
Team Work as a Source of Synergy - Quantitative Approach

Submitted 19/09/25, 1st revision 16/10/25, 2nd revision 26/10/25, accepted 20/11/25

Monika Jasińska¹

Abstract:

Purpose: The aim of the article is to point out to a constant need and ability the organisations operating in an innovative economy have to ensure the quality of teamwork. In other words, a type of joint action, on the basis of which synergy emerges.

Design/Methodology/Approach: Hence, the study measures dependence of factors significant for the efficiency in team working and analyses them from added value perspective, which is expressed as a qualitative measure of synergy - satisfaction of joint action (satisfaction*). In order to have all that possible, both the summary of qualitative research and analysis of quantitative data of the preliminary survey must be taken into consideration. The two aspects first needed to be surfaced and determined. Thus, for the research part the grounded theory and surveys were used, while the analytical part involved the development of two models i.e. confirmatory factor analysis and a multiple regression one. In turn they allowed to select and describe the values of the quality parameters of team work. The focus was then on identifying key terms and determining significant relationships for synergy in team work.

Findings: The case study-based project, made it possible to see the strength of cooperation and its effects, supported by the quality of relations and the activity of potential in action in the studies teams. Subsequently, it prompted a more holistic approach to joint action requiring from its parties commitment, all to boost teamwork, and accountability for quality and reinforcement of social potential in an organisation. This only confirms the legitimacy of systemic thinking philosophy in the context of skills growth, and obtaining beneficial effects of joint learning, development and sustainable work.

Practical Implications: A good management of organisation is an intricate and yet reachable concept and once found is like a patent for an innovator. However, no great approach is possible without system thinking that triggers the right solution, methods of operation, building the organisation's value based on its potential. This is especially important in the context of learning organisations.

Originality/Value: The originality of the article lies in applying synergy—understood as “satisfaction with joint action”—as a qualitative measure of the added value generated by teamwork, as well as in integrating qualitative and quantitative methods (grounded theory, CFA, regression). The article identifies key factors and relationships that influence synergy, highlights its significance in innovative organizations, and emphasizes the role of systems thinking in building social potential and enhancing the quality of collaboration. Through its case study, it provides practical evidence of the value of synergy for team effectiveness and the development of learning organizations.

¹Ph.D., University of Siedlce, Faculty of Social Sciences, Siedlce, Poland,
ORCID ID: 0000-0001-9231-4469, e-mail: monika.jasinska@uph.edu.pl;

Keywords: *Synergy, teamwork quality, cooperation, organisation potential, learning organisation.*

JEL Codes: *L20, L26, O15, M54.*

Paper Type: *Research article.*

Acknowledgements: *The paper has been prepared on the basis of a fundamental research project - Synergy and Social Capital of Modern Organisations. The project was financed by the National Science Centre with funds allocated on the basis of decision-DCE 2011/01 / BHS4 / 04810*

1. Introduction

Many countries keep the innovative economy as the goal of growth. In this perspective, one of the priorities in organisations based on the philosophy of sustainable development is the so-called intelligent and sustainable growth. It is based on increasing resource efficiency and a more competitive and environmentally friendly economy. In this respect, today's organisations are facing more and intricate challenges.

The higher dynamics of many processes, the pace of the turbulence of the environment, the increasing unpredictability of operating conditions of companies, requires the creation of an extraordinary model of organisation management (Oswald and Mascarenhas (ed.), 2018). It is the management that will not only focus on ordinary efficiency, but will create opportunities for added value. Thus it is vital to account for the value established through sustainable work, created by cooperation, use and growth of potential of active participants in the joint learning process who also experience satisfaction of joint action (Jasińska, 2020).

The functioning of the organisation in an innovative reality is associated with the need to create new solutions, ideas and creative concepts. The goal of many organisations is the innovative development, which, naturally, is possible if we use the value of knowledge, the ability to improve it and apply it in practice. The pursuit of this aspiration requires the courage, and accepting the risk in taking up challenges. This direction of thinking indicates the necessity of mobilising the potential in an organisation and the use of fully possessed possibilities (Senge, Kleiner, Roberts, Ross, Roth, Smith, and Guman, 2007).

Creation of conditions for innovative development requires from any organisation a combination of the ability of team learning and building the quality of potential. In order to achieve the synergy effect, it is necessary to ensure adequate resources and

knowledge transfer as well as to stimulate entrepreneurial activity (Bessant and Tidd, 2007; Jasińska 2019).

In these circumstances, triggering team working activities enables contemporary organisations to achieve new values. Well-organised joint action stimulates and directs potentials and encourages the efficiency of action based on the acquired synergy effect. The synergy emerging along with teamwork improvement is a benefit, an additional contribution to team's effectiveness, resulting from higher satisfaction of joint action. Synergy, a function-specific goal, strengthens team work quality and efficiency growth.

This new dimension of team energy makes space for an intelligent community that is capable of continuous improvement, adaptation and introduction of changes (Jasińska, 2020). And shaping effective relations between cooperating people may simply support this. The ability of contemporary organisations is the foundation for building and strengthening social potential based on key factors, including: cooperation, sharing knowledge or satisfaction of working together.

Thanks to obtaining the appropriate quality of teamwork, the process of team learning becomes easier and more efficient, which is significant for the results obtained, which are expressed by innovative activity (Albrecht, 2003).

The challenge contemporary organisations face, is often building and developing a culture that supports shaping behaviours through cognitive openness, openness to changes and developing the ability to create and to act together (Amabile, Conti, Coon, Lazenby, and Herron, 1996). Therefore, developing strategies and practices for creating and maintaining long-term value is essential for a sustainable economy (Kochan, Appelbaum, Gittel, and Leana, 2013) and for generating a sufficient number of high-quality jobs (De Sitter, *et al.*, 1997).

This management focus is an impulse for innovative potential and greater ability to compete. By the same token, numerous studies prove that innovations in the workplace are important both for organisation and its employees, which actually confirms this idea's vitality. In simple words, innovations, at all times, positively correlate with a gainful impact on efficiency, activity, development, creating new opportunities for continuous improvement of personnel (Appelbaum, Gittel, and Leana, 2010), flourishing quality of professional life (Pot, Dhondt and Oeij, 2012); Totterdill, Dgondt, and Milsome, 2002) and better organisation of work (Pot, 2011).

The direction of managing an organisation in a changing and active environment should include the promotion of individual and, above all, group innovation projects. Thus the answer to increase the efficiency of action and to create new space for generating knowledge lies in shaping employees' behaviour to strengthen their commitment to joint action.

Properly organised teamwork, supported by the value of knowledge and well-used social potential, increases the ability to activate energy in innovation-favouring action. This creates a stimulus to compile (combine), by means of exchanging and acquiring, knowledge resources through practice and creative experiences of a team. Intensifying the joint learning ability will allow an organisation to open up to the future and set a new quality.

Thanks to the fact that people will focus on developing and expanding collective consciousness and collective skills, the organisation will be able to improve (Zeeman, 2017; Jasińska, 2019). This will increase the speed of reaction to changes, flexibility of operation, as well as readiness to implement innovative solutions (Schippers, West, and Dawson, 2015). Therefore, the value of teamwork is the key to ensuring that the organisation can be considered to be learning and more competitive.

2. Teamwork Environment in Learning Organization - Synergy Source

In an intensively competitive environment, innovations become the most important factor influencing the organisation's success (Udwadia, 1990; Martins, Terblanche, 2003; Conference on Knowledge Economy, 2005/2006). They require the organisation to dispose of and use specific potentials that involve all participants in the organisational life.

Innovations are created through sustainable and active work however, they are strengthened by the efficient knowledge sharing process, which develops the quality of joint action and cognitive potential (Jasińska, 2019). From that perspective, managerial personnel, management and organisational culture have an important role to play (Figure 1). A vision of entrepreneurial activity, shaping productive and proactive behaviour of staff and combining diversity in favour of above-average, often risky activities is a prerequisite to achieve advanced business results (Hamdan and Ah Alheet, 2020).

