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Effects of digitalization on leadership competencies in IT companies
in the SME sector

Theses to the dissertation

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1. Problem Definition and Research Objectives

The megatrend of digitalization is driving transformations in all areas of the organization and represents a caesura for business and companies. To meet these transformational changes and challenges, companies need to align their organizations to the needs of the digital age. The managers in companies play an important role in this process of change. They have always been responsible for corporate goals, developing strategies for their own area of responsibility, and working in their capacity. If digitalization is a key driver for businesses and executives play a major role in the success of digital transformation, then it is important to understand how leaders' skills are changing. Do executives need to develop new skills, or do they still have the day to day management responsibilities? Competency profiles provide the basis for employee appraisals, development plans and career paths in today's professional life. The competencies can thus be used in terms of personnel policy, in order to organize and promote the individual development of employees in management tasks. Considering the growing shortage of skilled workers (War for Talents), the development of demand-driven labour markets, as well as the increasing social changes and values of employees (work-life-balance), this topic is becoming more relevant. Modern leadership as well as modern and effective executives are substantial for companies. Due to its scarcity of resources, small and medium-sized enterprises still have another problem area: despite of the success of SME-companies in Germany, the willingness to invest in "soft" topics such as i.e. digitalization is more restrained than necessary existential investment in machinery. Furthermore, owner-managed SMEs are more likely to lack the willingness to introduce strategic management tools into their business. However, this is very important regarding the previously outlined HR challenges. This problem results in the need for this dissertation project and the following research questions emerge:

- How and to what extent is digitalization changing the role of executives?
- What tasks do executives have in a digitized work environment?
- What competences do managers need to be able to lead appropriately in times of digitized work?

The research questions lead to the objectives of this dissertation. A solution for leadership in the digital age is being developed. However, the research should not have a theoretical effect, since the examination context is in the area of medium-sized companies (SME). Accordingly,

regarding the action research methodology, the practical applicability must be ensured. Due to this, the problem can be concretised into the goal: Development of a practice-oriented solution for leadership in digital working environments of IT companies in the SME sector.

2. Hypotheses

Hypotheses are an important part of the scientific research and thus also part of this dissertation. Hypotheses represent assumptions that are made about facts. These assumptions are reviewed during empirical research. If the test results confirm the assumptions, a hypothesis is verified. Alternatively, the research results can also provide information to that dissertation include incorrect assumptions and then apply as falsified or refuted. Derived from the objective and based on the literature analysis, the following hypotheses arise for this research:

Hypothesis 1   In order to achieve an appropriate speed in decision-making in digital times, managers must increasingly delegate their decision-making power to employees and teams.

Hypothesis 2   The challenges that a VUCA world entails can only be successfully achieved by executives who see the constant change as an opportunity and bring a strong openness to change.

Hypothesis 3   Digitalization leads to a modification of the leadership role.

