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Andrejs Cekuls

**Enhancing the Knowledge-Sharing Culture in Managing
Competitive Intelligence in Latvian Enterprises**



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Andrejs Cekuls

Enhancing the Knowledge-Sharing Culture in Managing Competitive Intelligence in Latvian Enterprises

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ABSTRACT

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Nowadays, organisations work in a very dynamic environment; in the economic context of the 21st century, rapid development of information occurs, and knowledge becomes an essential issue. Consequently, in order to ensure a competitive advantage, organisations should be capable of improving their internal processes in order to accumulate and analyse the necessary information, and make managerial decisions.

However, formal activities do not encourage knowledge sharing within the organisation, which has been demonstrated in various ways in a number of prior studies.

Thus, the main objective of this dissertation is to identify the organisation's factors that affect the creation and sharing of knowledge within organisations as well as within the process of competitive intelligence. An important aspect is the attitudes of supervisors and subordinates toward operational activities a) within a group as well as b) interaction with other groups within an organisation. It is necessary to reduce the difference of opinions by 1) improving communication and 2) related management processes in order for the organisation to have higher probabilities of competitive success. This dissertation explores the values of an organisational culture and the factors affecting implementation of knowledge sharing in enterprises, accounting for the scale of values and the social value system of both employees and supervisors in the organisation. Values and corresponding behaviour should be reflected in any aspect of group structures, systems and processes.

A mixed research design was used, in order to leverage data gathered by and analyzed using both qualitative and quantitative research. The results showed that the knowledge-sharing culture in managing competitive Intelligence in Latvian enterprises is affected by several factors. Employees are willing to share knowledge with people whom they trust. However, the findings revealed contradictions in the views of employees and supervisors regarding the role of organisational trust with regard to knowledge sharing. In order to effectively develop the CI process, it is important to identify the desired distribution of cultural values. Leaders in the enterprise should be aware of which values of organisational relationships will contribute to the smooth progress of CI.

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Tampere, August 20th 2018

Andrejs Cekuls

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1. INTRODUCTION

1.1. The motivation for the research

One of the most significant aspects ensuring knowledge-sharing in organisation is an organisation's receptiveness to changes and enabling the flow of information, such that the required information is available to each employee at any time they may require it to more effectively complete their work tasks.

It is very important that business managers be capable of converting the wealth of available data and information into a valuable form for decision-making and subsequent actions; collected data must be converted into intelligence (Fleisher & Bensoussan, 2007). It is necessary to understand the place of intelligence within the larger context of an organisation. Competitive Intelligence (CI) is not just about collecting information. It is about analysing that information, filtering it, learning what is useful and what is not, and then using it to benefit (Kahaner, 1996). Fleisher and Blenkhorn (2001) pointed out that competitive intelligence has become an important management topic for senior decision-makers.

In order to evaluate CI processes in Latvia several studies were performed by the Author (Figure 1). The study of CI was carried out in Latvia for the first time. The acquired responses and evaluations showed that there were no typical CI policies in Latvian enterprises; however, the existence of particular business information application methods directed towards the increase of the effectiveness of decision making was found. The result of the studies leads to the question: "Why does the CI process in Latvian enterprises have inherent weak informative and reversible links?" In order to find the answer to this question the new study was started in 2105 (Figure 1).

