deals. Hewlett-Packard and EDS seemed to have a good vertical fit, with Hewlett-Packard Services strong in manufacturing and telecoms, and EDS in government and financial services. Both suppliers' strongest suit was infrastructure outsourcing and joining forces was seen as one way to fight price pressure from offshore delivery and the increasing efficiency of IT equipment. The larger scale of the joint unit should allow squeezing as much as possible out of IT operating costs and provide a platform for stronger cross-selling of Hewlett-Packard hardware. The merger made Hewlett-Packard and EDS rank as the second largest player in the Western European IT services market with combined 2007 services revenue of EUR 11.5 billion, according to rankings from Pierre Audoin Consultants (2008), giving it a market share of 7.5 %.

Competitors followed the same strategy. Dell took over Perot Systems in 2009. Dell paid USD 3.9 billion to make Perot Systems Dell's services unit, initiating a focus on enterprise services and weathering sluggish hardware sales. Xerox seeks to transform itself from a technology into a high-end enterprise services company through the acquisition of ACS. Beyond its traditional business, the Xerox/ACS company model opened for Xerox the option to participate in two additional markets: business process outsourcing (BPO) and information

technology outsourcing (ITO). While the company's long-term opportunity grew considerably through that move, the competitive landscape also intensified. Xerox found itself in competitive situations for IT services with vendors like IBM and Accenture that previously partnered with Xerox as a reliable and steady partner on the technology side. This, of course, created danger on Xerox revenue stream in this field. But for long-term survival, the ACS deal was a chance that Xerox had to take.

As argued, such deals put massive pressure on so-called "local heroes," in many cases large European IT services players with a strong foothold in one or two European countries, but often lacking real international presence or offshore delivery capabilities [see for the Indian IT industry (PricewaterhouseCoopers 2011)]. Capgemini, when acquiring the US-based but in fact more Indian IT firm Kanbay in 2006, was among the few European firms to early develop a strong offshore profile.

Firms like Atos Origin, Siemens Business Services, T-Systems, and others failed to undertake such forward-looking strategic moves. Often being reported to be in merger talks, nothing really happened. It lasted until 2010 before Atos Origin made a move, when Siemens was once again looking for a partner for its long-term struggling IT services division Siemens IT Solutions and Services (SIS). Undoubtedly, the Atos/SIS merger created a new big European IT services firm, being better positioned when it came to winning larger infrastructure deals against other large providers such as CSC or T-Systems. Furthermore, from a regional perspective, SIS and Atos Origin complemented one another: SIS is strong in Germany, UK, and Scandinavia, whereas Atos has a strong market presence in France and the Benelux countries. From a capabilities perspective, Atos Origin has strong competencies in the BPO segment and particularly in the field of transaction processing, which is of major importance in the financial services industry. In addition, SIS can compensate Atos Origin's lack of footprint in the automotive industry. However, the new Atos still has limited footprint in the Americas and in APAC (especially in the emerging BRIC markets). Further acquisitions will have to follow with a view to closing such gaps.

In general, however, firms of this size can be seen as having a strategic "stuck in the middle" position. They are too large to position themselves in local niche markets. They are too large and too "old world focused" in terms of workforce to be attractive for one of the remaining hardware players or some of the Indian firms, which want to grow. On the other hand, they are too small either; too small to enter—what we call—the "cross-silo game" which IBM and Hewlett-Packard are already playing for a couple of years; and this forms the second consolidation stream we see at present.

In a cross-silo expansion strategy, the objective is to be able to address customers in a holistic way with combined hardware, software, and IT services capabilities. Again IBM and Hewlett-Packard, the "Big 2," are the strategic frontrunners. Beyond and complementary to their services expansion strategy, they have more recently invested massively into acquisitions in the software field. IBM has made some 15 acquisitions in 2010 and 2011, with the majority of those focused on expanding or supporting its software group, which has been identified as main component of growth for the company. Acquisition examples include: Clarity

Systems, PSS Systems, Q1 Labs, DemandTec, and i2. IBM, Hewlett-Packard, and others see systems software, middleware, and application management software being at the core of a large enterprise's IT architecture. Owning this strategic position is perceived as creating a long-term customer relationship and thus stable access to enterprises' IT spending, i.e., maintenance and license fees. Moreover, as most IT decisions in other areas are closely linked to this core, cross-selling options for instance in the low-margin, high-competitive hardware business are likely to arise. This trend puts massive pressure on and enforces the need not only for repositioning for IT outsourcing and services firms but also for large software vendors like Oracle, SAP, and Software AG.

They might be too small for cross-silo strategies, but already at the top of the software silo. How can the future look like for them? Is there a future for them at all? We think there is!