The efficiency of management requires including in the company's strategy proper handling of innovation. This should be done on the basis of the ability to build knowledge, development of competences (Tidd, Bessant, and Pavitt, 2015; Lepak and Snell, 2003) and increased employee involvement in the organisation's innovations (de Jager, Minnie, de Jager, Welgemoed, Bessant, and Francis, 2004).

In this context, the awareness of tangible benefits and successes gives the organisation a better chance to stand out and strengthen its potential (Tidd, 2012). A holistic approach to innovation management based on mutual relations between the market, technology and organisation requires the development of a unique set of skills (Tidd and Bessant, 2018), which will facilitate creative changes and set new directions of development.

Teamwork focus, generation of ideas, engagement, flow of knowledge, tolerance for errors, results oriented in team work (Cropanzano, Bowen, and Gilliland, 2007) are of fundamental importance.

The ability to learn and keep organisations moving depends on employees who are open to change, entrepreneurial in action and have acquired the ability to continuously implement innovative solutions. Research results suggest that organisations that can mobilise a large proportion of people to participate in innovation can work easier, faster and generate more added value (de Jager, Minnie, de Jager, Welgemoed, Bessant, and Francis, 2004).

Achieving this depends on a systematic process of organisational development supported by pro-active behaviours social relations expanded and strengthened by appropriate quality, effective cooperation and satisfaction (Jasińska, 2020).

Innovation is a function of at least three important components: creative people (Bessant and Tidd, 2007; Grund, Harbring, and Klinkenberg, 2025), teamwork (Jasińska, 2015; Salas, Linhardt, and Fernández Castillo, 2025) and pro-innovative environment that is created in an organisation by management (Hamdan and Ah Alheet, 2020).

Creativity of people is associated with cognitive efficiency, the ability to realise knowledge hidden in action and the ability to adapt. These two features are particularly valuable under conditions of change. They can increase the imagination, the flexibility of thinking and acting, and the sensitivity of noticing new perspectives in the environment.

In addition, they form the basis for improving the ability to solve emerging problems quickly. Creativity is important for the organisation to be able to innovate, which is a catalyst for creating new quality. Therefore, the development of this potential is one of the most important priorities in improving the organisation.

In each company there are resources of knowledge, ideas and talents. However, not every organisation will be properly identified. Good ideas are often lost in everyday activities, and their creators have no chance or tools to implement them. The challenge for management in this area is to create the right environment and the right culture that will support them to develop them and apply them in practice.

The culture of innovation treated as the "social bond of life" in an organisation (Cameron and Quinn, 2011) is a powerful management tool, it enables people to act independently and consistently (Christensen, 2011). In order for its potential to become a natural source of success, it is necessary to create a strategy that will support the participation in the innovation process of as many employees as possible, namely, a culture of innovation that will strengthen the behaviour of people open to

change, motivated to share their tacit knowledge, develop competences, use talents, support innovators' exploring skills and ventures.

Exploring-wise rooted culture supports innovative thinking and builds the awareness of shared responsibility for created and adequately used effects of innovation and is a natural force that constitutes a special value for the entire organisation system. Fortunately, this value is acquirable through good communication, jointly developed regulations, work organisation, complementary skills, mutual strengthening of activity and using support in teamwork.

That in turn translates into better creative efficiency of people involved in generation and promotion of ideas within and outside their team. In this context, the innovative culture has a significant impact on the relationship between creative efficiency and motivational orientation (Rietzschel, 2011; Amabile and Kramer, 2011), which has two dimensions: (i) preventive - related to avoiding losses, and (ii) promotional - concerning improvement and development benefits.

In organisations supporting the culture of innovation, employees are clearly motivated to fully commit to the process of creating collective intelligence all to implement projects consistent with the goals and values of their organisation. This positive impact reflects on increasing efficiency, taking intelligent risks and the organisation's ability to meet challenges, which often are the synergy source.

In learning organisations, ideas are selected and developed on the basis of collective human experience (Senge, 2014). Through active cooperation and trust in a team work (Jones and George, 1998; Kramer and Tyler, 1996), social potential increases the organisation's ability to learn together in different dimensions. Teams creating a widespread community based on a network of relations update their potential, increase openness and readiness to achieve tangible results in team work.

Active teams are designed to stimulate innovative development through the creativity of action and to achieve a state of personal and team championship (Perry-Smith, and Shalley, 2003). Research results indicate that personal mastery directly impacts organisational effects through team learning and innovation. Mutual and positive influence of team learning on the results of the team in the organisation through innovative achievements (Morales, Montesa, and Joverb, 2007) have also been observed.

It proves that progress intensifies the strength of mutual influence and potential of people in the joint work and it creates a state of "exceptional" satisfaction. In these circumstances, progress and satisfaction generate exceptional strength, which raises the team to a higher level of joint activity, encouraging the emergence of synergy in a team (Jasińska, 2015; Corning, 1995). Creativity, entrepreneurship (Quinter, Andrade, and Ramírez, 2019) and teamwork are an impulse for changing the way we think about management.

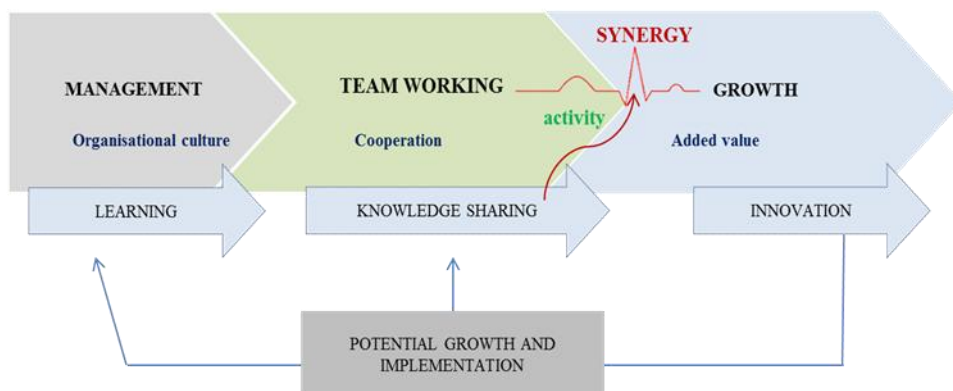
Creating a new organisation model aimed at innovative development, needs encouragement from the leadership (Malone, 2004), efficient knowledge and quality management (Wali and Boujelbene, 2011). That turns into an organisational environment in which team work and the value of the joint action quality play an important role.

The environment that favours the development of an innovation can be created by changing the organisational culture that implies a new way of thinking and quality of action (Pun, 2001). The literature points that continuous improvement (Van Dun, Hicks, and Wilderom, 2017) and competitiveness (Ahmed, Loh, and Zairi, 1999) are effective when there is an appropriate organisational culture (Almaiman and McLaughlin, 2018).

Each organisation is distinguished by its distinctive culture. It is important to shape pro-innovation behaviours (Brunetto, Xerri, and Nelson, 2014), support activity, develop the quality of relations, since it plays an important role in the period of change (Essawi and Tilchin, 2013; Hood, Jacobson, and Van Buren, 2011).

For a high level and pro-innovative profile of organisational culture, the way of managing, approach to and awareness of people's potential is of great importance. Taking into account the key elements discussed for the efficient functioning and development of learning organisations, their relationship is presented graphically in Figure 1.

