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System Trust through Stable-Flexible System Standards and Participation

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Abstract

In today's flexible working sphere trust takes a central place in relations to customer, supplier and institutions as well as between coworkers and executives. Therefore, co-operation is not thinkable at all without a certain amount of trust. A low amount of trust is not an adequate basis for obtaining quality of living or realization of business success. In the everyday life it is to be also experienced that the structure of trust requires very much time, power, money and patience. The effects, on which an employer has to count with loss of trust by unmotivated and unproductive coworkers, can mean enormous economic damage for the enterprise and entail the loss of a market projection. So trust was determined by means of a quantitative questionnaire. The aim was to investigate the existence of trust promoting and trust inhibiting factors and to generate rankings in regard to their importance.

Keywords: flexibility, stability, trust, co-operation, change processes



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1. Introduction

1.1 Importance for the practice

The dynamics of the business environment, which are intensified by the globalization of markets, the development of new technologies and consequently increasing competitive pressure, are challenging companies more and more, not only to adapt reactively their environment, than rather also to act proactively in order to exist permanently on the market. Not only permanent changes, but even radical change processes are common practice in companies.

The existence of a resilient culture of trust is extremely important in planning and implementing such processes of change and the establishment of cooperative relations. An employee, who identifies the potential development by himself and together with team members, is to be viewed as a "promoter" and a "supporter" of any action. Change requires the presence of conducive and innovative work environments. The cooperation and acceptance of the employees are crucial for its implementation and sustainable embedding. Changing processes are doomed to fail, if the employees see no point in them, for example, as there is no longer confidence in the management caused by previously failed projects.

Several studies have also proved the correlation between corporate culture and corporate success. Trust is the promoter for exchange and collaboration. In a trustful environment the organizational development will run more efficiently due to less friction losses and the acceptance of information from others is stronger, votings run faster and the participation in decision-making is supported. This leads to an increase in work motivation and commitments and consequently to a reduction of the periods of sickness absence and dismissal rates (Osterloh and Weibel 2005).

Especially in business cooperation trust leads to the effect of saving time. First, trust makes complex contracts and agreements unnecessary. Second, the trust donors eliminate extensive checks of the partner.



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Furthermore studies have shown that trust has a significant impact on loyalty and fidelity between the partners. In this way a main effect of trust is the stabilization of the cooperative relationship. Especially in international business cooperation the role of trust could be described as "trust dilemma".

On the one hand the demand for trustworthy cross-border cooperation is increasing since the design and enforcement of contractual agreements on boundaries, time-consuming, expensive and designed performance-insecure is more complicated than on national basis. Geographical distances make it difficult to control opportunistic actions of the cooperation partner. On the other hand building trust between the representatives of various nations is difficult. Workers are often not familiar with their cooperation partners' values, norms and beliefs, so it is difficult to derive references of trustworthiness from their behavior. Trust without control mechanisms can cause irredeemable damage, arouse expectations, which were pitched too high and also leads to innumerable aspects of additional disappointments and conflicts. That's why confidence to its full extend is neither realistic, nor useful and had to be positioned within certain limits.

1.2 Relevance of research

In organizational psychology researches trust plays an important role, both as a characteristic trait - as an aspect of the superior traits of compatibility and integrity - as well as relations and situation-related state (Rotter 1967, Deutsch 1960, Kramer 1999). Johnson-George and Swap (1992) come up with another concept just like Kee and Knox (1970) in which trust is to be seen as a result of experience. For Luhmann (2000), however, trust is seen as systemic generated power: Trust is a mechanism for reducing complexity which makes it risky. Trust is not stable across several situations, but varies depending on the interaction partners (Gurtman & Lion 1982).

The consideration of trust as an experience variable is dealing with the development process of trust. It is assumed that experience has an influence on the level of trust which is shown in particular situations (Kopp & Schuler 2003).