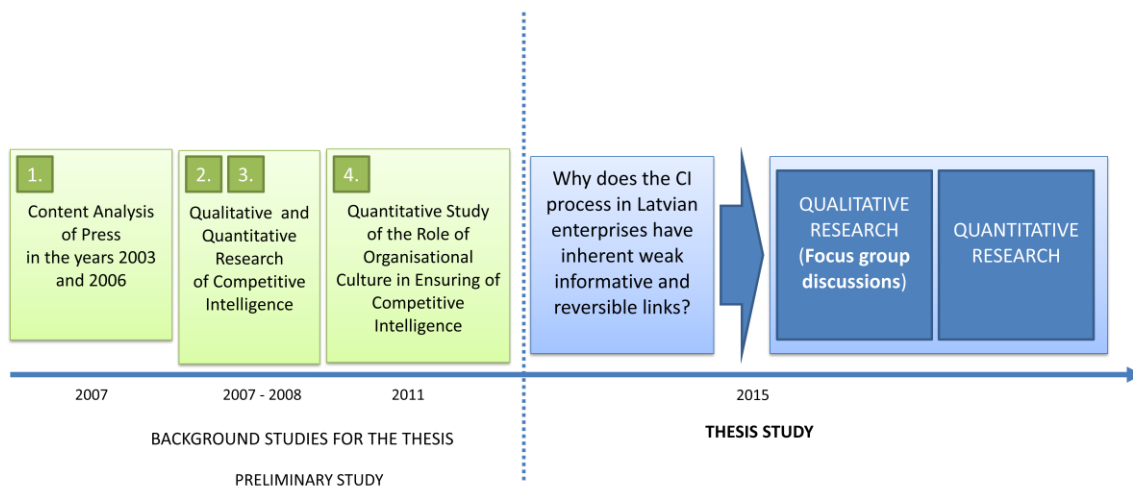


Figure 1. The timeline of studies conducted in Latvia from 2007–2015

The background study of the CI of the business environment in Latvia showed: (1) Employees provide their superiors with information on the competitive environment on a regular basis. (2) The CI results

are only distributed among authorised personnel, and this could hamper informational interaction within the organisation. (3) Power in Latvia's companies is primarily concentrated with one or several leaders who take all major decisions. Unconditional fulfilment of the leader's personal directions was required from all of the remaining organisational members, and their obedience of, and conformity to, management is appreciated more than their professional competence. (4) The information turnover in Latvia's companies was mostly one-way. This could also be evidence of the hierarchical system of information transfer or of shortcomings in the information movement processes in general. The introduction of changes into organisational structure and the values of organisational culture should be assessed; intercommunication problems are considered to be communication defects of a particular culture. (5) Although the respondents admitted that information from people obtained within the organisational framework serves for CI, a comparatively low evaluation was given to the statement that the existing organisational culture encourages sharing of information. (6) The study of the role of organisational culture in providing the CI processes, via an emphasis on the intercommunication problems in Latvia's companies, confirmed the assumption that many problems that are explained by '*communication failures*' or by '*insufficient cooperation level*', can be considered as shortcomings in the system of values of the company's organisational culture.

The conclusions of the background studies served as motivation to investigate what hinders communication turnover in an organisation and results in dissatisfaction with the progress of communication in the CI process.

It is vital to identify the cultural values that affect communication processes and hinder knowledge-sharing in organisations. The question is whether the current cultural values are consistent with the desired cultural values that influence knowledge sharing and promote a successful CI process. Values and a corresponding behaviour should be reflected in any aspect of group structures, systems and processes. In order for the competitive intelligence process to be successful, the entire work of an organisation should be based on the values that promote knowledge-sharing. They should regulate all aspects of decision-making, and should be reflected in the processes.

In order to ensure implementation of new processes in organisations, the ability to manage employees' behaviour is no longer sufficient; it is necessary to manage the issues that determine what kind of overall employee views facilitate acceptance of organisational processes. Thus, it becomes necessary to introduce a common system of values, norms and regulations, which may help to increase process efficiency.

In order to promote communication behaviours within an organisation, a transformation of organisational culture should be performed by senior management, emphasising the deliberate introduction of and daily implementation of values of supporting culture in the organisation. The ignorance of organisational culture values in the CI implementation process can hinder or completely stop implementation of this process. The introduction of values will most efficiently occur if supervisors and employees share the same values.

Nowadays, the intensely competitive and globalised business environment means that organisations must rely on human capital to be innovative. Committed employees are required for organisations to foster innovative behaviours (Hakimian et al., 2016). Knowledge is recognised as a critical asset in allowing organisations to gain a competitive advantage and in maintaining long-term success (Akhavan et al., 2015). Furthermore, knowledge sharing among an organisation's team members is critical with regard to gaining a competitive advantage (Weinberg, 2015).

In the economic context of the 21st century, rapid development of information occurs and knowledge becomes an essential matter in organisations. The fact that economies have become more knowledge-intensive makes it evident to most companies that knowledge is a precious resource (Howell & Annansingh, 2013). Numerous scientists consider knowledge to be a critical organisational resource that provides a sustainable competitive advantage in a competitive and dynamic economy (e.g., Grant, 1996; Spender & Grant, 1996; Davenport & Prusak, 1998; Foss & Pedersen, 2002). Knowledge is a company's most valuable resource because it embodies intangible assets, routines and creative processes that are difficult to imitate (Renzl, 2008). It is important not to confuse the concept of knowledge with information. Knowledge is only linked to a person, while information may exist independently (Rivera-Vazquez et al., 2009). It is important for an organisation to encourage the employee to share what they know with colleagues (McMurray, 2002). Feng et al. (2005) argued that increasing investment in IT alone does not ensure an improved business performance or distribution of information among employees. It is due to the fact that distribution, sharing and utilisation of knowledge is a complex coordination within the social network of an organisation (Chae, et al., 2005). There are often a number of barriers to sharing knowledge, and the process takes considerable time, effort and energy; it is also difficult to influence (Bock et al., 2005; Hu & Randel, 2014). Knowledge sharing is a factor that contributes to communication satisfaction. Positive satisfaction with communication in an organisation leads to improved productivity (Goris, 2007) and stimulates innovations, as well as greater staff support for change implementation (Clampit & Downs, 1993).

