



Business IT Alignment - Status Quo on a Survey Amongst Top It Managers in German Speaking Countries: A Replication Study

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Abstract

This research-in-progress paper describes how Companies and especially IT Organizations manage the Business-IT-Alignment between the Management including its Top Management Team and the Chief Information Officer (CIO). This is necessary as near to all companies are part of a world where volatility, uncertainty, complexity, and ambiguity (VUCA) drive the constant adaption of Business strategy, business models, and Technology to stay either ahead of the competition or at least be able to compete head to head with the other market players. The CIO whose Role more and more is described as an executive one, rather than an operative one, needs to drive this process actively. The Scope of this research are bigger companies in the German-speaking DACH (Germany, Austria, and Switzerland) region from all industries. Excluded from the survey were state agencies. As the survey was purposely only offered in German language, a referral to other countries has been prevented. Purpose: To give interested practitioners and researchers an overview over the status quo. Additionally, the outcome will be used to design research models for further analysis. Methodology: Based on data acquired in an online survey in the German-speaking DACH region, methods of descriptive statistics have been used to visualize the nature of the results. The results of this research are based on 168 individuals which held the position of a top IT manager. Results and conclusions: This paper gives a structured overview of key figures regarding IT Organization's setup, CIO's strategic work, and Business-IT-Alignment. The data suggest that IT organizations today are on the same level as other operational business processes and that CIOs are fully accepted as part of the top management team. This results in the fact that business IT alignment leads to the situation that most companies report that the IT architecture supports the business strategy very well. Yet, the participants report that their involvement in the development of the company

strategy is average, which might cause issues in the future as new digitally enabled business models are more and more needed in a VUCA environment.

Keywords: Chief Information Officer, IT Organization, Business IT Alignment, IT Strategy

1. Introduction and actuality of the topic

Synnott defined 1981 the role of the chief information officer (CIO) as the “senior executive responsible for establishing corporate information policy, standards, and management control over all corporate information resources” (Synnott and Gruber, 1981). CIOs can positively influence the company's performance not only by fostering IT efficiency, which means lower costs, and by this increasing profit, yet increasing IT effectivity through improved IT use (Durst, 2007). Measures to drive IT efficiency are introducing tailored internal IT management systems (Schweda and Schmidt, 2014) efficient IT service management (ITSM) frameworks (Marrone and Kolbe, 2011) and the right organizational setup (Hodgkinson, 1992). An efficient budgeting and controlling process that ensures that investments in technology deliver the planned results (Chan et al., 2006) is essential. Measures to improve IT effectivity are supporting business processes with appropriate information technology (Tallon, 2014). But ultimately a CIOs main task is to ensure “Business-IT-Alignment” (BITA). This results in strategic information technology initiatives driving business performance (Peppard, 2010). Information Technology departments act as internal supplying organizations. According to J. A. Schumpeter the economic system needs to go through mutation and revolution to keep capitalism running (Schumpeter, 2003). Innovation is one means for this mutation and revolution. IT Organizations act accordingly and change technologies and promote changes in their operations and processes and through their service offerings also at their internal customers.

2. IT Management in Companies in the DACH Region

The target group for this research was current or former Top-Managers in a CIO or IT manager position.

3. Methodology and Data source

In the period 26th Nov. 2021 to 21st March 2022 an online survey was open for answering by contacted participants. To ensure that only CIOs participate in the survey screener questions were placed at the beginning of the questionnaire. As no central database for CIOs exists different ways of approaching them had to be chosen. Therefore, the research has to be regarded as an explorative one. The first source was a database from the company Dun&Bradstreet which maintains the former “Hoppenstedt Firmendatenbank”. This database consists of information about German companies with financial numbers, addresses, and names of 1st and 2nd-level managers. For this research, a selection of companies located in Germany with the criteria of >125 Mio€/a turnover was selected. The overall population from this database was 7471 Companies. The database only contained the name of 3021 CIOs. The database unfortunately only contained 2177 non personalized e-mail addresses (mostly of the front

desk). These have been contacted with a personalized e-mail. A total of N=48 responses to this address source could be registered in the survey tool SoSci Survey (Leiner, 2019).