Confidence is a key variable in relation to the structure and the stability of committed and successful action in organizations (Bierhoff, 1995; Jones & George 1998).



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Regarding to the intra- and interorganizational cooperation it is expected that a lack of confidence has a high probability of failure (Currall & Judge, 1995; Das & Teng 1998).

So trust seems to be a fundamental element to support communication, cooperative behavior and adaptive organizational structures such as networking. In addition, the rapid formation of ad hoc working groups is facilitated (Bussing & Broome 1999).

The central importance of trust for social and economic relations is beyond debate (Kassebaum, 2004; Villiger 2005). Confidence increases the extent and the quality of communication and reduces the fear of opening up. In turn communication simplifies cooperation and teamwork (Büllesbach 2007). A successful partnership is based on confidence, which in turn requires a high degree of "flexible" stability. In research literature various conditions are regarded as positive requirements to restore trust, for example the compliance with agreements, loyalty, honesty, openness, discreet handling of secrets, cooperative rather than competitive behavior, lasting relationships and respect.

2. Collaborative project StabiFlex-3D

2.1 Project content and aims

In the context of the joint project "StabiFlex-3D" ("Trust in Systems through Stable-Flexible System Standards and Participatory Change Management"), which is supported by the Federal Ministry of Education and Research of Germany (BMBF), the field of culture of trust is transferred into to three-dimensional concept (Figure 1) in order to explore a strategy for building and strengthening the development of systemic trust. Systemic trust is the ability and willingness of risky inputs that allow an efficient interaction between the system and its relevant environments. One aspect is the culture of trust within a team. This interpersonal dimension is based upon cooperation between organizational members (e.g. department or team leader and team members).



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A second important part for processes of change is the intraorganizational dimension, because it reflects the cooperation and mutual understanding of different organizational units within a company.

The third important part is the cross-company interorganizational dimension, which is formed by the cooperation of several branches of a company and by the cooperation of various companies in the product development process.