It has been concluded that efficient knowledge sharing in a company develops the basic expertise of employees and contributes to competitive advantages (Lin, 2007). Knowledge is nowadays considered to be one of the most important resources in organisations (Choe, 2004), and mutual knowledge sharing is a key to business information management (Alavi & Leidner, 2001). Furthermore, knowledge sharing is the fundamental means via which employees can contribute to knowledge application, innovation and, ultimately, to the competitive advantage of the organisation (Jackson et al., 2006).

Organisations are not capable of developing knowledge without their employees (Lahti & Beyerlein, 2000). Consequently, while the theoretical sources have identified the benefits of sharing knowledge in teams, it has tended to overlook the individual team members' contributions to this shared construct, although an individual team member's perspectives and contributions play an important role in the team knowledge outcome (Khedhaouria & Ribiere, 2013). Blair (2002) further claimed that when an organisation's employees *'have knowledge'* that is advantageous to their organisation, they own something more valuable than just the plain data and information that is stored in the organisation's information systems. Knowledge sharing is pivotal in transforming individual knowledge into organisational knowledge (Nonaka, 1994; Foss et al., 2010). Indeed, Reid and Reid (2003) stated that

knowledge sharing has been of benefit to both individuals and groups. Nowadays, researchers discuss such phenomena as knowledge donation and knowledge collection (Weinberg, 2015).

When evaluating knowledge sharing as an organisational value, top managers should carefully assess the existing culture of social interaction within the company. However, behaviour determining practices of knowledge sharing depends on leaders' personal values and on the system of social values in the company. When employees are more engaged in knowledge sharing, they internalise a greater amount of knowledge, and this fosters innovative employee behaviours (Akhavan et al., 2015). Connelly and Kelloway (2003) indicated that there is a significant relationship between individual differences and employees' perceptions of the knowledge-sharing culture.

Barrett (2006) believed that organisational culture is the mirror of the organisation leaders' consciousness; therefore, cultural transformation begins with leaders' individual transformation. When defining 'solutions' for changes within the organisational culture transformation process, an unwillingness of leaders to acknowledge personal prejudices, values and habits can hinder the process of change. Kahaner (1997) pointed out that some senior managers support the idea of CI and *'even found it, but don't trust the findings in their heart of hearts'*.

CI professionals have stated that they are most successful when management knows them and trusts their work (Kahaner, 1997). Therefore, managers could make some efforts to develop a climate of trust among employees (Zhang & Jiang, 2015).

Trust can inspire individual creativity, develop an initiative spirit and facilitate the appropriate shape of an organisation, such as network relationship (Yang, 2016). Trust in the workplace has a mediating effect on organisational knowledge-sharing behaviour. A significant correlation between expected personal benefit through sharing knowledge and the development of trust in the workplace has also been discovered (Kuo, 2013). Interpersonal trust between an employee and a supervisor represents the level of confidence that an individual has in another person to act in a fair, predictable and competent manner (Camgöz & Karapinar, 2016).

Knowledge can be characterised as the ability of an organisation to increase productivity and marketing to enhance competition against other organisations. In order to provide the CI process it is important to identify the desired distribution of cultural values. The enterprise should be aware of which values of organisational relationships will contribute to the smooth progress of CI. The way in which CI and dissemination of knowledge will be carried out is largely determined by such factors in the organisational culture as trust, which has established itself as a value and directly affects employees' communication processes and communication satisfaction in the area of CI. Organisations should realise the importance of trust, and, in general, there is much to gain by increasing the levels of trust between their employees, as this will also increase knowledge sharing between employees (Rutten et al., 2016).

Lack of values alignment occurs when there is (a) a lack of alignment between the personal values of individuals and the collective values of the group, and (b) a lack of alignment between the values expressed in the current culture and those of the desired culture (Barrett, 2006).