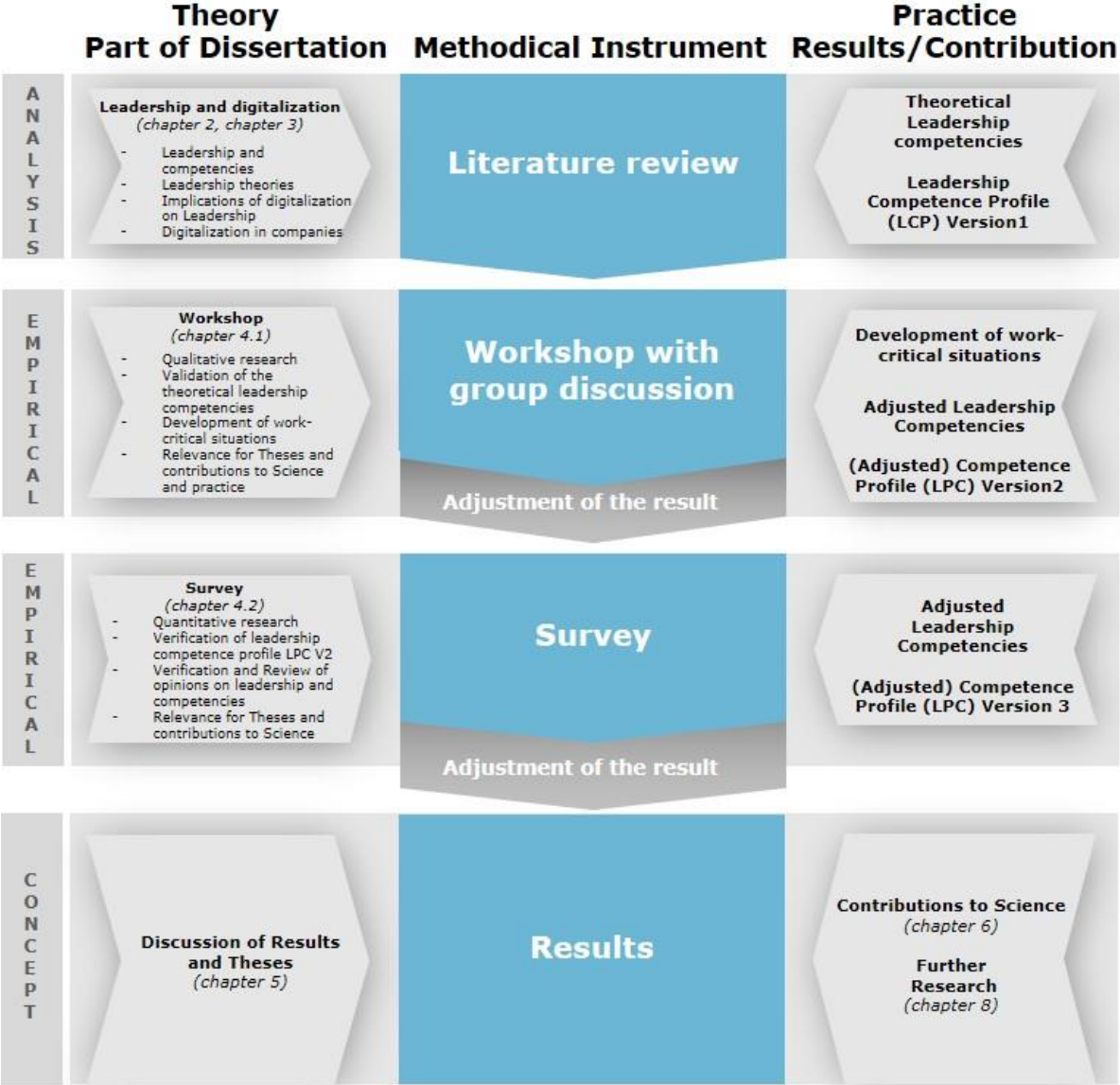Hypothesis 4   Executives are increasingly becoming a coach for its own employees.

3. Research Methodology and Research Process

In this dissertation the action research is applied. The research method of action research includes the aim of developing practice-oriented solutions to social problems through a strong integration of practice and science. Although the researcher temporarily concedes the distance to the research subject, in order to enable an active exchange with the social group and furthermore to collaborate in order to find a solution to a problem. Contrary to classical research, the action researcher includes the practice intensively in the following process steps: the definition of objectives as well as in the evaluation and determination of findings. This is to achieve an even higher practical added value in the solution. This research strategy is applied in this dissertation because the research project has the following characterizations: The problem described above is a problem derived from practice. The researcher was able to win a

company, which defined the problem situation. The cooperating company is an IT service enterprise in the SME sector. The researcher works in the medium-sized businesses and maintains an existing network of SME entrepreneurs. This network is used to gather/gain authentic expert knowledge. Consequently, applied action research is predestined for the investigation and solution of the above-mentioned practical problem. As a certified Microsoft partner, the cooperating company sells the ERP solution called Microsoft Dynamics NAV (product name modified into: Business Central) and addresses small and medium-sized businesses. In this environment, the IT service company advises small and medium-sized enterprises (SME). Currently the consulting primarily refers to the technical dimensions in the environment of the Microsoft products. The cooperation company identified in its ERP projects with clients that customers have an increased need for information in the field of digitalization and digital transformation. Customers are also asking for advice concerning the development of digital business models. At the same time, the IT service company is confronted with a variety of questions regarding the necessity for change as well as how to set up a modern organization, with a corresponding structure and process organization. In this context, the topics of leadership and digital corporate culture are often addressed. The cooperating company itself already undergoes the transformation to a digital enterprise and elaborates the opportunities of extending its consulting portfolio on the management consulting. Corresponding to this problem situation, the primary research target group is tailored to these IT medium-sized companies. The work thus focuses on the effects of digitalization on the leadership of a specific target group (in depth) and does not claim to generate full insights for leadership. Whether the transferability and generalizability of research results is applicable to non-SME companies will be answered within the research project of this dissertation. The aim of the dissertation is to shape the operational reality of the cooperation company and to develop a practicable solution for the field of leadership. Due to the definition of the scope, the results can basically be used for SME. The research of this dissertation follows a structured research process, using both secondary and primary research as information sources. First, the fundamentals from existing and available secondary literature is compiled. Based on the literature analysis, the researcher develops a theoretical or scientific solution to the problem. This is the compilation of scientifically based competences for leaders. With the addition of scientific findings on digitalization and the associated transformation, the previous solution concept will be adjusted and enhanced into an extended scientific competence profile for leaders in digital working environments. On the one hand, the scientifically compiled competence profile for leaders represents the result of desk research. The research hypotheses set up beforehand are also reflected in