Figure 1. *Fundamentals and the importance of creating synergy conditions in a team*



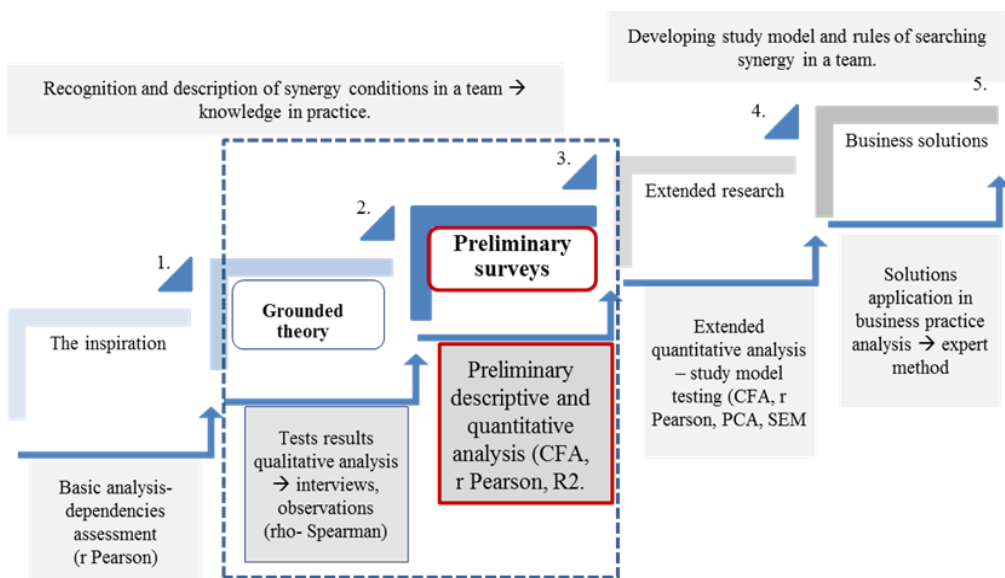
Source: *Author's concept.*

3. Research Methodology – Description of the Procedure

The performance assessment study of a team enabled an exploration of synergy conditions. Emphasising the complexity of the development and implementation of the full study procedure, one should mention the value of the empirical material obtained at each stage of the process.

Following the assumption, that the results of the three-stage study provide certain qualitative knowledge of the subsequent research and analytical activities, it was decided to present these results in separate publications. This article will focus on the summary of the analysis of the results of qualitative research, and above all on the quantitative analysis of the effects of the preliminary survey. Figure 2 presents the sequence of research activities undertaken as part of the procedure.

Figure 2. Research activities to diagnose the quality of teamwork and determine synergy conditions in a team .



Source: Author's concept.

The first part of the research is based on a mixed and qualitative methodology with the planned tasks using the case study method, since the concept was to have better changes of experiencing team work in real environment. The preliminary stage of the research analysed the basic quantitative data, which was gathered in two companies of different characteristics in terms of industry and management.

In total, 774 surveys were carried out. Findings of the preliminary stage become the evident ground supporting the validity and need to develop the project exploring the knowledge on synergy in teams. Thus a general analysis, using questionnaires, was carried out to assess dependence of factors valid for the efficiency of people

functioning in team work. The applied r Pearson's correlation coefficient helped to define the research issues relevant to further proceedings. All that became the basis of a research project aimed at exploring the conditions of synergy in a team.

Subsequently, by means of the qualitative research case study approach the empirical material was collected. The methodology of grounded theory was used (Konecki, 2009). The contribution of this strategy in the context of the validity of the collected data is very significant as this made it possible to gain detailed knowledge about the quality of teamwork and its end effect - a phenomenon of synergy.

Hence, as part of the grounded theory, interviews and observations were carried out in the "P-M" company, which has been selected for the study on account of two premises. In this respect, previous experience in research cooperation proved to be of importance since it was used as the preliminary insight of the practice aspect and the basis for consolidating knowledge about building cooperation in a company.

The second premise was an empirically interesting multidimensional profile in terms of: operations, multiplicity, and complexity of processes, dynamics and direction of introduced changes, a serious number of teams, company size (big) and management methods. The study procedure includes two types of interviews: individual and group. The selection of teams for the study was entirely intentional and based on the list set by the HR department and upon the approval of the management.

The selection of teams was carried out in the context of meeting three conditions: size, type and level of efficiency at work. The study included teams: big, medium, small; project, managerial, advisory, trouble shooting, operational; distinguished by high and moderate level of efficiency in operation. The indicated three criteria were fulfilled by 22 teams, represented by 200 people. In addition to the members of the designated teams and their leaders, a group of 14 people from senior and middle management was invited to the interviews. In total, 88 interviews were conducted at the qualitative stage (73 individual and 15 group), with the participation of 214 people.

In-depth individual interviews were carried out with members of 7 project teams (including their leaders) and managerial staff. In total, 73 people took part in individual interviews. The description of the course of the study was made in form of notes that were regularly transcribed and analysed (Charmaz, 2014). The structure of respondents' features is presented in Table 1.

Table 1. *Features of individual interviewees*

Team size	Gender		Age				
	F	M	> 30	30-39	40-49	50-59	≤ 60
big*	7	5	-	4	6	2	-

small*	3	3	-	2	3	-	1
big**	8	4	-	6	5	1	-
small**	6	-	-	-	5	1	-
medium**	2	5	-	1	5	1	-
medium*	5	3	-	4	3	1	-
medium*	4	4	1	4	2	1	-
Senior management	2	5	-	-	4	3	-
Intermediate management	4	3	-	3	3	1	-
Σ	41	32	1	24	36	11	1
* high level of efficiency; ** moderate level of efficiency; N = 73.							

The second type of interviews were focus group. The recording of the study was carried out in two forms: audio (voice recorder) and notes - a code sheet was developed based on the main research issues. 15 teams participated in the focus group interviews, with 141 employees. The selection of teams for the study was proportional, including the three previously defined criteria. The features of focus group interview are presented in Table 2.

Table 2. Features of focus group interview

Team size	Type	Gender		Age				
		F	M	> 30	30-39	40-49	50-59	≤ 60
average**	project	7	2	2	4	3	-	-
big*	project	9	6	2	5	5	3	-
small*	managerial	3	3	-	3	2	1	-
big**	operational	11	6	-	9	5	3	-
medium **	operational	3	5	-	5	-	2	1
big**	advisory	6	8	1	2	7	3	1
small*	trouble shooting	3	2	-	-	3	2	-
small**	operational	2	3	-	2	2	-	1
big**	managerial	10	8	-	9	3	4	2

small*	project	2	3	-	2	3	-	-
medium*	trouble shooting	3	4	-	3	4	-	-
average**	managerial	4	3	-	3	4	-	-
big**	trouble shooting	7	5	2	6	4	-	-
small*	advisory	3	3	-	3	3	-	-
medium*	advisory	4	3	-	3	2	2	-
Σ		77	64	7	59	50	20	5
* high level of efficiency; ** moderate level of efficiency; N = 141.								

The focus group research was an extension of the research issues and a verification of individual interviews results. Additionally, the findings allowed exploration and recognition of new circumstances of the teams' operations and establishing of main associations and analogies relating to the phenomenon of synergy.

After data transcription and analysis of each successive interview, new concepts, features, definitions, key issues emerged. The frequency of similar or similar responses was also noted. The entire sampling process finished at the time respondents frequently submitted similar answers (Charmaz, 2014; Konecki, 2011).

In order to establish the first significant dependencies and determine the further direction of the study, the rho-Spearman correlation coefficient was applied to perform qualitative analysis, which was also result of the development of the first version of a set of research tools. The content of the entire questionnaire based on the practical knowledge. At first, the tool consisted of 120 statements describing the quality of team work and team behaviour. A 5-point Likert scale was used to measure individual features, where that 1 is the lowest and 5 the highest value.

The second stage of the study is related to the implementation of the preliminary diagnostic survey. The survey involved team members (200 people) involved in previously completed interviews. The aim of this exploration was to test tools, verify the significance of key research areas, group features and determine basic variables. Pearson's correlation coefficient r and confirmatory factor analysis (CFA) were used in the data analysis. To assess the relation between values of indicators describing the quality of teamwork and satisfaction*, an analysis of the multiple regression model was carried out:

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4$$

where:

Y - dependent variable (*satisfaction*^{*});

X_1, X_2, X_3, X_4 - independent variables (X_1 - *entrepreneurial potential*, X_2 -*quality of relation*, X_3 - *cooperation*, X_4 -*effects of team work*)

b_0 - absolute term;

b_1, b_2, b_3, b_4 - model parameters (regression coefficients), informing how much the value of Y dependent variable will change when the independent variable increases by one unit, while other values remain fixed.