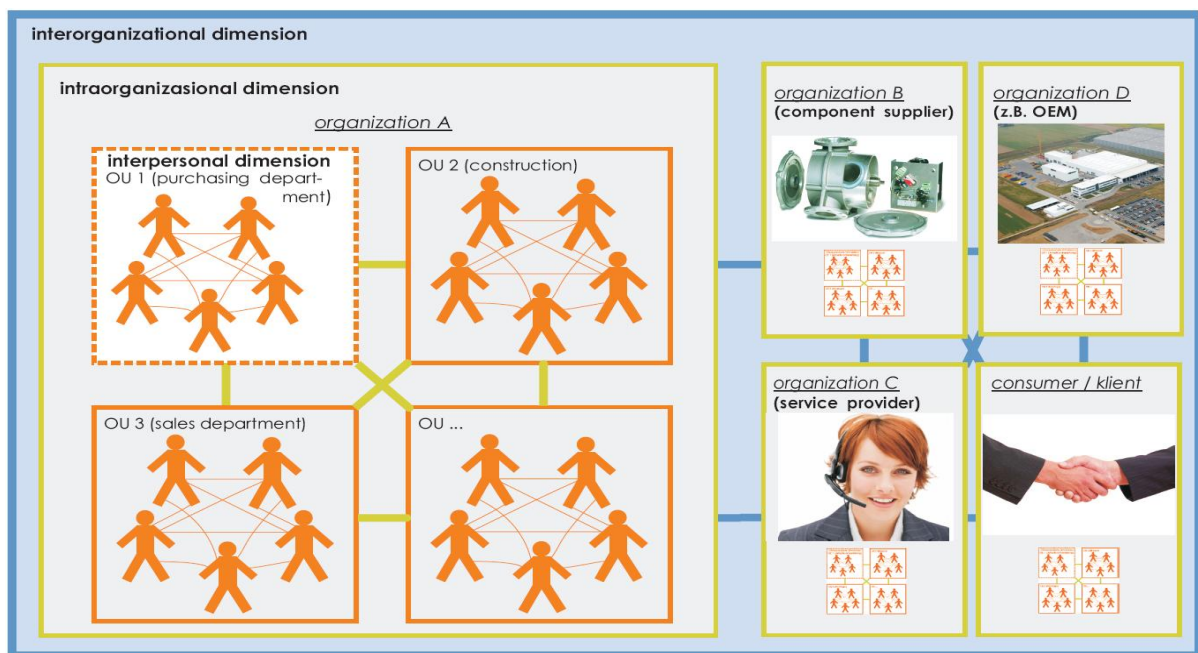


Figure 1: *Dimensions of professional trust*

The aim of "StabiFlex-3D" is to develop a theoretical and practicable process model for "system trust", that allows an integrated treatment of the entire dimensions of trust (systemic trust 3D). The process model is supposed to support companies, executives and employees to build a resilient culture of trust together. Thus serve as a foundation for sustainable business development, innovation and adaptability by balancing between stability and flexibility requirements with the help of a guideline for behavior and interaction.

During the adaptation of the project "StabiFlex-3D" it was necessary to enforce a current analysis of the culture of trust among the project partners and additionally to elaborate on their specific issues primarily.



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In particular the impact of leadership style, dealing with problems, the position of the company within the value chain as well as the employees' identification with the company should be identified.

Furthermore the corporate culture, communication structure and the existing customer relationships have been analyzed. In addition, the behavior of companies during crisis situations or during change processes was determined.

2.2 Procedure

The first task was an actual state analysis and going into the specific conditions of the four practice partners in order to identify trust promoting and confidence inhibiting factors for the development of trust in the company. The aim was to examine the impact management culture, the company's position within the value chain, the focus on project work and project management on the cooperation within and with the company. The following figure shows the methodology of the project "StabiFlex-3D".