4 The Future: Creative Destruction and Intelligent Partnerships in Value Creation Networks

Consolidation in an industry is a clear sign for its increasing maturity (see Nelson 1994). Market shares are stable and most often the strategic positions in the industry are relatively fixed. Changing this situation in the current environment is very difficult. Yet, history shows that discontinuities and radical changes often wipe out such strategic advantages of large incumbents within a few years. For firms willing to dare far-reaching moves beyond the current status quo, this can open-up new growth potential and the chance to position themselves successfully in newly emerging markets and fields of business. In the following, we will discuss four major trends, which from our point of view have the potential to reshape today's markets.

4.1 Service as a Software

In the discussion about low-cost labour in offshore countries and wage arbitrage across the globe, one important thing is often forgotten. The greatest leap forward in manufacturing industries some 120 years ago was not made by making labour cheaper but by using technology to replace manual work. In this sense, we think that there is an opportunity especially for European companies to turn their current weaknesses into future strength. Given the demographic shifts towards an aging society and a lack of young talents, automation and codification of services into software solutions can become a game changer. Let us illustrate this. Some 15 years ago, every PC got its updates through a service engineer, who brought CDs or even still disks to every single workplace. Nowadays software and its updates are delivered automatically and centralized. Let us just use a simple example: When already today consumer products like an iPhone use speech recognition Siri to

deliver “services” to the user, how big would the potential be for fully automated and speech-recognition driven helpdesks? In the business environment, we see BPO providers at the forefront of establishing highly automated transaction processing services, such as accounts payables or travel and expense management processing with minimal involvement of manual tasks. We are confident that when thinking creatively into this direction many more services can be turned into software.

4.2 New Services Revolution

Of course, automation can replace manual work and human presence, but typically only to a certain degree. For the remaining services, in which service delivery by a human workforce might even create an added value, new services can be developed in order to leverage the potential of new technologies. Looking again at the consumer side, billions of tutorials on Youtube show how easy-to-understand services can look like. When your iPhone allows to “Facetime” with your counterpart, why don’t you as a firm offer real-time face-to-face technical support services via web solutions? In such a scenario, a services company might offer personalized services at higher price for situations in which fast reaction time and direct contact to the service partner is important for the client. Just think of the CEO in a client firm having problems with the laptop abroad. The CIO usually does not care much about the cost to solve this problem in a timely manner. To offer personalized high-end concierge “help desks” on a 24-7 basis for this target group can be one example of new services offerings with attractive price points and higher margins. Naturally, smaller and more flexible players are better equipped to develop and deliver such ‘niche solutions’. Once established, there is also the chance that large competitors buy such services for their own portfolio on a white label basis.

4.3 Cloud as the Underlying Infrastructure

For the above-mentioned two trends there is one thing for sure: Open and flexible technology infrastructure is the key. What will the infrastructure model of the future look like? We think that cloud will become the basic underlying infrastructure and cloud-related services belong without a doubt to the future growth drivers in the ICT market (see Pierre Audoin Consultants 2011). Therefore, it is imperative for every services supplier to address this topic. As these services will gradually replace traditional delivery concepts, they represent one growing segment within a limited market rather than a completely new market. Nevertheless, the challenges to implement cloud are huge and offer new opportunities for all types of players, but only if they are fast in transforming their organization towards the new models (see Rossbach and Welz 2011)

T-Systems, for example, is now leveraging its position as an integral part of Deutsche Telekom. The combination of IT and telecoms services represents a major

USP and forms the basis for the company's strategy for "net-centric cloud systems", i.e., flexible, ICT sourcing solutions for dynamic markets, comprising platforms and applications delivered as services via the network.

4.4 Intelligent Partnerships in Value Creation Networks

As these trends will gather pace and as the traditional services industry matures, a re-assessment of existing partnerships and the alliance ecosystem will take place (see Pierre Audoin Consultants 2012). We see lots of opportunity for firms of all sizes and backgrounds to position themselves in an intelligent way in the emerging Value Creation Networks (VCNs). The future VCNs are hierarchical, but flexible networks, organized towards the solution of specific need of particular client clusters. To prepare for a strong position in the cloud computing era, a number of service providers start to position as "aggregators" (or "brokers") for end-to-end services which are procured and integrated from multiple providers. The focus is here on the provision of business-oriented (but not technology-oriented) services that are aligned to (and measured on) business objectives. Essential in this approach are the ability to effectively integrate technology and services from multiple vendors, effective risk management, and risk sharing models, based on a commonly agreed governance model and SLAs. Players with strong IT infrastructure capability but also transformation skills will be well positioned to assume such a role.