The internal consistency Cronbach's α was applied, to weight up reliability of individual parts of the research tool. The aim of the statistical analysis was to assess the model by means of the main dependencies, factor loading values, the indication of interdependencies between variables, as well as the validation of research tools. Additionally, while interviewing the team members the researcher have also studied their behaviours. This allowed to get an idea of the natural reactions during team working and discussing and to understand and justify the results.

4. Interpretation and Result

To maintain certain continuity and appropriate structure of empirical evidence presentation, following the elaborated research procedure presented in Figure 2, this article summarises the qualitative research and quantitative analysis of surveys data.

The first stage of the research shows several main pragmatic findings (Jasińska, 2019):

1. For the efficiency of the operation, our own specific competences and the competences of people we cooperate with are equally important. This is confirmed by the relation between knowledge and attitudes ($r = 0.73$, $r = 0.68$) and knowledge and skills ($r = 0.68$, $r = 0.62$). In addition, a high correlation result was obtained between the knowledge of the management and employees' knowledge ($r = 0.63$). Important information is also the high dependence between the attitude of the managerial staff and the attitudes of employees ($r = 0.72$). This empirical evidence shows the validity of interdependence of potentials in working together. This is especially clear in the process of looking for ways to improve work and solve problems. In addition, the perceived strength of mutual influence is significant in shaping attitudes and behaviour at work. On top of the proper use of competences, relations are key to the efficiency of the operation, since they could strengthen or weaken the achieved effects, and above all support knowledge sharing.

2. Quality of relations between colleagues and their relations with the company ($r = 0.81$), awareness of directions ($r = 0.75$) and results of changes ($r = 0.78$) and communication and knowledge sharing ($r = 0.73$) impact the behaviour of employees at work. It was also determined that the understanding of the results of changes and actions taken significantly shapes the relations of people cooperating with each other ($r = 0.74$). Noteworthy is also the result signalling the important role

of communication and knowledge sharing in creating the level of knowledge of employees and awareness of activities of other people. In the context of ongoing events, setting new directions and the course of implementation of changes in the company ($r = 0.73$) turn out to be necessary. This is the foundation for openness, willingness and involvement of employees in creating the concept of organisation development. It is also important for building responsibility for decisions and for engaging in team working.

3. The application of the grounded theory strategy has enabled the emergence of distinctive concepts, indicators and characteristics of teamwork. Significant synergy conditions in a team were diagnosed and described by means of the developed transcripts. Thus the developed categories gave rise to the main research issues, which were defined by the frequency of emerging in the sampling process.

Among them, the following areas were distinguished:

- building and maintaining the quality of relations - indicators: creating and developing contacts with colleagues, managing relations, communication, trust;
- basics of building teamwork - indicators: team potential, work organisation, competences;
- effects of team work - indicators: activity in a team working, effectiveness of team working, self-development;
- manifestations of team activity - indicators: personal activity, team activity in team working;
- activities of the managerial staff in building teamwork - indicators: motivating, work atmosphere;
- cooperation process - indicators: behaviour at work, difficult situations in team work;
- satisfaction - a feeling of common work, pride of achievements, sense of new opportunities, perceiving the value of the effects of team work.

4. The actions taken as part of the grounded theory enabled natural associations of the synergy phenomenon when respondents spontaneously started using this term during group interviews. Watching focus group, work and effects of an actual team (this observation concerns several teams that showed high cognitive, emotional and behavioural activity), was also valuable. The result of the observations became important for the qualitative description and put focus on the details while elaborating the empirical material. In this respect, one of the results of the data analysis is the first definition of the operational synergy: *Synergy is the enhanced effect phenomenon (result of the intensification of factors) in comparison with the total outcome of individual factors (teamwork quality conditions). It is an energy, an additional contribution to the quality of teamwork. Synergy indicates the achievement of greater effects through the growth and use of an activity released and enhanced by team work. A qualitative measure of synergy that has qualities of*

quantification is the satisfaction of team work (gaining a common benefit on the basis of team work).

5. It was noticed that the basis for increasing the efficiency of an organisation functioning, considered as the constantly learning, is effective team work and proactive behaviour. This conclusion concerns building teams as well as developing cooperation between individual departments (parts) in a company. It was observed that the activity of building openness and cooperation is important for apt quality of relations ($r_s = 0.75$), satisfaction ($r_s = 0.73$), and above all, mobilising effects of the team work ($r_s = 0.84$), way of managing ($r_s = 0.64$) and the potential of a team ($r_s = 0.58$), which are designed to support and improve the level of cooperation.

6. Having in mind creation of conditions to have apt quality team work, when analysing the data, a specific feature showed itself. That was the cooperation feature which emerges along with team's cooperation quality improvement and achievement of sufficiently high level of activity of team work. This is an additional value, the energy that is produced by a special type of "*satisfaction*". This is a bonus, it is something extra, but still achieved in the right conditions for working together. This is a state that resembles the phenomenon of synergy in its interpretation. Analysis of the developed material indicates that for the occurrence of *satisfaction** specific conditions are important: quality of relations ($r_s = 0.82$), beneficial effects of team work ($r_s = 0.79$) and a conscious and structured course of cooperation ($r_s = 0.73$). In this situation, one sees an analogy to physical phenomena that allow to include synergy as a function of a particular state. This state depends on the initial and final conditions, and not the means by which it is obtained.

The analysis result of qualitative research is the development of the scope of research areas. As part of building the theory, basic assumptions emerged on the basis of practical knowledge. The first of them was the research problem that evoked main question: *What team work conditions induce synergy in a team?* Hence, the main working hypothesis was adopted: *By providing the right potential, level of relation and stimulating co-operative activity, the quality of team work creates synergy opportunities.*

Having a designated and verified direction of research activities, a set of tools has been developed. In the first version, it included 5 thematic blocks: *entrepreneurial potential, quality of relations, cooperation, effects of joint action, satisfaction*. The 5-stage Likert scale was used to study define the areas defined by 120 statements.

The validation of the study tool evidences the achievement of high reliability parameters defined using Cronbach internal coherence coefficient amounting to $\alpha = 0.898$. In case of the analysed data for t test's calculated value, the significance is $p < 0.001$. That procedure is the vital point initiating second stage of research and presenting a quantitative data analysis.

The confirmatory factor analysis (CFA) was the first step in the statistical elaboration of the empirical material obtained from the surveys. This method allowed to assess the value of factor loadings of 12 distinguished variables (in total 108 features) explaining 4 implicit variables (*entrepreneurial potential, quality of relations, cooperation, effects of team work*) and loading of 1 observed variable (*satisfaction**) described by 12 features.

As a result of the analysis, the following results were obtained (Jasińska, 2019):

1. Estimation of the CFA based model indicates that 10 out of 12 variables reached the desired loading value of 0.7 while the other 2 was above 0.6. Therefore, it can be assumed that after correcting the statements, the loadings may be higher. In general, the analysis indicates a good match between individual statements to all studies factors. The highest loadings were recorded in the case of *common effects* (learning - 0.915, knowledge sharing - 0.848, efficiency - 0.732) and *cooperation* (commitment - 0.864, satisfaction - 0.825, cooperation - 0.744) factors, followed by *relationship quality* (trust - 0.911, communication - 0.878, norms and rules - 0.636), and *entrepreneurial potential* (active attitude - 0.752, employee capabilities - 0.733, managerial staff - 0.629). The activities of the management, norms and team working principles are the variables which should primarily be verified based on the value of factor loadings received. There are probably some hidden variables that can be important for explaining the factors of *entrepreneurial potential and the quality of relations*.