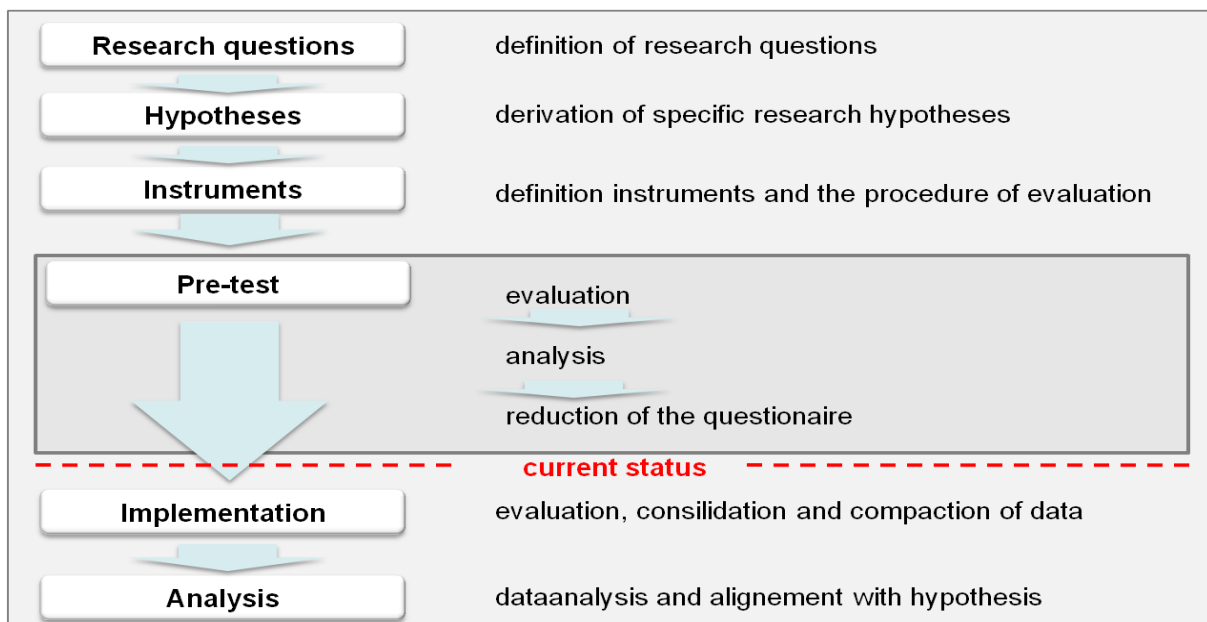


Figure 2: Methodology of the project



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On the one hand the procedure contains extensive interviews and a questionnaire survey was conducted. The survey currently contains 180 items, which is quite extensive and consequently not practicable.

Down to the present day a total of 300 staff of the participating industry partners were invited to participate in the paper-and-pencil survey. The pre-test has been realized with 92 of these employees, which have a various area of activities in the particular company. The main purpose of the pre-test is to reduce the number of questionnaire items down to 140 and to generate a trust inventory. That is why the analysis phase is not finalized yet.

At the other side staff of different functions within the company was interviewed such as the management board, head of department, employees in customer service, marketing and sales and other collaborators of the fields of product and process development and also information processes and IT.

Further steps for the collaborative project are spreading the questionnaire to obtain a large sample to prove the hypotheses adequately. The "process model of systemic trust" is developed in order to particular identify the confidence building process, which will allow to identify both, beneficial and inhibitory, factors. Finally it is aimed to develop stable-flexible standards and implement and transfer the gained knowledge into practice.

2.3 Measuring Trust

Many articles have been published in which scales for measuring trust have been developed. However, they can only partially be applied to measure trust in small and medium-sized companies. That is due to the fact, that the existing trust scales focus - on the one hand - on whether individuals personally trust each other and - on the other hand - are developed from within a sociological or psychological perspective on the concept of trust. In order to measure interpersonal, intraorganizational and interorganizational relationship in and between companies, networks and allies those trust scales cannot be used.



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The aim being the development of an adequate instrument to measure trust, this questionnaire regarding "Trust in companies" is meant to be an aid for finding criteria that are adequate for indicating trust in organizations.

With the help of these criteria it should be possible to gain an individual, company-specific and unique fingerprint of a team, organizational unit or even the whole company. This fingerprint displays the level of trust at point in time X in the form of a flash-light. Applied repeatedly it can display the development of the organization - for example during a change-process - chronologically (See figure 5).