this research step. On the other hand, the leadership model serves as the basis for the empirical investigations in the further research process. In order to produce a valuable result for science and practice, the researcher decides for a two-stage empirical research in this dissertation. The fact that the research project is based on two methodological pillars and that the combination of different methods (qualitative and quantitative research) enables complex and high-quality insights. Therefore, the first empirical research starts with a qualitative investigation, in the form of a workshop with a group discussion. This is followed by an online survey as quantitative research. The two sequentially coordinated empirical researches provide relevant contributions to the hypotheses. The motivation and substantive justification for this combined research approach is justified as follows: The literature analysis shows that (leadership) competencies are not measurable. The presence of a leadership competence can only be determined by behaviour of a person. Leadership skills thus require a vehicle that allows verification of competence. These vehicles are the so-called behavioural anchors that describe the relevant behaviour of a leader in order to succeed in challenging professional situations. Competency profiles only fulfil their purpose if they contain the necessary behavioural anchors besides the competence itself. In the research process so far, the leadership skills are based on the secondary literature. Additively, the list of competencies is supplemented by competencies due to the digital transformation. For validating the elaborated leadership competencies, it is necessary to "match" or compare the competencies with real leadership situations (out of the practice). The critical professional situations have to be determined in the discourse (a requirement of action research). Consequently, the workshop with SME-leaders is carried out in order to develop these relevant critical professional situations of leaders within the digital transformation. Challenging professional situations cannot be determined by quantitative research. It needs open dialogue and discussion in order to assemble these situations. The result of the workshop includes a cooperative collection of professional situations of leaders. Furthermore, a group discussion on the topic of digital leadership is integrated into the workshop, so that a common level of knowledge among the participants is achieved. Another part of the workshop, according to the action research, is the reflection and interpretation of the previous research results with the whole group. This aims the validation and justification of the leadership competences. The researcher processes the insights gained from this empirical investigation and integrates these into the developed leadership competence profile as well as in the discussion of the hypotheses. The second primary research builds upon the research result of the first empirical research. It examines this state of research by means of an online survey with a standardized questionnaire as a quantitative investigation. The objective

of the survey is to gain an overall view of the research topic and how the target group assesses and evaluates the role of leaders and the relevance of future leadership skills. The findings of the quantitative survey again adjust the established leadership competences and incorporate relevant aspects into the competence profile. The survey is deliberately aimed at leaders in the medium-sized IT sector, since this industry already knows the challenges of digitalization. With that knowledge these leaders can estimate/assess relevant future (digital) leadership skills. This is vital in terms of the validity of the results and to gather the relevant knowledge. Consequently, with each empirical research the result will be adjusted and developed further, so that a solution for practical use is elaborated. Furthermore, with each primary research, a reflection on the gathered contributions to the defined research hypotheses can be made. The following figure illustrates the methodological and content-based concept of the dissertation.

	Theory Part of Dissertation	Methodical Instrument	Practice Results/Contribution
A N A L Y S I S	**Leadership and digitalization** *(chapter 2, chapter 3)* - Leadership and competencies - Leadership theories - Implications of digitalization on Leadership - Digitalization in companies	**Literature review**	**Theoretical Leadership competencies** **Leadership Competence Profile (LCP) Version1**
E M P I R I C A L	**Workshop** *(chapter 4.1)* - Qualitative research - Validation of the theoretical leadership competencies - Development of work-critical situations - Relevance for Theses and contributions to Science and practice	**Workshop with group discussion** Adjustment of the result	**Development of work-critical situations** **Adjusted Leadership Competencies** **(Adjusted) Competence Profile (LPC) Version2**
E M P I R I C A L	**Survey** *(chapter 4.2)* - Quantitative research - Verification of leadership competence profile LPC V2 - Verification and Review of opinions on leadership and competencies - Relevance for Theses and contributions to Science	**Survey** Adjustment of the result	**Adjusted Leadership Competencies** **(Adjusted) Competence Profile (LPC) Version 3**
C O N C E P T	**Discussion of Results and Theses** *(chapter 5)*	**Results**	**Contributions to Science** *(chapter 6)* **Further Research** *(chapter 8)*