2. *Satisfaction** variable is described by 12 features. CFA based analysis shows that 7 out of 12 features have obtained loading value exceeding 0.7. In turn, the result of 2 loadings of features is very similar to the desired value. The other three features should be reinterpreted or rejected due to the average value of factor loadings (less than 0.57). The features that best explain *satisfaction** are: a sense of development, new opportunities (0.771) and learning and mutual inspiration in teamwork (0.771), sense of teamwork and usefulness of common effects (0.764), future prospects (0.761), sense of good work (0.756), progress satisfaction (0.739), and recognition for common accomplishments (0.72). We should also accept two further features that have similar value to the desired one: a sense of participation in a team (0.697) and a sense of well-used work time in a team (0.674).

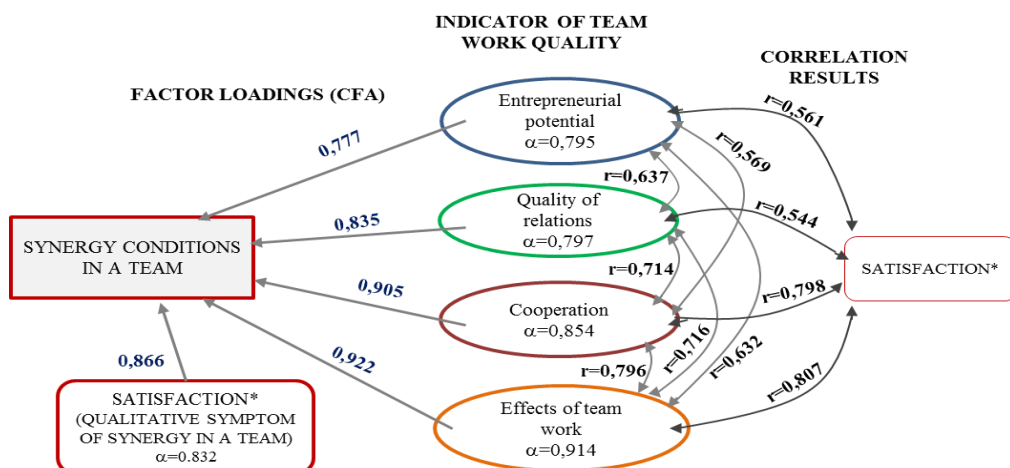
3. The interpretation of the data analysis was complemented by determining the percentage of explained variance (R^2), which strengthen the quality of the factor analysis model assessment. In case of 9 out of the 12 examined variables explaining the four main research areas, the result exceeded the desired value of 0.5. *The effects of team work* were best explained by *learning* (0.785) and *sharing knowledge* (0.764) while *cooperation* factor by *involvement* (0.645) and *satisfaction* (0.603) and *trust* (0.783) and *communication* (0.694) by the *quality of relations*. The *entrepreneurial potential* is best explained by the *active attitude* (0.538). In the aspect of variables (*managerial staff* - 0.386, *norms and rules* - 0.375), which did

not achieve the desired value of 0.5, it can be seen that these are the same variables where factor loadings did not exceed the desired value of 0.7. The *capabilities of employees* variable, despite having a high factor loading (0.733), explains the *entrepreneurial potential* (0.425) in a rather low percentage. This justifies the need to verify the statements describing it. Taking into account the *satisfaction** parameters, every feature whose value of factor loadings exceeded 0.7 explains the factor 65% in at least. However, the best feature to explain satisfaction is a sense of development, new opportunities (0.905) and learning and mutual inspiration in teamwork (0.901), sense of teamwork and usefulness of common effects (0.883), future prospect of a team (0.874), satisfaction with progress (0.828). This result can be assumed as high enough.

The next part of the statistical study is related to the analysis of the model in the context of data interpretation in two scopes. First, it refers to the development of material based on CFA analysis used to determine the value of factor loadings describing the synergy conditions in a team. This is based on 4 factors observed indirectly (each measured by 3 variables) and 1 variable observed directly.

The second scope of the analysis includes the action enhancing the estimation of the model. This applies to the evaluation of the correlation occurring between the five variables being measured. The result of assessed dependencies also complements the quality of previous estimates of the model. It also indicates a positive correlation of the main factors describing the quality of teamwork and their dependence on *satisfaction**. Figure 3 presents the results of two activities within the applied analysis methods.

Figure 3. Confirmatory factor analysis model with correlated factors describing the synergy conditions in a team



Source: Author's concept.

The results of the developed model of confirmatory factor analysis indicate that the value of loadings of factors explaining the conditions of synergy in a team are high. They exceed the desired value of 0.7. Ideally, the circumstances of the emergence of synergy in team work are explained by *effects of team work* (0.922) and *cooperation* (0.905) variables. The high result obtained on the basis of the reliability of the tool strengthens the quality of these empirical modules estimation. This is confirmed by α level assessment, where *joint effects* coefficient is $\alpha = 0.914$, and *cooperation* is $\alpha = 0.854$.

This proves the high internal consistency of the statements that jointly characterise the area of effectiveness of team activities. Both, *satisfaction**, the value of which is slightly lower than the previously set variables (0.866) and *quality of relation* (0.835) show high factor loading. The coefficient α was also calculated for these two variables.

On this basis, it can be determined that the internal coherence of the tools is similarly high. This is confirmed in case of *satisfaction** $\alpha = 0.832$, and *relation quality* $\alpha = 0.797$. The variable *entrepreneurial potential* meets the condition of the desired factor loading value 0.7. At the same time, this value of all 5 modules in the model, is the lowest value determining the possibility of emerging synergy in team work (0.777). The obtained result indicates the need to correct (clarify) the tool in terms of statements describing this aspect. The Cronbach's coefficient, which for the variable *entrepreneurial potential* is $\alpha = 0.795$, supplements the analysis activities.

The level of tool reliability determined in this way should also be considered as high. Taking into account all the results of the internal consistency assessment of the individual empirical dimensions included in the tool, a decision was made to delete some statements. This was important for the overall improvement of factor loadings. As part of further verification of the tool, in the case of several statements, they were constructed in a different way.

Guided by the results of the analysis, it was also decided to supplement this set with further statements, primarily in the aspect of the variable *quality of relations* and *entrepreneurial potential*. This was done by means of features emerging successively on the basis of the grounded theory, which validity has not been previously considered fully significant.

As part of the quality assurance of the model estimation, an evaluation of the correlation between 5, indirectly and directly measured variables, has been performed. Figure 3, clearly shows three strongest correlations: *effects of team work* - *satisfaction** ($r = 0.807$); *cooperation* - *satisfaction** ($r = 0.798$) and *cooperation* - *effects of team work* ($r = 0.796$). This is another empirical evidence that confirms the fact that for the creation of favourable synergy conditions in teamwork, 3 key mutually reinforcing variables are important.

Cooperation is explained most strongly by commitment to work, job satisfaction and the course of team work. Managing a team based on ensuring the right quality of work should be related to the skilful use of the potential of people in team action. Properly realised and developed potential of people striving to achieve the organisation's goals, translates into specific team effects. A measurable value obtained during active teamwork is the satisfaction of team work.

In addition to the sense of well-arranged and implemented cooperation, this jointly generated energy arises on the basis of the effects obtained by a team. The most commonly obtained measurable benefits result from mutual learning, sharing knowledge and experience as well as the effectiveness and efficiency of team activities. The *quality of the relation* variable, which shows a high dependence with *cooperation* ($r = 0.714$) and *effects of team work* ($r = 0.716$) also is worth mentioning.

Based on the result obtained, it can be assumed that the relations play a greater role in activating the potential in a team. This is usually done through efficient communication and an appropriate level of trust. Given the effects of the analysis, these are the strongest factors that create the quality of mutual interaction. In order to have the power to generate and strengthen a good effect in team work, relations in a team, should be based on appropriate regulation.

These should be specific, communicated, understood and respected norms and principles that create a sense of communality in a team and enable organisation and good mutual relations. The value of the quality of relations lies in the fact that they define the basis for safety and activity in team work, especially when it comes to shaping innovative behaviours and developing the effectiveness of joint action.

On this basis, the team's ability to create energy initiated by the team's social capital is perceived, even though, the other defined correlations between the main dimensions of the analysis indicate weaker, comparing to 3 key variables, yet still significant relationships ($r > 0.54$).