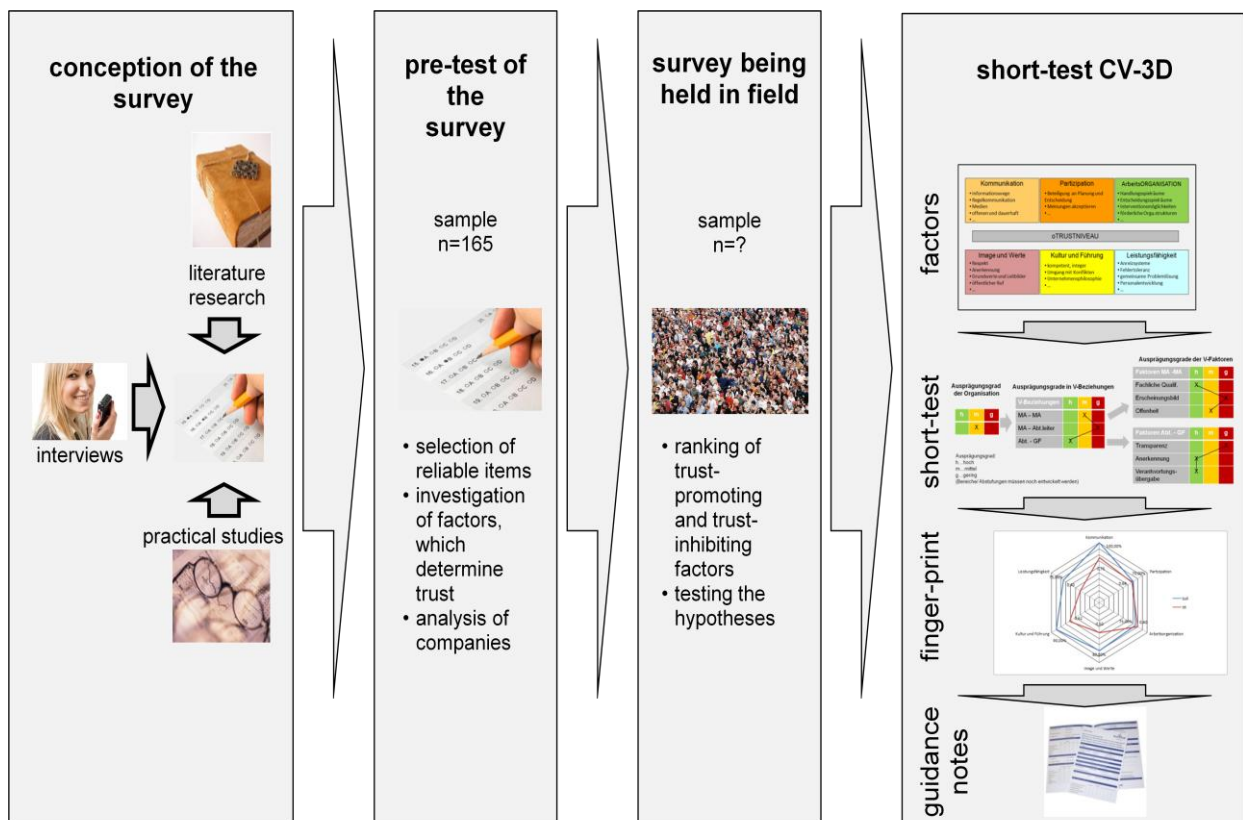


Figure 5: Development of the "Chemnitzer Vertrauensinventar" (CV-3D)



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Based on the evaluation of existing papers and studies on the topic of trust there emerged essential aspects that are significant when it comes to trust in organizations and companies.

These provide the foundation for the development of our questionnaire. In the first step a pretest was developed and used in two companies.

The later statistical evaluation made it possible to develop a second, better questionnaire. Staff members of an another company completed the questionnaire. Based on the analysis of this empirical evidence a quick-test is developed.

The results of this test are then expressed in graphical form: the so-called "fingerprint" (See figure 6). The spider diagram emerged as a useful tool to display trust, because it can express various factors of trust - which are imported from the questionnaire - at the same time. What's more: further sub-units of these factors can be recorded and displayed. The centre of the fingerprint indicates the point zero of all factors. The outline of the diagram connects the possible peak value of the individual factors and sub-groups (100%). The task of the management consists in defining the desired value for every factor. Those represent the individual weighting factors and their sub-groups for the company. Using and evaluating the CV3D there emerges a curve which expresses the actual characteristic of the measured trust.

The space limited by this curve indicates the level of trust. Even though deficits in single factors let the whole space shrink other factors or potentials can extend the space again. This is of importance, because different companies due to their individual situation (size, type of leadership, structure organization) have different desired values.

The fingerprint is to be interpreted as follows: The better the relationships in the organization that is examined the further out is the curve indicating the actual situation. The more deficient the level of trust is the closer is the curve to the centre.