Due to the low return rate a second source of contacts had to be established. Therefore Social Media was utilized to directly approach CIOs. These platforms delivered better response return rates. With the help of CIO.de, Xing, and LinkedIn over 1100 more CIOs have been reached directly. The survey tool reported 944 visits to the first page, yet only 300 started the survey. After data investigation, 168 surveys were classified as completely filled. Yet, with missing answers in some areas. To present the data, methods of descriptive statistics have been applied. Analysis was done with IBM SPSS V. 22 (IBM Corp.). This research is in large parts a replication study based on former research of Termer and Nissen (Termer & Nissen, 2013).

4. Selected Results and Discussion

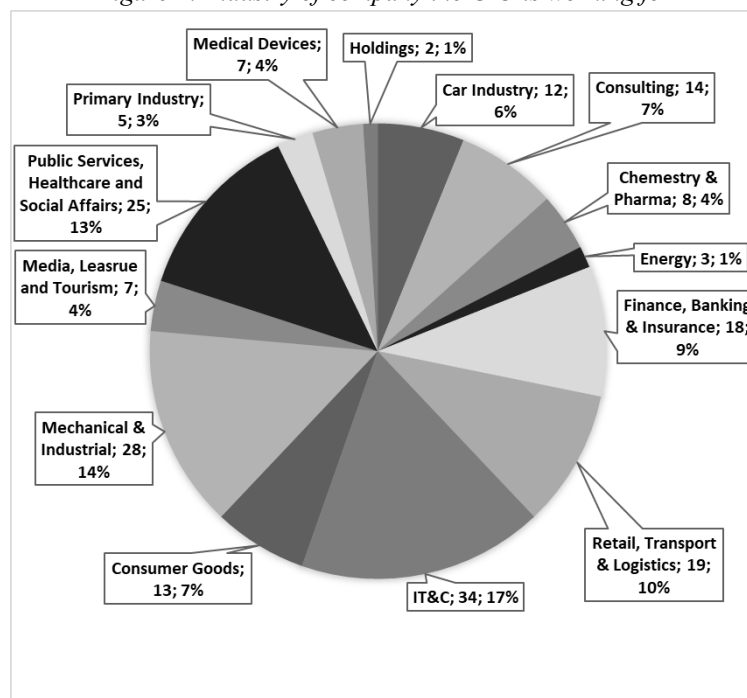
The focus of this publication is to give an overview over

1. the nature of companies that participated in the survey.
2. The nature of IT organizations
3. IT Business Order
4. IT Strategy, and Business IT Alignment practices of the CIOs.

4.1. Nature of the business involved in this study

All Industries are contained in the sample (see Figure 1), therefore it can be assumed that the results of this study are meaningful.

Figure 1: Industry of company the CIO is working for



Source: Own Data

The original goal of the research was to target companies with a minimum turnover of 125 Mio. € annually. Table 1 shows that the mean turnover was 528 Mio € annually, 120 Mio. € in

the lower quartile, and 3000 Mio € in the upper quartile. Therefore, representativeness can be assumed. The data contains some statistical outliers which can be explained by the participating large DAX companies. See Table 1.

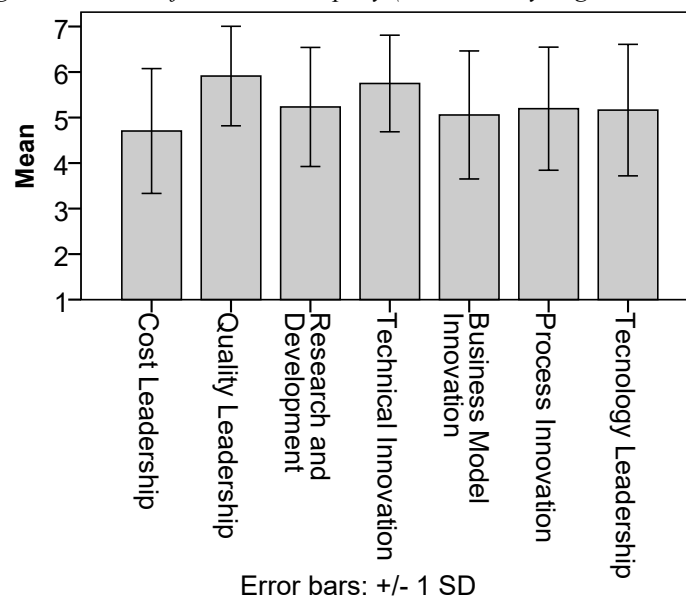
Table 1: Company characteristics in FTE and Turnover

		The company employs ... Full time equivalents (FTE)	Yearly Turnover in Mio €
N	Valid	141	112
	Missing	21	50
Minimum		20	5
Maximum		400000	250000000
Quartiles	25	270	120
	50	1500	528
	75	5000	3000

Source: own data

Based on Porter's (Porter, 1985) generic Strategies concept the participants were asked if the top management of their company focused on Cost leadership. Additionally, the aspects of their view of Innovation (in different areas of Product development, Technical Innovation, Business Model Innovation, and Process Innovation) were queried. Also the aspects of Technology and Quality leadership. Figure 3 shows the results.