The next stage of the quantitative approach in assessing the synergy conditions in teamwork presented the values of the basic statistics using the data presented in Table 3.

Table 3. Basic statistics of synergy conditions in a team

Variables in the model	Average rating Arithmetical Average	Standard Deviation SD	Coefficient variation V (%)
satisfaction*	3.980	0.524	13.1
potential entrepreneurial	3.567	0.307	7.67

quality of relation	3.587	0.294	7.35
cooperation	3.878	0.378	9.45
effects of team work	3.772	0.442	11.05
N = 200.			

Source: Own work.

Taking into account the variables in the model, the highest average score was achieved by *satisfaction** (3.98), *cooperation* (3.878) and *effects of team work* (3.772). These variables also show a significant relation. The *relation quality* (3.587) and *entrepreneurial potential* (3.567) were considered average. It is a signal that the team work of the studied teams should develop and strengthen the level of the relation and potential activity, especially through trust, proper communication, active attitude and the right opportunities.

Moreover, table 3 demonstrates - standard deviation, as well as the coefficient of variation V. Hence, the result shows that the responses of team members participating in the study are similar due to the studied features. The SD result with respect to the dependent and independent variables ranges from 0.294 to 0.524, which indicates a small standard deviation (low variation).

In turn, on the basis of the coefficient of variation, that measures dispersion, it can be stated that the studied group is not very diversified in terms of assessed features. The empirical evidence for this is the result of the variation coefficient V in the range from 7.35 to 13.1. In view of the above, it is clear that team members have similarly defined the conditions of the *quality of teamwork* and *satisfaction**. The result of the analysis makes it evident that the *quality of the relation* shows the smallest variability and differentiation among all assessed traits and *satisfaction** the highest.

The indication and justification of the significance of the conditions of synergy in a team is based on the impact analysis of *teamwork quality* variables on *satisfaction**. The results of the analysis are presented in Table 4.

Table 4. Values of multiple regression coefficients between *satisfaction* as a dependent variable and independent variables describing the quality of teamwork (*entrepreneurial potential, quality of relations, cooperation, joint effects*).

Variables in model	Determina'n Coeffi't R ²	Value of regression coefficient(b)	Standardized regression coefficient Beta (β)	Test Value F	Level of significance p
--------------------	-------------------------------------	------------------------------------	--	--------------	-------------------------

Absolute term		0.075				
Quality of teamwork	potential entrepreneurial	0.469	0.187	0.110	4.896	0.028
	The quality of relation	0.612	0.465	0.261	20.263	0.000
	Cooperation	0.676	0.703	0.508	63.970	0.000
	Effects of team work	0.699	0.617	0.521	62.454	0.000
For the entire model		0.745	142.489			0.000
N = 200; df _{model} = 4; df _{rest} = 195; Marked correlations are significant at the p <0.001.						

Source: Own work.

The relations between major variables are explained using the relatively strong and previously established correlations. On this basis, another goal was set - to determine the shape of the relation between the dependent and independent variables. Referring to the data collected in the qualitative study (interviews and observations) and quantitative analysis, *satisfaction** was indicated as a dependent variable.

In addition, four key independent variables were identified: *entrepreneurial potential*, *quality of relations*, *cooperation*, and *effects of team work*. In the context of such a combination of variables, the multiple regression method was used for further analysis.

The general verification of the model, based on the data in table 4, indicates that the regression equation is significant. This is evidenced by the high value of $F = 142.489$ and the level of significance of factors p . All partial coefficients of regression are also significant ($p < 0.05$). In the case of 3 independent variables, a high result of the F statistics was obtained, which indicates that the most important are *cooperation* ($F = 63.97$) and the *effects of team work* ($F = 62,454$).

The F value of *the entrepreneurial potential* ($F = 4.896$) is quite surprising and that may indicate collinearity with another variable. Correlation of entrepreneurial potential with *satisfaction**, see figure 3, indicates a fairly high dependence ($r = 0.561$), so the argument about the lack of dependence with the dependent variable should be rejected.

On this basis, it is thought that *entrepreneurial potential* may be more important in combination with *quality of relations*. This is demonstrated by high dependence ($r = 0.632$) and the highest value among other variables assessed in the model. This can be an empirical evidence that the *quality of the relation* activates and develops *entrepreneurial potential* in a team.

This argument may also demonstrates that the *quality of the relation* strengthens the action of another factor (including *the entrepreneurial potential*). Therefore, *quality of the relation* should be recognised as a *synergistic factor*, intensifying and strengthening the effects of other factors.

Moreover, the value of the correlation coefficient, where $R = 0.863$ is confirms the significance of the model. This means that there is a strong linear correlation between the dependent and the independent variables. The result informs that a high dependence occurs between *satisfaction** and the *quality of team work* explained by 4 variables: *entrepreneurial potential*, *quality of relations*, *cooperation*, and *effects of team work*.

The coefficient of determination is high, as evidenced by the result of $R^2 = 0.745$. It indicates that the variability of *satisfaction** is explained in 74.5% by the *quality of teamwork*. In the context of 4 features of the latent variable, the presented regression equation explains well the variability of the *satisfaction** value that depends on the level of *team work effects* (about 70%) and *cooperation* (67.6%). It should be assumed that the awareness of progress (Amabil and Kramer, 2011(1)), achieving extraordinary effects in team, good alignment and activity of team work strengthen the chances of increasing *satisfaction**, recognised as a qualitative measure of synergy.

The development of this analysis is the standardised regression coefficient b , which determines the positive influence of 4 variables describing the quality of teamwork impacting the value of *satisfaction**. The *cooperation* ($b = 0.703$) variable is the highest in the model. In other words, with the increase of *cooperation* by 1 point, *satisfaction** increases by 0.703 point. A similar observation applies to the variable *effects of team work*, where $b = 0.617$. In this context, along with the increase in the *quality of team work effects* by 1 point, *satisfaction** will increase by 0.617 point.

The *relation quality* ($b = 0.465$) variable obtained lower result of the standardised regression coefficient. This explains that with the increase in the *quality of relation* by 1 point, the value of *satisfaction** increases by 0.465 points. The lowest result of this coefficient $b = 0.187$ was obtained for the variable *entrepreneurial potential*, which defines a fairly low level of variability of the dependent variable. This result indicates that with the increase of *the entrepreneurial potential* by 1 point, the level of *satisfaction** will increase by 0.187 point. Given the above (Table 4), it should be stated that the best change of *satisfaction** is determined by the *cooperation* ($b = 0.703$), and the least is *the entrepreneurial potential* ($b = 0.187$).

This result is understandable due to the fact that the potential of a team will not create sufficient conditions for synergy. In this approach, even though, *entrepreneurial potential* is not a sufficient factor, it still can be considered as a source generating energy for team work.

Therefore, it must be properly activated, used and developed through appropriate *quality of relations*. Only then will the base for the appropriate level of quality of cooperation be created. It can be assumed that properly arranged and utilised relations in the team work will be a force that increases the activity of cooperation and the basis for obtaining measurable effects of joint action.

The quintessence of this activity may be synergy, recognised as a team's feature, which emerges from the assurance of quality teamwork. Another proof in the estimation of the model is the result of the standardised Beta (β) regression coefficient. Based on the obtained parameters, it can be indicated that in the analysed model the most important predictions for the explanation of *satisfaction** are *cooperation* (0.508) and the *effects of team work* (0.521).

As a result of the analysis, it can be seen that the higher the level of *satisfaction** the respondents feel, the more consistent they are in believing that the quality of teamwork, explained by *entrepreneurial potential*, *quality of relations*, *cooperation* and the *effects of team work*, creates good conditions for synergy in a team. Thus one can confirm the hypothesis specified in the study: *The quality of team work creates opportunities for synergy by providing the appropriate potential, level of relations and stimulating co-operative activity.*

5. Conclusion

The qualitative analysis of the collected empirical material, with the key element being the grounded theory, made it possible to recognise and describe the conditions of synergy in a team. The conclusion is that all participants in the organisation (employees and managerial staff) should be involved in the improvement of teamwork.