4. New research results and answering the hypotheses

The research carried out in this dissertation was to investigate leadership and relevant leadership skills more precisely under the influence of digitalization. The aim is to answer the research questions defined at the beginning of the research project as well as to answer the defined hypotheses.

The conducted workshop and the online survey with 167 participants (all SME-executives and leaders) provide valuable results for the dissertation. The participants confirm the assumption that the leadership skills will change. The debates highlight the roles and responsibilities of leaders needed in times of digitalization and digital transformation. Empirical research has proven that leadership is changing under the influence of digitalization.

The management tasks are shifting due to the digital transformation. A new understanding of roles an executive must fulfil evolves. While executives continue to be responsible, traditional role models, such as being the decision maker and the expert, modify. The technical knowledge and expert status no longer legitimize the leadership role. In return, the share of being an accompanying, supporting and enabling leader increases intensively. Depending on the management situation and the employee, the executives must choose the right management and leadership style. All this takes place in order of developing employees into self-organized employees. The latter is urgently needed in the digital age and in the VUCA (volatile, uncertain, complex and ambiguous) world. Empirical research has proven that the role as executive essentially includes three new roles in the repertoire. The traditional supervisor transforms to be a coach, a consultant and an enabler of the employee. The supervisor becomes a consultant to its employees, when those need an accompanying executive. The executive helps to work out a solution for a problem in the interaction with the employee(s). Moreover, the supervisor becomes increasingly the coach of its employees, as far as the personal development is concerned. Moreover, the supervisor becomes an enabler and networker to its employee(s). Being an enabler means that the supervisor empowers employees within the organisation and processes. Furthermore, the leader open-up its contact network in order to facilitate employee(s) for making decisions. Due to digitalization and its resulting responsibilities as an executive, supervisors will also require appropriate leadership competencies in the future. Only with this, executives can fulfil their leadership role in the digital age.

The objective of the dissertation was to develop a practical solution for SME companies in the IT industry. For this reason and in line with the research strategy, the relevant leadership skills

were initially determined theoretically and examined and enhanced/adjusted with the help of empirical surveys. The final and comprehensive leadership competence profile is the result of the research steps. The profile includes the following set of leadership competencies (see following figure). For each leadership competence, the relevant behavioural anchors - for the determination and measurement of a competence - have been determined and integrated into the profile. For reasons of capacity, the description of the entire leadership competence profile is omitted here. At this point, reference is made to the dissertation.

Leadership competence 1: Leadership and Employee Motivation	**Leadership competence 2:** Employee Development and Individual Support	**Leadership competence 3:** Be a role model and create a culture of trust
Leadership competence 4: Leading Change	**Leadership competence 5:** Innovation und Volition Competence	**Leadership competence 6:** Adaption Competence

Throughout the dissertation research, it has also been possible to answer the established and determined research hypotheses. The arguments presented in the hypothesis discussion represent the scientific and empirical results of the dissertation.

Thesis 1: "In order to achieve an appropriate speed in decisions in digital times, managers must increasingly delegate their decision-making power to employees and teams."

The first thesis provides a broad range of arguments, which are mentioned and discussed below. Based on the historical and classical understanding of leadership, the sole decision-making power is one of the constituent factors of a manager. Literature analysis has proven that this privilege is challenged in favour of participatory leadership and due to increasing employee orientation. Increasing number of management approaches argue for involving employees in the decision-making processes. New organizational approaches, such as those of the holocracy, allow employees to be completely self-sufficient, as secondary analysis of the dissertation shows. Contrary to the established hypothesis are arguments such as the necessary independence of the employees. The transfer of decision-making power goes in line with an autonomy of employees, which is fundamentally viewed positive. However, the literature as well as the empirical/ practice research note that employees must first learn to make decisions.