1.2. The purpose and limitations of the study

In 2011, the study of CI management in companies indicated trends to show that employees of Latvian enterprises lack motivation to share information. The affirmation *'our culture encourages sharing information'* obtained the lowest evaluation in the questionnaire, which could indicate incompliance with the organisational culture.

The purpose of this study was to identify the values of organisational culture that contribute to knowledge-sharing, affecting the CI process. Organisational culture was analysed from the perspective of specific values, and theoretical and practical opportunities were considered for translating organisational culture values into behaviours, in order to provide needed inputs into the CI process.

The study established the research question: why did the CI process in Latvian enterprises have inherently weak informative and reversible links? It then analysed this with regard to their values of organisational culture (Figure 2), which are closely related to the knowledge-sharing process, from the CI perspective. Everything performed within the framework of this study focused on those values of organisational culture that, in the study participants' opinion, could contribute to knowledge sharing in and organisation. The theoretical background is described in parts 2 and 3 of this paper.

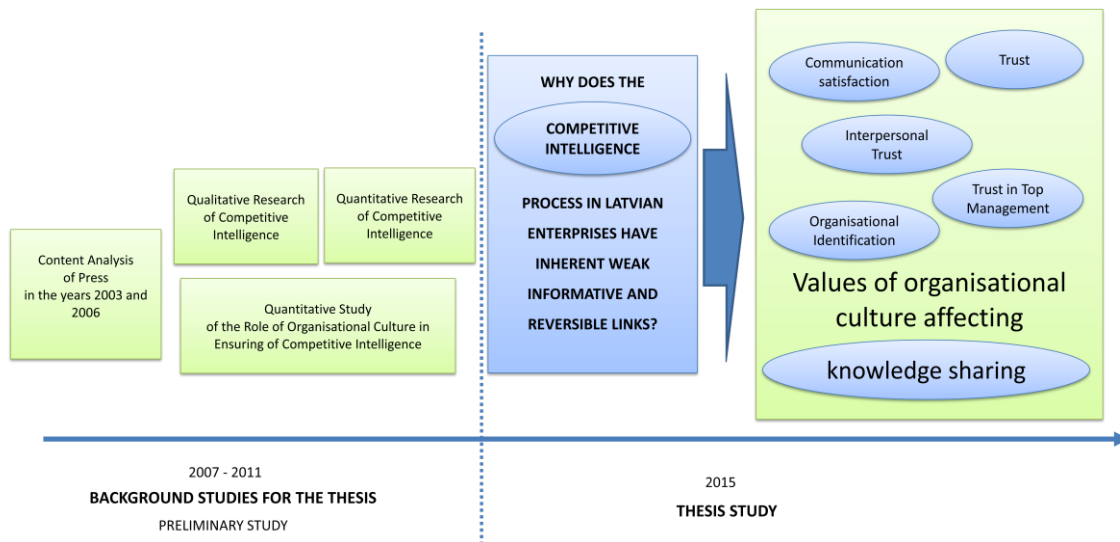


Figure 2. The value of organisational culture affecting knowledge sharing with regard to the competitive intelligence process.

The background studies identified the CI process in Latvia and identified the problems closely related to organisational culture and directly affecting the communication process in organisations, with regard to providing the CI process. It was found that intelligent exchange of knowledge between employees of the organisation is impaired in this process, which had inherently weak informative and reversible links. Studies pointed to trends, but they did not identify reasons.

Several terms in the scientific literature describe the flow of information in an organisation: knowledge transfer, knowledge sharing and knowledge exchange.

In specifying knowledge properties, the difference between knowledge and information is crucial. Knowledge differs from information in that 'Information is a flow of messages, while knowledge is created by that very flow of information, anchored in the beliefs and commitment of its holder. "...knowledge is essentially related to human action"' (Renzl et al., 2005).

The term 'knowledge sharing' has been most frequently defined as a result of knowledge transfer. Jonsson conducted a study that summarised the approaches of several authors and concluded that, both 'knowledge sharing' and 'knowledge transfer' are used and discussed interchangeably within the frame of reference: 'As it is not clear if there is a difference, both terms will be used' (Jonsson, 2008). Another example is '*... many authors and researchers have failed to provide a clear-cut definition for knowledge transfer and, at times, it has been discussed together with the term "knowledge sharing"*' (Liyanage et al., 2009).

In the context of knowledge sharing in general, there is human involvement and is a shifting in human consciousness as an individual learns something. In the context of information transmission, human involvement is not necessary, and is in fact meant to replace humans. If this was the case, the results could not lead to the acquisition of knowledge (Chomley, 2013).