With this development, we predict for the future a strong focus on the development of a comprehensive partner ecosystem, including providers of technology, software, public cloud services, and process consulting. This will be not a traditional supplier-buyer relationship, but a multi-dimensional partnership including the development of joint (exclusive and differentiating) solutions within the ecosystem. Similarly, the relationship models (and contracts) will have multiple dimensions and pricing models and need to become more flexible, based on business outcomes and/or project success.

5 Conclusion

What impact will these trends and developments have on the industry structure and consolidation patterns? We expect a mixed picture, with large players expanding further to reach global footprint and cross-silo coverage, establishing comprehensive service portfolios with a focus on the provision of IT infrastructures. But, we also see significant growth opportunities for smaller, locally/regionally focused or specialist service providers, for example servicing the specific needs of certain industry sectors. This is in response to a higher degree of differentiation (or modularization) of application and platform architectures able to offer customized and highly specialist types of services and differing service levels. Industry and business process know-how coupled with software development and

automation skills will be key assets turning such players into valuable partners (or indeed acquisitions targets) for the large global players.

For local or regional players in a country like Germany, we see an opportunity (at least in the medium term) in the provision of local “trusted,” private, or hybrid (public/private) cloud concepts adapted to the regulatory environment and customer demands (for security and availability) in their local markets.

The opportunities for IT service providers are many; however, the future will favour those that are ready and able to quickly and flexibly adapt their business models, portfolios, and skills in line with a highly dynamic environment.

References

- Bäumer U, Kreutter P, Rothauge F (2010) Higher Hanging Fruits – Zielsegmente und Strategien indischer IT- und Technologieunternehmen in der DACH-Region. *M&A Rev* 590–595
- Chylla P (2007) Interview. 9 July 2007 in Düsseldorf
- Corbett MF (2004) *The outsourcing revolution: why it makes sense and how to do it right*. Dearborn Trade Publishing, Chicago
- Debis (2000) 10 debis Jahre: Eine Erfolgsgeschichte. DaimlerChrysler Services (debis) AG, Berlin
- Grimme K, Kreutter P (2006) Consolidation continues... Analyse der Handlungsoptionen für IT-Töchter deutscher Konzerne: M&A oder klassisches Outsourcing? *M&A Rev* 261–266
- Kroker M (2003) IT-Dienstleister: Nur aufgehübscht. *Wirtschaftswoche*, 11.09.2003, 48–51
- Lacity MC, Hirschheim R (1993) The information systems outsourcing bandwagon. *Sloan Manage Rev* 35(1):73–86
- Middelmann U, Helmes M (2005) Management von Desinvestitionen: Ein Beispiel aus dem Desinvestitionsprogramm von ThyssenKrupp. *DBW Die Betriebswirtschaft* 65(5):503–519
- Nelson RR (1994) The co-evolution of technology, industrial structure, and supporting institutions. *Ind Corp Change* 3(1):47–63
- Pierre Audoin Consultants (1999) *Software and IT services industry in Germany 1999*. Pierre Audoin Consultants, München
- Pierre Audoin Consultants (2005) *Outsourcing program Germany*. Pierre Audoin Consultants, München
- Pierre Audoin Consultants (2008) *Outsourcing program Germany*. Pierre Audoin Consultants, München
- Pierre Audoin Consultants (2011) *Cloud computing – global view*. Pierre Audoin Consultants, München
- Pierre Audoin Consultants (2012) *Outsourcing research program*. Pierre Audoin Consultants, München
- PricewaterhouseCoopers (2011) *Changing landscape and emerging trends: Indian IT/ITeS Industry*. PricewaterhouseCoopers, Bangalore
- Roszbach C, Welz B (2011) *Survival of the fittest: how Europe can assume a leading role in the cloud*. Roland Berger, München
- Schlaberg F, Kreutter P (2005) Konsolidierung – quo vadis? Analyse und Diskussion sich abzeichnender Konsolidierungsmuster im deutschen IT-Dienstleistungsmarkt. *M&A Rev* 215–219
- Soden JV (1972) Planning for the computer services spin-out. *Harv Bus Rev* 50(5):69–79
- Stiehler A (2007) *Systematisierung und Handelbarkeit von IT-Dienstleistungen*. Berlecon Reserach/INTERDIG, Berlin
- Venkatraman N (1997) Beyond outsourcing: managing IT resources as a value center. *Sloan Manage Rev* 38(3):51–64



<http://www.springer.com/978-3-642-29180-7>

Globalization of Professional Services
Innovative Strategies, Successful Processes, Inspired
Talent Management, and First-Hand Experiences
Bäumer, U.; Kreutter, P.; Messner, W. (Eds.)
2012, XV, 278 p. 15 illus., Hardcover
ISBN: 978-3-642-29180-7