The practice representatives in the workshop are clear in their statement that employees are not yet independent and self-organized enough to decide autonomously. Employees need support from their executive to achieve this status. The literature analysis also shows that employees must be willing and able to take over the decision-making power. If this is not the case, the delegation does not work for the employee. Regarding the topic of digitalization, external factors continue to influence company-specific decision-making processes. Both empirical researches (quantitative and qualitative) confirm that digitalization is changing the decision-making processes. In addition, respondents in the online survey vote in favour of the thesis, stating that in today's leadership practice, employee involvement is important in decision-making. Only 39% of executives surveyed state that they are making decisions as an executive. In the workshop, the practice representatives put forward another argument for confirming the thesis: Employee involvement is generally very good and conducive to decision-making, but this slows down the pace and speed with which decisions must be made in the digital age. This is counterproductive and therefore there is the need to completely delegate the power of decision as a leader to its employees. Speed is an essential factor in the digital working environments. Regarding the delegation of decision-making, both empirical researches are also clear: a transfer to employees only makes sense when they are professionally/technically competent. Another advantage is that the decision-making delegation also makes sense from a technical/professional point of view. The online survey has shown that the (technical) expertise in the future will no longer be found among the executives. This is the result of the management's assessment of their current and future expertise (survey results of the online survey). However, the delegation of decisions to employees leads to the question, what kind of roles the manager will take over in the future. A manager continues to hold a leadership position. From an etymological perspective, it becomes apparent that leadership means responsibility. An executive is responsible for an outcome (e.g. profit). However, the transfer of decisions to employees does not contain the simultaneous transfer of (profit) responsibility. In contrary, the responsibility for results remains with the executive who still is in charge. Digitalization therefore does not modify the relevance of executives but realigns the operational management tasks. If the ultimate responsibility remains with the managing director, it is in his own interest, as a coach and consultant, to continue developing its employees self-employed employees. The following arguments for and against the thesis can be summarized as follows: Digitalization changes the circumstances and the people involved in the decision-making process. The conditions of digital transformation require swift action, and consequently the decision-making process must be delegated to one or more actors who

can best assess the case. As the empirical studies show, this no longer must be an executive. The transfer of decision-making power on to the competent employees handing over to the competent employees is useful, especially in times of complexity and uncertainty. Based on these arguments, <u>the hypothesis</u> can thus be regarded as <u>true and verified.</u>

These 2: „The challenges that a VUCA world entails can only be successfully achieved by executives who see the constant change as an opportunity and who bring a strong openness to change.

Today, it is undisputed that our world is transforming into a VUCA world. Our world is influenced by many factors and is subject to constant change. War for Talents, volatile markets, ecological awareness and digital transformation are just some of the buzz words of our time. Digitalization is an epoch that enhances the complexity and dynamics of our reality. Artificial intelligence as one of the digitalization technologies stands for complexity and is a metaphor for uncertainty. Changes will have sustainable effects on all protagonists. In companies, digitalization particularly affects executives. The online survey with 167 participating executives confirms that digitalization is a change process. The workshop acknowledged that the change process is linked/tied to people in the company. Leaders are needed to help within this process of change. The participants in the workshop describe the leaders as prophets of change. The importance of executives in the change process as well as their openness to change are further pro-arguments which the online survey discloses. In times of digitalization, executives must be open and honest what the changes bring. Moreover, they have to see themselves clearly as initiators of change. The respondents of the online survey (executives) confirm the status of being responsible for the change in the company as well as being the operators of change, like the so-called change agents.

There are also counterpoints that are essential in this debate. In every change process, the attitude and/or behaviour of employees regarding change plays a significant role. In any company, it can be assumed that there is a certain proportion of employees who reject the change. If the attitude to change is not positive, willingness to change cannot be forced. Any motivational measures or incentive schemes will not help. In times of digitalization and the VUCA world, companies need people who want change and who want to be involved in change. Managing directors can require the right attitude for change from its leaders. But this cannot be expected of employees. For companies it means a challenge when current executives show

unwillingness for the process of digital transformation. Based of the online survey, the first indications were found that there are managers who are indifferent regarding change and/or who are not ready/willing for change. The ticked negative or neutral answer options to the statements about digitalization confirm this opinion. Basically, people have an understandable need for security, clarity and stability. Therefore, change starts on an individual level. Transformation takes time and requires the necessary support from the executive (in the case of executives, the next highest level of management is meant). Furthermore, it can be assumed that a certain percentage of employees will not take part in the change. However, from an (overall) economic point of view, management is prevented from dismissing or releasing these executives just because they don't want the changes. As the workshop has shown, beyond the transformation process, IT staff is needed who will continue to master the legacy or "old" technology and its practices before the new technologies become fully operational/established. This means that non-convertible employees/managers can continue to be used for IT companies. However, for other sectors that are outside the IT context the result may be to consistently separate from non-willing executives. This should be done so as not to disturb the transformation process in times of digitalization. This conclusion concludes the theses. Based on the debate and the arguments, <u>the hypothesis can basically be regarded as true or verified</u>.