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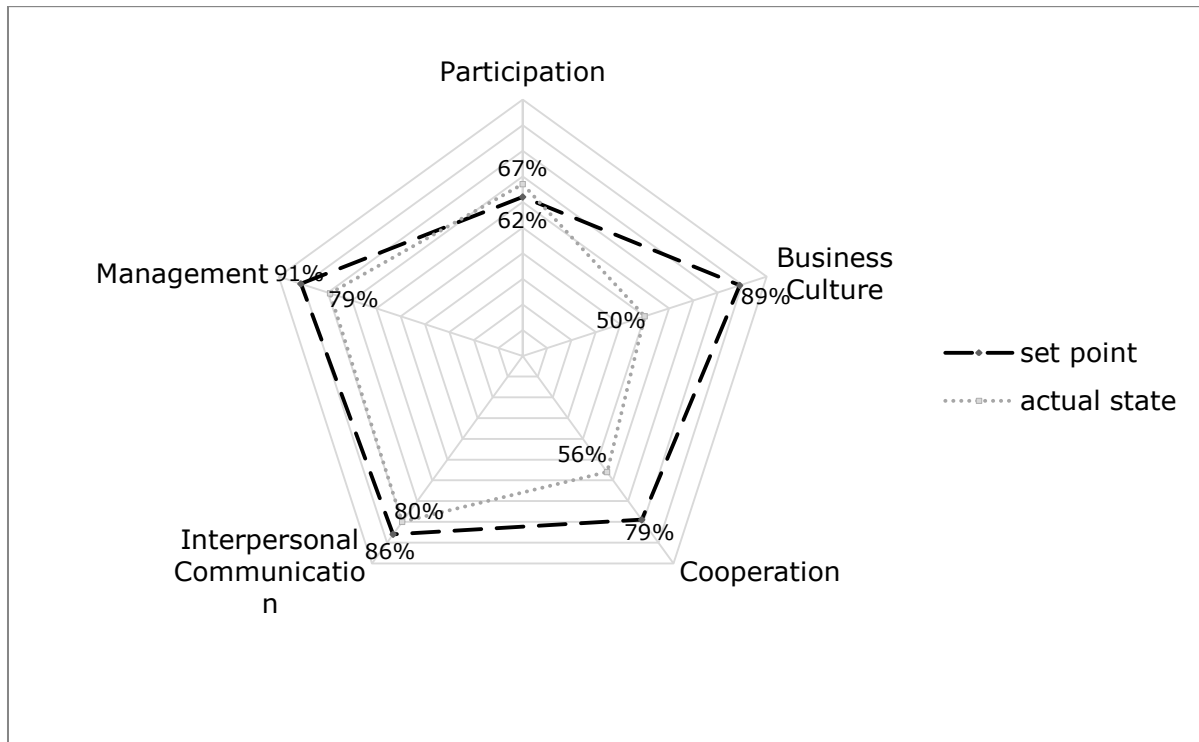


Figure 6: *Characteristics of trust-factors (exemplary)*

To back the existing analytical model, an operationalisation of the factors to sub-groups is taking place. The following figure exemplifies - with no claim to completeness - the relationships, which has to be determined in current research.