Figure 2: Strategic orientation of the CIOs company (1= extremely negative, 6=extremely positive)

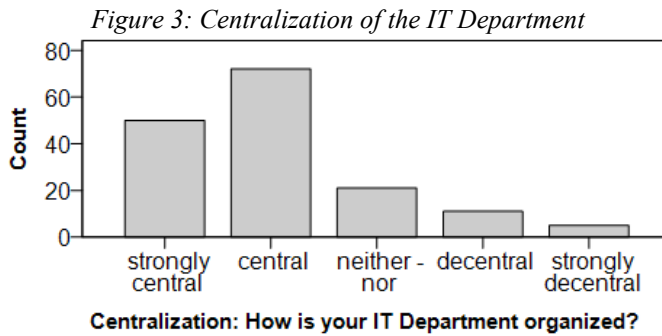


Source: Own data

The results of these analysis suggest that the sample of the survey is representative of the industry in the German-speaking DACH region.

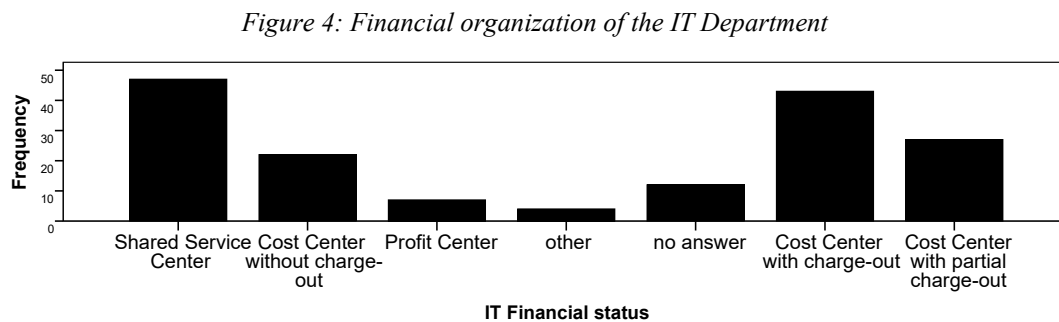
4.2. Nature of the IT Organization

The participants (CIOs) were asked about how they have set up their IT Organization in three different dimensions. 1. Central vs. Decentral, 2. Financial Setup, 3. Organizational integration. The analysis shows that most participants answered that their IT organization is centralized. This is also in line with Termer who did similar research in 2010 (Termer, 2015).



Source: Own data

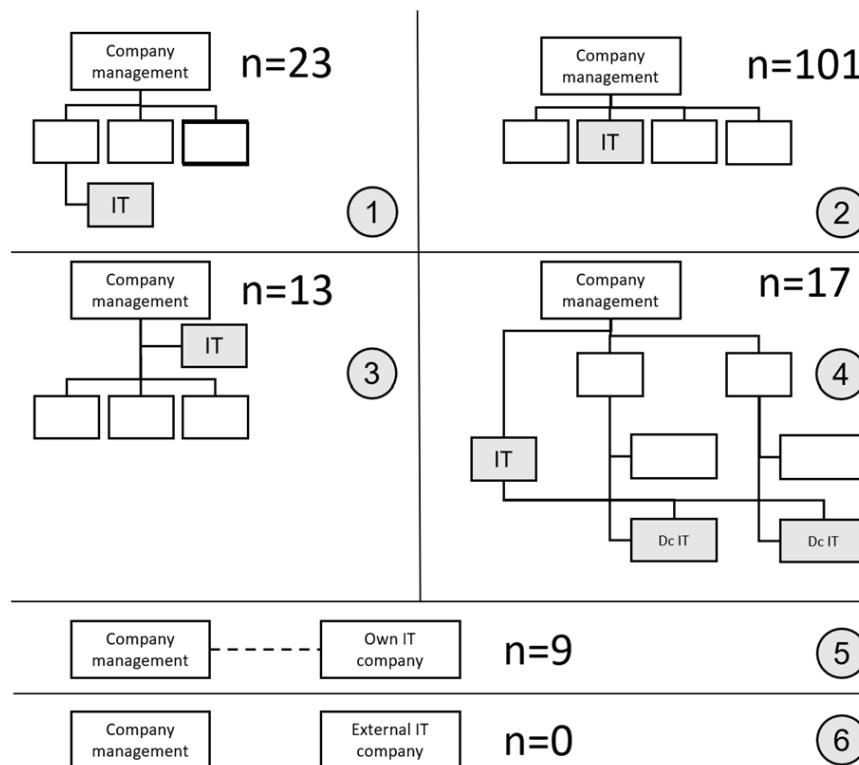
Additionally, it has been asked how the IT organization is organized financially. The results show that only a minority is seen as a profit center. Shared Service Centers are a common setup for IT Departments. Yet most are organized as Cost Centers. In this group, the Organizations with full or partial charge-out are most prominent. Only a few Departments are cost centers without charge-out