This responsibility, strengthened by the quality of social potential, is a source for the perception and understanding of important relations and for a holistic view of the combined action. In this context, the implementation of the philosophy of system thinking increases the chances and the ability to learn together. This ensures the development of every element in the system - the organisation (Sange, 2014).

Therefore, it is reasonable to develop this approach based on shaping synergic potential. Thanks to this, the foundation for the efficiency of the knowledge management system and organisational skills improvement is enhanced. It also provides for an adequate flow of knowledge, good use of experience and an impulse

for developing skills. Hence a need, awareness and strength are created to set new directions for change and to take innovative actions.

The applied analysis methods at the stage of quantitative data assessment allowed to indicate key factors in creating conditions for synergy in a team. The variables well explaining the basis for the appearance of this phenomenon are a special type of *satisfaction** and the *quality of teamwork*. The quality of work is defined by the values of 4 indirectly observed variables: *entrepreneurial potential, quality of relations, cooperation and the effects of team work*. Among the assessed variables using the CFA analysis, the relation of *cooperation, the effects of team work and satisfaction** were of the most significant importance.

Cooperation is best explained by people involvement in common work and satisfaction with the work being done. This translates positively into shaping active attitudes in a team. It is also a source of generating and transferring knowledge and acquiring new experiences. The effects obtained on the basis of joint action are best explained on the basis of efficient knowledge management and potential updating. The key variables in this area are learning in a team and sharing knowledge. These values are important for shaping openness in working together, developing creativity and stimulating innovative behaviour.

*Satisfaction** as an additional contribution to the quality of teamwork appears on the grounds of the ability to see and use the effects of teamwork. The strength that creates its uniqueness is a sense of development and new opportunities, a feeling of the sense of teamwork. The analysis enabled to see a strong relation between conditions conducive to the emergence of synergy. It was also found that the *quality of relation* in a team is a value that activates the entrepreneurial potential and strengthens other factors of teamwork quality. This observation develops further analysis towards the recognition of the *quality of relations* as a synergistic potential in a team.

The analysis also showed a good fit of the model, in which the variability of *satisfaction** is best explained by active *cooperation* and extraordinary *effects of team work*. On this basis, synergy in teamwork manifests by growing joint action satisfaction, which is available only in case of a complete awareness of increased activity in teamwork. Additionally, higher efficiency and added value through co-entrepreneurial approach, reflected in the implemented innovative solutions, also unfolds.

In the new social and economic circumstances, in the era of progressive digitalisation of many areas of human activity affecting quality of social relations, building a culture of innovation turns out to be of an essence. Its main role should be to shape an environment conducive to thinking, behaving and acting in an innovative way. The culture of innovation, as already recognised in many research as well as this analysis, supports the assumption indicating the impact of social environment on

factors crucial for establishing innovative growth zone, such as empowerment, creativity, freedom and space for creating new and useful ideas, individual and team involvement in the innovation process, cooperation, shaping the quality of relationships - through trust and mutual support (Dobni, 2008; Gallup Institute, 2013; Amabile, Conti, Coon, Lazenby, and Herron, 1996).

Researchers also point out that a true culture of innovation is expected to multiply its potential sources. In this regard, one of the key sources is the synergy phenomenon, an intangible asset, obtainable by means of high-quality teamwork. Empirical evidence enables assumption that synergy is a trait of innovative, action-organised teams, in which social relations are considered useful since they activate entrepreneurial potential, commitment, strengthen motivation and mutual support. To achieve such prominence, a culture of innovation, in contemporary organisations, should be a culture of safety, work balance, increasing activity in teamwork and supporting progress

References:

- Ahmed, P.K., Loh, A.Y.E., Zairi, M. 1999. Cultures for continuous improvement and learning. *Total Qual. Manag.*, Vol. 10, No. 4-5, 426-434.
- Albrecht, K. 2003. *The power of minds at work. Organizational intelligence in action.* American Management Association, New York.
- Almaiman, S., McLaughlin, P. 2018. Facilitating a continuous improvement culture: a literature review. *Proceedings of the 16th International Conference on Manufacturing Research, Volume 8. Advances in Manufacturing Technology XXXII*, 493-498.
- Amabile, T.M., Conti, R., Coon, H., Lazenby, J., Herron, M. 1996. Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154-1185.
- Amabile, T.M., Kramer, S.J. 2011. The power of small wins. *Harvard Business Review*. No. 89(5), 70-80. <https://hbr.org/2011/05/the-power-of-small-wins>.
- Amabile, T.M., Kramer, S.J. 2011. *The Progress Principle: Using Small Wins to Ignite Joy, Engagement, and Creativity at Work*, 1st ed. Harvard Business Review Press, Boston.
- Appelbaum, E., Gittel, J.H., Leana, C. 2010. *High-performance work practices and sustainable economic growth*. Washington: CEPR. Centre for Economic Policy Research
- Bessant, J., Tidd, J. 2007. *Innovation and Entrepreneurship*. John Wiley & Sons. Ltd, Inc., Chichester.
- Brunetto, Y.O., Xerri, M.J., Nelson, S.A. 2014. Building a proactive engagement culture in asset management organizations. *Journal of Management in Engineering*, Vol. 30, No. 4.
- Cameron, S., Quinn, R.E. 2011. *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*, 3rd ed. John Wiley & Sons, San Francisco.
- Charmaz, K. 2014. *Grounded Theory in Global Perspective: Reviews by International Researchers*.
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.858.8343&rep=rep1&type=pdf>.

- Christensen, C. 2011. *The Innovator's Dilemma: The Revolutionary Book That Will Change the Way You Do Business* (Reprint edition). Harper Business.
- Conference on Knowledge Economy - Challenges for Measurement, Luxembourg, 8 - 9 December 2005. Luxembourg: Office for Official Publications of the European Communities. <https://ec.europa.eu/eurostat/documents/3888793/5838637/KS-73-05-598-EN.PDF/3d66d924-58df-44d7-94a2-941939c287f9?version=1.0>.
- Corning, P.A. 1995. Synergy and self-organization in the evolution of complex system. *Systems Research*, 12(2), 89-121.
- Cropanzano, R., Bowen, D.E., Gilliland, S.W. 2007. The management of organizational justice. *The Academy of Management Perspectives*, 21(4), 34-48. <http://dx.doi.org/10.5465/AMP.2007.27895338>.
- De Jager, B., Minnie, C., de Jager, J., Welgemoed, M., Bessant, J., Francis, D. 2004. Enabling continuous improvement: a case study of implementation. *Journal of Manufacturing Technology Management*, 15(4), 315-324. <https://doi.org/10.1108/17410380410535017>.
- De Sitter, L.U., den Hertogh, J.F., Dankbaar, B. 1997. From complex organizations with simple jobs to simple organizations with complex jobs. *Human Relations*, 50(5), 49-534.
- Dobni, C.B. 2008. Measuring innovation culture in organizations, *European Journal of Innovation Management*, vol. 11, No. 4, 539-559.
- Essawi, M., Tilchin, O. 2013. A Model of Knowledge Management Culture Change. *American Journal of Industrial and Business Management*, Vol. 3, No. 5.
- Gallup Institute. 2013. *State of the Global Workplace*.
- Grund, Ch., Harbring, Ch., Klinkenberg, L. 2025. An experiment on creativity in virtual teams. *Journal of Economic Behavior & Organization*, Volume 231, 106926. <https://doi.org/10.1016/j.jebo.2025.106926>.
- Hamdan, Y., Ah Alheet, A.F. 2020. Innovative-entrepreneurial Universities in the Postmodern World Concert: Possibilities of Implementation. *Entrepreneurship and Sustainability Issues*, 8(1), 203-217. [http://doi.org/10.9770/jesi.2020.8.1\(13\)](http://doi.org/10.9770/jesi.2020.8.1(13)).
- Hood, J.N., Jacobson, K.J.L., Van Buren, H.J. 2011. Creating ethical organisational cultures by managing the reactive and proactive workplace bully. *International Journal of Economics and Business Research*. Inderscience Enterprises Ltd, Vol. 3(1), 29-41.
- Jasińska, M. 2015. Synergy, the result of intelligent cooperation. <http://www.irdo.si/skupnicd/cdji/cd-irdo-2015/referati/15-monika-jasinska-paper.pdf>.
- Jasińska, M. 2019. Recognition and description of synergy conditions in team work in view of the grounded theory. *Entrepreneurship and Sustainability Issues*, 7(1), 375-397. [http://doi.org/10.9770/jesi.2019.7.1\(27\)](http://doi.org/10.9770/jesi.2019.7.1(27)).
- Jasińska, M. 2019. Synergy in a team – quality analysis of conditions. *Zeszyty Naukowe Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach*, Nr 120, Seria: Administracja i Zarządzanie (47), 5-15. https://repozytorium.uph.edu.pl/bitstream/handle/11331/2378/M.Jasinska_Synergy_i_n_a_team_quality_analysis_of_conditions.pdf?sequence=5.
- Jasińska, M. 2019. Synergia i dzielenie się wiedzą – kontekst współdziałania w pracy zespołowej. In: Bazan-Bulanda, A., Bylok, F., Kwiatek, A. *Człowiek w organizacji – nowe trendy w zarządzaniu zasobami ludzkimi*. Wydawnictwo Politechniki Częstochowskiej. Częstochowa, 83-96. https://repozytorium.uph.edu.pl/bitstream/handle/11331/3482/Synergia_i_dzielenie_sie_wiedza.pdf?sequence=1.