Theses 3: „Digitalization leads to a modification of the leadership role.

This thesis can be discussed controversially. Historically, executives have always been results-oriented supervisors who drive and control their employees. Furthermore, they possess the relevant decision-making power. Literature research confirms that leadership developed further according to new leadership approaches. An executive becomes a flexible superior according to the transformational approach. The arguments evaluated by means of the literature analysis make the defined hypothesis seems logical. In fact, empirical research has also confirmed that leadership is being modified. Respondents assume that the professional expertise of executives is becoming less important. Furthermore, the duties of a manager vary regarding the decision-making and control function. As stated in thesis 1, the opinion of the practice representatives shows that decisions are transferred to technically competent employees in order to decide quickly and correctly in digitalized working environments. The manager thus becomes a supporter who in its role as a consultant, strengthens the employee in various situation. Another argument for the modification of leadership can be found in the control

function. The question whether digitalization is causing a change in the control function led to a split view among the respondents. 41.3% of the 167 executives expect a shift of the control from result-control to a process control. 53.9% take a neutral stance and are at odds. 4.8% believe that the results must continue to be monitored. These practice evaluations illustrate the awareness that the transformation of managers regarding control tasks and control function has already started in practice. Executives are gradually changing their attitudes and 41% of respondents are already aware of the new control function as a consultant to the employee. Taking these findings into account, the <u>hypothesis</u> can be considered as <u>confirmed/verified</u>. Digitalization leads to a modification of the leadership role.

Hypothesis 4: *"Executives are increasingly becoming a coach for its own employees. "*

As already mentioned before, the supervisor is no longer the expert. Nonetheless, the executives assume an increasingly professional and advisory role in selected areas of expertise. Here the manager provides technical support and supports the employees as consultants, depending on the situation and in selected subject areas. Outside of the subject area, the manager transforms into a coach of the employee. The literature analysis shows that in the future, managers will have to deal differently with employees in digital work environments. The manager's job is to identify, use and develop/promote the resources and skills of an employee. In the workshop, the interviewees expressed their opinion that executives have to develop their employees for self-organization. This executive's task is referred to in the workshop by the participants as coaching. The online survey confirms that there will be the transformation of the executives into a more process-related and advisory supervisor. This corresponds positively to the role of a coach. In contrast, there is a manager's task to control. Despite the increased process orientation, a manager still has to control and if necessary, intervene in a guiding manner. This is completely different from being a coach. Based on these advantages and disadvantages, the researcher draws a conclusion on the hypothesis. An executive cannot, in the sense of a general definition of the coach, be a coach for its employees. This is not possible because it requires a relationship of trust between the manager and the employee. Furthermore, a manager does not work voluntarily with the employee. In contrast, a coach does not work result oriented. In other words, there is no optional cooperation because there is a contractual relationship between the employee and the company. Cooperation with the executives is governed by a working contract. That in case of a regulative work-relation, a relationship of trust can be established, appears to the researcher as questionable and unlikely. Nevertheless,