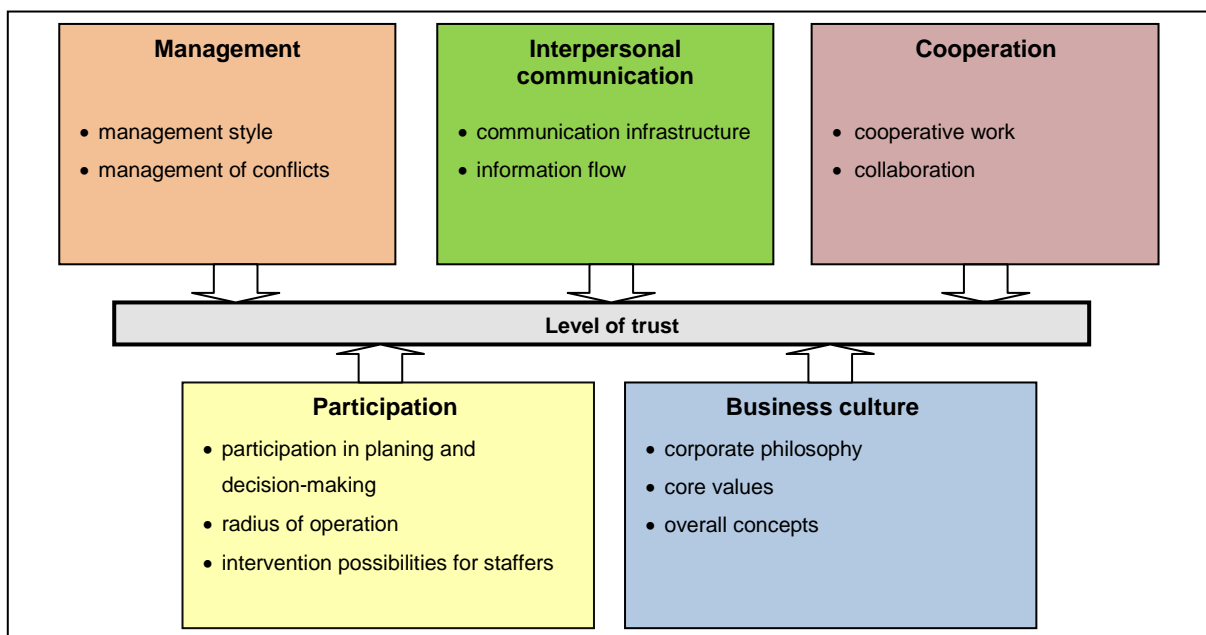


Figure 7: *Illustration of factors of trust and their sub-groups*



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To figure out the organizational trust with the help of the fingerprint in and between organizations, the development of a short test, called CV3D (Chemnitzer-Vertrauensinventar-3D), is forced. With the help of this short test, which should not exceed the limit of 50 items and two pages DIN A4, practitioners, like the team spokesman, the head of the department or the manager are enabled to evaluate relationships in all of the dimensions of system-trust on their own. Furthermore it is provided, that users, corresponding to the ascertained fingerprint, have guidance at their disposal, which is oriented on the problems and deficits delved.

2.4 Initial findings

Responses of the first surveys unveiled most notably, that poor communication and the lack of transparency are stressing the relationship between cooperation partners. So far there is evidence, that this result refers to significant differences in the respective dimensions arises from the phenomenon of trust.

As another essential aspect, which was derived from the results of the interviews, is that mutual respect is a necessary factor for establishing and maintaining trustful relationships. It can be assumed, that building trust is a very lengthy process.

Furthermore a loss of confidence, caused by opportunistic behavior, develops very quickly. Moreover, initial evaluations have shown, that in dependent customer-supplier relationships with sanctions or even a total termination of the relation are only practiced in serious cases. In contrast to that, it is precisely in the intraorganizational and interorganizational dimension in which serious misconduct causes serious tension.

Figure 8 shows the ranking of trust promoting and trust inhibiting factors in extracts, which were determined in the research so far.



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Item (not important – very important)	Average	Standard Deviation	Item (Item (not a all - strong))	Average	Standard Deviation
<i>How important are for you...</i>			<i>How much are you strained by ...</i>		
Services provided by the company (e.g. kindergarten, company sports)	2,69	0,951	Short-time work	2,22	1,112
Company outing, Company events	2,78	0,918	Permanent control by superiors	2,29	1,038
Material incentives for achievements (e.g. company car, bonus)	3,02	0,927	Excessive demands	2,41	1,013
Freedom for individual choices	3,23	0,576	low demands	2,46	0,973
Opportunities further education, workshops	3,23	0,725	Unplannable career	2,51	0,985
Appreciation by the superior of one's own work	3,57	0,647	Negative consequences by superiors	2,52	0,974
regular communication to the superior	3,61	0,622	High personel fluency	2,66	0,972
Positive work atmosphere	3,61	0,671	competition between colleagues	2,8	0,984
Openness in teams	3,61	0,643	Lack of openness in teams	2,83	0,951
Open approach to problems and common problem solving with the superior	3,67	0,575	Lack of appreciation of one's own work	2,85	0,872
Integrity of the superiors and managers	3,69	0,67	Low communication between departments	2,9	0,795
Regular communication between co-workers	3,71	0,597	Unfair criticism by superiors	2,96	1,083
Reliable co-workers	3,74	0,547	Unequal treatment of employees	2,98	0,932
Reliable superiors	3,86	0,404	Lack of co-operation	3	0,834
			Disbelief in the longterm survival of the company	3,01	1,027
			Poor working atmosphere	3,05	0,839
			Unreliable superior	3,05	1,036
			Downsizing	3,09	1,213