Source: own data

Mertens and Knolmayer (1995) described four alternatives for the organizational integration of IT into the company. This concept was extended by two further alternatives for this questionnaire. These are IT as an own company belonging to the firm on one side and as an independent company on the other side. The results show that most companies have set up IT on the same level as all the other business processes. The case that IT is done by an independent company was not found to be the case in this survey.

Figure 5: Organizational integration into the overall Company

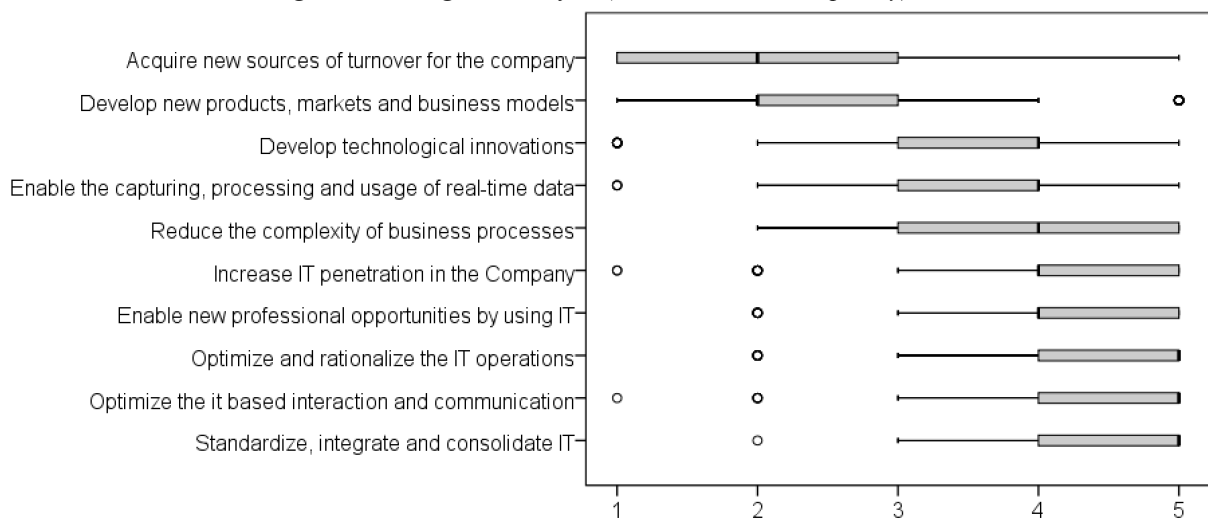


Source: own data based on Mertens and Knolmayer's (1995) adapted organizational integration alternatives

4.3. IT Business Order

The participants were asked about the strategic tasks of the IT organization. Predefined answers, which aim to represent the different facets of the IT business order, were presented. These questions regarding the tasks have been adapted from an older survey done Nissen and Termer (2014).

Figure 6: Strategic Tasks of IT (1=not at all, 5=completely)



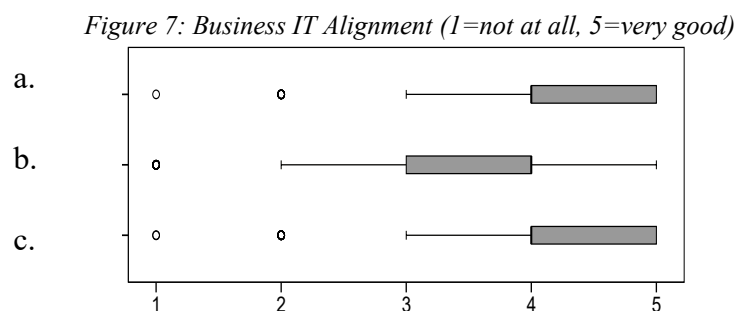
Source: own data

The first two questions were answered with a high disagreement which might be explained by the fact that a vast majority of companies see their IT organizations as Cost centers and therefore these IT organizations are more focused on internal issues.