over time, a trusting relationship can develop between the executive and the employee. Furthermore, a manager is assigned to take over the goal- as well as the result-oriented responsibility for a specified working area. This has been delegated from the executive board to the executives. By contrast, a coach works in a solution-oriented, process-oriented and needs-oriented manner, as the online survey has shown. There is therefore a clear conflict of objectives between these two orientations. An executive, who should also be a coach at the same time, moves in a wide field of tension. To illustrate, two examples are given: A manager always remains more closely attached to the company (due to its role) than to the employee. The reason for this is that a manager represents the interests of the employer. However, a coach is on the side of the person's interests. While a coach aspires to self-fulfilment of the coachee, an executive deploys the employee as a carrier of performance, thereby pursuing the achievement of corporate objectives. This can be pushed by the executive's power. In contrast, a coach will not have that power. Empirical research has shown that leadership in digital working environments is more needed than ever and that laissez-faire attitudes can be counterproductive. Based on this comparison, there is the realization that a manager (by definition) cannot be a coach. Nevertheless, it is important to consider the overall context. Due to the evolutionary development of IT, not only technologies and processes are changing, but also social generations in companies are evolving. Young employees bring changed expectations and demand that they can work together with their manager like a coach would do. An executive should recognize and develop/promote the strengths and talents of employees. These details justify the verification or the falsification of the hypothesis. An executive is increasingly a coach for his employees. He has to meet expectations. This is done through the task of gaining more position and giving feedback to the employee. An executive works with the employee in order to prepare decisions. It is therefore a personal development process to the employee in which a supervisor accompanies and, depending on the progress of the employee, gradually withdraws from the operative (decision-making) process. The manager acts - in the interests of the employee - more needs-oriented and supports the employee whenever he wishes. This form of cooperation creates a relationship of trust between the two parties, which which is essentially driven by results. This will remain in the future. The researcher concludes that the term coach is inappropriate in the context of leadership and thus creates an incorrect image regarding the tasks of a digital executive. Taking all the arguments into account and taking the opinion of the researcher into account, the <u>hypothesis can therefore be regarded as falsified</u>.

5. Conclusion, critical appraisal and further research needs

According to the applied research methodology, action research demands for a change of the problem situation defined in chapter 1. Furthermore, it requires the development of a practical solution for the problem. During the initial theoretical analysis, relevant approaches to leadership competencies have been researched and correlated with the driver of digitalization. Literature analysis has shown that there is no theoretical approach to a leadership-oriented competence profile for digitalization. Furthermore, there is no list of leadership competencies provided by the secondary literature. For this reason, the researcher has set up an own prototype for such a leadership competence profile based on the literature. Subsequently, the developed prototype was tested, validated and further developed by the involvement of the practice. The defined digital leadership competencies as well as the created leadership competence profile represents a practical solution to the challenges of changing leadership in digital work environments. According to the demand of action research, the result not only changed the problem situation but also solved it. Now, small and medium-sized enterprises (SMEs) have a solution at hand to develop executives into digital executives. The result, however, exceed the theoretical approach. With the creation of the practical leadership competence profile, the necessary competencies of executives in digital working environments have been recorded. The profile is pragmatic and appropriate for the SME sector. In addition, the elaborated competence profile is available as a viable tool for systematically organizing personnel development and leadership development. At the same time, the result can be used to attract and retain talents and high professionals.

In conclusion, it can be stated that the practical and usable result in the form of this leadership competence profile is not yet available in personnel management and thus represents an innovation for modern HR management. The findings of the research on leadership in the digital age are thus trendsetting. The dissertation was able to completely fulfil the defined objective and, regarding the compiled and practically viable/applicable leadership competence profile, even exceed it. In the context of the results analysis, a critical appraisal of the investigation must always be made. However, the data analysis of the survey results is limited to a relatively simple two-sided correlation analysis according to Pearson. The empirically collected data correlate only marginally, so that a further statistical analysis - for reasons of scope of the dissertation - initially omitted. An in-depth analysis, such as looking at third and possibly fourth intervening variable to uncover a possible chain of causation and additive effects, seems useful. This may result in potential and recommendations for further research. The re-

striction to the IT market of the SME sector took place through the applied action research and due to the cooperation with an IT service company. The result leads to a solution that is tailored to the IT market. The applicability of the evolved solution has been confirmed by IT-practice and thus reflects a representative and collective opinion for the selected population. The extent to which transferability to other sectors and company forms is possible should be subject of further research. The study was also prepared for the European market and is based on the state-of-the-art leadership research. It would be recommendable to pursue extended research on whether this result applies e.g. to the American or Asian market. As part of empirical research, executives were deliberately selected and asked to name the necessary leadership competencies. An equally interesting and further research would be the investigation from the perspective of the employees. Finally, through combined research that integrates both executives and employees, a full-fledged picture of leadership in digital transition could be identified.

The dissertation proves that leadership is dynamic and a reflection of social evolvement/development. Changing values, people and role models, as well as trends and events, are constantly influencing the way in which people want to lead and be guided in organizations. It is therefore recommended that management not only take the changed market conditions as an opportunity to invest in the technological digitalization of the business model. It is advisable to work parallel at the continuous and systematic development of executives. By this, every competent, digital executive actively increases the success of future change processes in companies.

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