- Jasińska, M. 2020. Synergy - an enhancement of learning organisations undergoing a change. *Entrepreneurship and Sustainability Issues*, 7(3), 1902-1920.
[https://doi.org/10.9770/jesi.2020.7.3\(31\)](https://doi.org/10.9770/jesi.2020.7.3(31)).
- Jones, G.R., George, J.M. 1998. The Experience and Evolution of Trust: Implications for Cooperation and Teamwork. *Academy of Management Review*, Vol. 23, No. 3, 531-546.
- Kochan, T., Appelbaum, E., Gittell, J.H., Leana, C. 2013. The Human Capital Dimensions of Sustainable Investment: What Investment Analysts Need to Know. Working paper prepared for the Sustainable Investment Research Initiative Sustainability & Finance Symposium June 7. <https://cepr.net/images/stories/reports/applebaum-human-capital-dimensions-of-sustainable-investment-2013-02.pdf>.
- Konecki, K.T. 2011. Visual Grounded Theory: A Methodological Outline and Examples from Empirical Work. <https://doi.org/10.5613/rzs.41.2.1>.
- Konecki, K.T. 2009. Teaching Visual Grounded Theory. *Qualitative Sociology Review*, Volume (3). <https://hrcak.srce.hr/file/106256>.
- Kramer, R.M., Tyler, T.R. (eds.). 1996. Trust in organizations: Frontiers of theory and research. Thousand Oaks, CA, US: Sage Publications, Inc.
- Lepak, D.P., Snell, S.A. 2003. Managing the Human Resource Architecture for Knowledge-Based Competition. In: Jackson, S.E., Hitt, M.A., De Nisi, A.S. (ed.). *Managing Knowledge for Sustained Competitive Advantage. Designing Strategies for Effective Human Resource Management*. Jossey-Bass. San Francisco, 127-130.
- Malone, T.W. 2004. *The Future of Work: How the New Order of Business Will Shape Your Organization. Your Management Style and Your Life*. Boston, MA: H, Harvard Business School Press. Boston.
- Martins, E.C., Terblanche, F. 2003. Building organisational culture that stimulates creativity and innovation. *European Journal of Innovation Management*, 6(1).
- Morales, V., Montesa, F., Joverb, A. 2007. Influence of Personal Mastery on Organizational Performance through Organizational Learning and Innovation in Large Firms and SMEs. *Technovation*, No. 27, 547-568.
<http://dx.doi.org/10.1016/j.technovation.2007.02.013>.
- Oswald, A.J., Mascarenhas, S.J. (ed.). 2018. *Corporate Ethics for Turbulent Markets*. Emerald Publishing Limited, 281-294.
- Perry-Smith, J.E., Shalley, C.E. 2003. The social side of creativity: A static and dynamic social network perspective. *Academy of Management Review*, 28, 89-106.
<http://dx.doi.org/10.2307/30040691>.
- Pot, F. 2011. Workplace innovation for better jobs and performance. *International Journal of Productivity and Performance Management* 60(4), 404-415.
- Pot, F., Dhondt, S., Oeij, P. 2012. Social innovation of work and employment. In: Franz, H.W., Hochgerner, J., Howald, J. (ed.), *Challenge Social Innovation. Potential for business, social entrepreneurship*. *Management and Sustainable Development*, 12(1), 13-32.
- Pun, K.F. 2001. Cultural influences on total quality management adoption in Chinese enterprises: An empirical study. *Total Qual. Manag.*, Vol. 12, No. 3, 323-342.
<https://doi.org/10.1080/09544120120034483>.
- Quintero, A., Andrade, J.M., Ramírez, E. 2019. Entrepreneurship as an Area of Knowledge: Literature Review. *European Research Studies Journal*, XXII(2), 100-124.
- Rietzschel, E.F. 2011. Collective regulatory focus predicts specific aspects of team innovation. *Group Processes & Intergroup Relations*, 14(3), 337-345.
<https://doi.org/10.1177/1368430210392396>.

- Salas, E., Linhardt R., Fernández Castillo, G. 2025. The Science (and Practice) of Teamwork: A Commentary. *Small Group Research*, Volume 56, Issue 3. <https://doi.org/10.1177/10464964241274119>.
- Schippers, M.C., West, M.A., Dawson, J.F. 2015. Team Reflexivity and Innovation: The Moderating Role of Team Context. *Journal of Management*, 41(3), 769-788.
- Senge, P., Kleiner, A., Roberts, Ch., Ross, R., Roth, G., Smith, B., Guman, E.C. 2007. The dance of change: The challenges to sustaining momentum in learning organizations. <https://doi.org/10.1002/pfi.4140380511>.
- Senge, P.M. 2014. *The fifth discipline fieldbook: Strategies and tools for building a learning organization*. Crown Business. New York.
- Tidd, J. 2012. *From Knowledge Management to Strategic Competence*. Imperial College Press. London.
- Tidd, J., Bessant, J.R., Pavitt, K. 2015. *Managing Innovation: Integrating Technological, Market and Organization Change*. John Wiley & Sons Ltd, Chichester.
- Tidd, J., Bessant, J.R. 2018 *Managing Innovation: Integrating Technological, Market and Organizational Change*. John Wiley & Sons Ltd, Chichester.
- Totterdill, P., Dhond, S., Milome, S. 2002. *Partners at Work? A Report to Europe's Policy Makers and Social Partners*. Nottingham: The Work Institute. https://www.researchgate.net/publication/281492158_Partners_at_Work_A_Report_to_Europe%27s_Policy_Makers_and_Social_Partners.
- Udwadia, F.U. 1990. Creativity and innovation in organizations: Two models and managerial implications. *Technological Forecasting and Social Change*, 38(1), 65-80. [https://doi.org/10.1016/0040-1625\(90\)90018-Q](https://doi.org/10.1016/0040-1625(90)90018-Q).
- Van Dun, D.H., Hicks, J.N., Wilderom, C.P.M. 2017. Values and behaviors of effective lean managers: Mixed-methods exploratory research. *Eur. Manag. J.*, Vol. 35, No. 2, 174-186.
- Wali, S., Boujelbene, Y. 2011. Cultural influences on TQM implementation and financial performance in Tunisian firms. *Ekonomika a Management*, No. 3.
- Zeeman, A. 2017. Senge's Five Disciplines of Learning Organization. <https://www.toolshero.com/management/five-disciplines-learning-organizations/>.