4.4. IT Strategy, and Business IT Alignment

In the further course, CIOs have been asked about their own strategic contribution. They have been asked about their opinion on the strategic participation of IT and the results of this participation.

- a. How intensively do you align IT-Strategy with business strategy
- b. How strong is your involvement as CIO in the development of the company strategy?
- c. To which degree does the IT architecture support the business strategy?

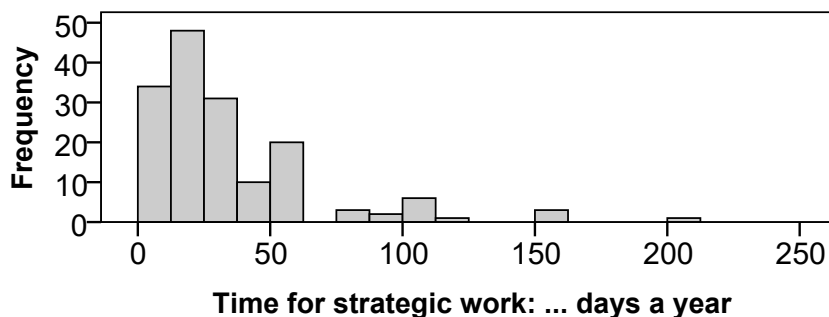


Source: own data

The results show that Business-IT-Alignment is widely seen as good to very good. As well as the belief that the IT architecture supports the business strategy. Yet, for the CIO's involvement in the development of the company's' strategy values show only medium agreement.

Then in the next question, CIOs were asked how much time they spend on strategic work.

Figure 8: Time spent for strategic work per year

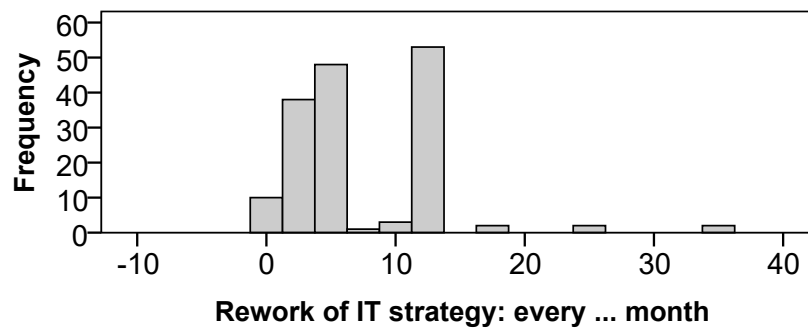


Min=4, max=210, Quartiles: 25=15, 50= 20, 75=40.

Source: own data

The data suggest that most CIOs spend the most time on operative rather than on strategic work. Furthermore, CIOs were asked how often they rework their strategy.

Figure 9: Frequency of IT Strategy rework



Min=0, max=36, Quartils: 25=3, 50=6, 75=12.

Source: own data

The results suggest that a majority of CIOs adapt their strategy after 3 to 6 month to align with the challenges of the company in the VUCA World.

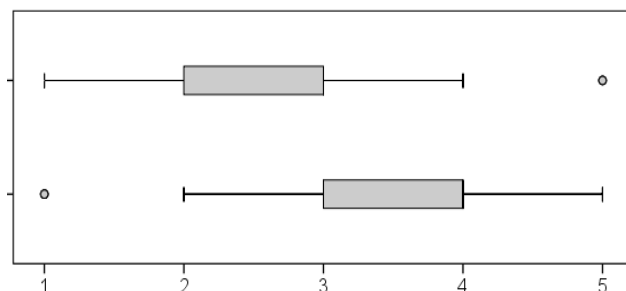
A relatively big group reworks the strategy once a year, which leads to the assumption that they follow an established process and timetable.

Lastly, the CIOs were asked how they evaluate the IT Knowledge of their supervisor and their colleagues on the same level. The results clearly show that there is a clear need to educate the TMT Members about IT and the chances it can open for the company's success.

Figure 10: Boxplot of IT Knowledge of supervisor and peers (1=not at all, 5=very good)

d. How do you rate the general IT understanding of the other colleagues of the Top Management Team?

e. How do you rate the general IT Understanding of your direct supervisor?