Figure 8: *Trust promoting and trust inhibiting factors (analysis of survey responses)*

Regarding the main factors of impact on the professional bond of trust, the preliminary state of the previous paper-and-pencil interviews already permits first conclusions. The presented results show clearly, which factors in business environment may encourage trust to a certain degree or which are suspected to permanently influence trust in a negative way.

It was revealed, that both, job cuts and a deficient working atmosphere, are factors, which put stress on the bond of trust the most. Reliability of superiors and the regular communication between colleagues, by contrast, are considered to be the factors which promote trust primarily. Final reports and statements are only possible after the final completion of the survey.

At the present time, the final revised questionnaire had to fill out by the employees of further industry partners. Following this, all relevant frameworks of “professional trust” must be described in conclusion after the intended final analysis.



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WISSENSCHAFT UND PRAXIS

References

Boff, K. R., Kaufman, L., & Thomas, J. (1986). Handbook of perception and human performance. New York: John Wiley & Sons.

Bierhoff, H.-W. (1995). Vertrauen in Führungs- und Kooperationsbeziehungen. In: A. Kieser, G. Reber & R. Wunderer (Hrsg.), Handwörterbuch der Führung Stuttgart: Schäffer-Poeschel.

Büllesbach, A.-M. (2007). Vertrauensförderung durch Corporate Governance – Problem oder Lösung? Diplomarbeit, University Berlin. München: Grin.

Büssing, A. & Broome, P. (1999). Vertrauen unter Telearbeit. Zeitschrift für Arbeits- und Organisationspsychologie, Nr. 43/3.

Butler, J. K. Jr. (1991). Toward understanding and measuring conditions of trust: Evaluation of conditions of trust inventory. Journal of Management, No 17/3.

Currall, S. C. & Judge, T. A. (1995). Measuring trust between organizational boundary role persons. Organizational Behavior and Human Decisions Processes, No 64.

Das, T. K. & Teng, B.-S. (1998). Between trust and control: Developing confidence in partner cooperation in alliances. Academy of Management Review, No 23.

Deutsch, M. (1960). Trust, trustworthiness, and the F-Scale. Journal of Abnormal and Social Psychology, No 61.

Gurtman, M. & Lion, C. (1982). Interpersonal trust and perceptual vigilance for trustworthiness descriptors. Journal of Research in Personality, No 16.

Jones, G. R. & George, J. M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. Academy of Management Review.



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ORGANISATIONSENTWICKLUNG - BEITRÄGE AUS
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Kassebaum, U. B. (2004). Interpersonelles Vertrauen: Entwicklung eines Inventars zur Erfassung spezifischer Aspekte des Konstrukts. Thesis, University Hamburg.

Kee, H. & Knox, R. (1970). Conceptual and methodological considerations in the study of trust and suspicion. Journal of Conflict Resolution, No 14.

Kramer, R. (1999). Trust and distrust in organisations: Emerging perspectives, enduring questions. Annual Review of Psychology, No 50.

Luhmann, N. (2000). Vertrauen: Ein Mechanismus der Reduktion sozialer Komplexität. Stuttgart: Lucius und Lucius.

Rotter, J. (1967). A new scale for the measurement of interpersonal trust. Journal of Personality, No 35.



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