Source: own data

The results suggest a clear potential for improving both the IT knowledge and understanding of the top management team and partly also the supervisor. This would clearly improve the Business IT Alignment as everyone communicates on the same level and mutual understanding is easier to achieve.

5. Results and conclusions

The data of this survey indicate that IT has become more important in companies which is reflected by the fact that most IT departments are on the same level as operational business processes like supply-chain (SCM), customer relationship (CRM) or product-lifecycle management (PLM). In terms of tasks and responsibilities data shows that the traditional tasks are still in the core of the IT operations. Yet some IT departments are asked to develop new products and business models, captured data and drive innovations for the organization. In terms of IT strategy development by doing business IT alignment most of the CIOs find that the process is good to very good. This results in the fact that most IT managers find that IT

architecture supports the business strategy very well. Yet, on the other side CIOs are not very well involved into the development of the overall company strategy. As new digitally driven business models are more and more needed to survive in the VUCA world this should be overthought by the executive management of companies.

6. Limitations of the study and suggestions for further research

- This study is an explorative study where CIOs could decide on their own if they participate or not.
- The study is limited to German-speaking CIOs in the DACH region.
- Further statistical analysis to investigate correlations between different groups of CIOs should be done
- A comparative longitudinal study utilizing earlier research by Termer & Nissen [12] should be done.

References

- Chan, Y. E., Sabherwal, R. and J. B. Thatcher, J. B., *Antecedents and outcomes of strategic IS alignment: An empirical investigation*, *IEEE Trans. Eng. Manage.*, vol. 53, no. 1, pp. 27–47, 2006, doi: 10.1109/TEM.2005.861804.
- Durst, M., *Wertorientiertes Management von IT-Architekturen*: Teubner, 2007.
- Hodgkinson, S. L., *IT structures for the 1990s: organisation of IT functions in large companies*. *Information & Management*, vol. 22, no. 3, 161-175, 1992.
- IBM Corp., IBM SPSS Statistics for Windows, IBM Corp., Armonk, NY.
- Leiner, DJ 2019, SoSci Survey. Available from: www.soscisurvey.de.
- Marrone, M. and Kolbe, L. M., *Impact of IT Service Management Frameworks on the IT Organization*, *Bus Inf Syst Eng*, vol. 3, no. 1, pp. 5–18, 2011, doi: 10.1007/s12599-010-0141-5.
- Mertens, P & Knolmayer, G 1995, *Organisation der Informationsverarbeitung. Grundlagen, Aufbau, Arbeitsteilung*, Gabler, Wiesbaden.
- Nissen, V & Termer, F 2014, 'Business-IT-Alignment. Ergebnisse einer Befragung von IT-Führungskräften in Deutschland', *HMD Praxis der Wirtschaftsinformatik*, vol. 51, no. 5, pp. 549–560.
- Peppard, J., *Unlocking the Performance of the Chief Information Officer (CIO)*, *California Management Review*, vol. 52, no. 4, pp. 73–99, 2010, doi: 10.1525/cm.2010.52.4.73.
- Porter, ME 1985, *Competitive advantage*, Free Press, New York.
- Schumpeter, J. A., *Capitalism, Socialism and Democracy*: Taylor & Francis e-Library, 2003.
- Schweda, C. M. and Schmidt, W., *Leichtgewichtiges, unternehmensspezifisches IT-Management*, *HMD - Praxis der Wirtschaftsinformatik*, vol. 51, no. 5, pp. 606–615, 2014, doi: 10.1365/s40702-014-0062-8.

Synnott, W. R. and Gruber, W. H., *Information resource management: Opportunities and strategies for the 1980s*. New York: Wiley, 1981.

Tallon, P. P., *A Process-Oriented Perspective on the Alignment of Information Technology and Business Strategy*, *Journal of Management Information Systems*, vol. 24, no. 3, pp. 227–268, 2014, doi: 10.2753/MIS0742-1222240308.

Termer, F & Nissen, V 2013, Eine Bestandsaufnahme zum IT-Management in Deutschland. Ergebnisse einer Befragung unter CIOs, Technische Universität Ilmenau, Fakultät für Wirtschaftswissenschaften, Institut für Wirtschaftsinformatik.

Termer, F 2015, Determinanten der IT-Agilität. Theoretische Konzeption, empirische Analyse und Implikationen, Springer Gabler.