This study did not aim to analyse the differences between, and use of, terminology dimensions, but rather to use the concepts in the context with dissemination of information. Knowledge sharing is an activity through which knowledge (including information, skills or expertise) is exchanged among people within organisations. Some authors believe that '*knowledge-sharing has been identified as a positive force in creating innovative organisations, but the organisational and individual factors that promote or discourage knowledge-sharing among colleagues are poorly understood*' (Connelly & Kelloway, 2003).

Some studies have shown that transformational leadership maybe a potential predictor of knowledge use in organisations, and the supervisor's role in providing knowledge sharing has been emphasised in several investigations (Kelloway and Barling, 1999; Martiny, 1998). Supervisors should be aware of the spectrum and depth of cultural values and be prepared to do something in this regard, first, to change themselves (Barrett, 2006).

The present study analysed different points of view, namely, that employees' knowledge sharing has values rooted in the dyadic relationships between the employee and the supervisor, and in their assessment of satisfaction with communication in the with regard to the CI process.

Dyadic communication refers to any communication between two persons. However, it can also refer to virtually any communication because, whether people are concerned with only one individual, a small group, or a large audience, communication occurs from one person to another, with each person

bringing into the situation particular assumptions and orientations. It is largely such assumptions and orientations-based on interpersonal perceptions-that may result in our talking at another, rather than with him or her. *'Interpersonal perception'* is referred to as the forming of judgments about people, the ways people react and respond to others, in thought feeling and action. Thus, interpersonal perception involves cognition or beliefs about people, feelings about them, and behaviour towards them (Barry & Crant, 2000).

As long as assumptions and orientations, an individual's interpersonal perception, are accurate, flexible, and open-minded, they facilitate communication. The converse is also true, if our perceptions of others are erroneous, inflexible, or closed-minded, they will distort communication (Almore, 1979).

To achieve the aim of the present study, the results and conclusions of the previous background were considered (Subsection 1.2), in order to determine the actual research problems. The problem revealed by the preliminary study was that the CI process in Latvian companies has inherently poor informative links and feedback, and is indicative of shortcomings in the communication framework and interrelationships among employees (Cekuls, 2014). Moreover, it was found that organisational culture, which is uniform across an organisation with elements of supporting and collaborative culture, fosters the management of competitive intelligence (Cekuls, 2014).

Such values of organisational culture as trust and confidence were repeatedly emphasised; however, as no individual values were analysed in the preliminary study, 'trust and confidence' were analysed in the present study as one of the reasons for communication problems. Likewise, the respective impact of various factors on the CI process was evaluated (Figure 3).

DESIGN OF THE RESEARCH

RESULTS OF PRELIMINARY STUDY 2007-2011

CONTENT ANALYSIS OF PRESS FOR PERIOD 2003 AND 2006
QUALITATIVE RESEARCH OF CI
QUANTITATIVE RESEARCH OF CI
QUANTITATIVE RESEARCH OF ORGANISATIONAL CULTURE

THE MAIN PROBLEM OF THE RESEARCH 2015

THE COMPETITIVE INTELLIGENCE PROCESS IN LATVIAN ENTERPRISES HAS INHERENT WEAK INFORMATIVE AND REVERSIBLE LINKS AND INDICATIVE OF SHORTCOMINGS IN THE COMMUNICATION FRAMEWORK.

QUALITATIVE RESEARCH

*KNOWLEDGE
SHARING*

COMPETITIVE
INTELLIGENCE PROCESS

COLLECTING DATA
UNITS OF CONTENTS

HYPOTHESIS

QUANTITATIVE RESEARCH

QUANTITATIVE RESEARCH INSTRUMENTS

DISCUSSIONS CONCLUSIONS

Figure 3. The research design

The research began with previously obtained information (the results of the preliminary study), after which an explanation was formulated using inductive thinking – a qualitative study. After all, the theory is formulated and its practicability is clarified through testing hypotheses and use of deductive thinking confirmed by quantitative study. In empirical scientific thinking, the very first general statement often develops through observation of the specific experience, that is, induction usually precedes deduction. Thus, the two research approaches complement each other. A more detailed exposition of each study phase is given in Section 4.

The theoretical and methodological framework of the present study consists of scientific literature, scientific articles, publications, conference materials, information published on the Internet, the author's own studies, statistical data and unpublished materials. The theory that underpins this study is based on the awareness that values of organisational culture stimulate communication behaviours, which affect CI innovations. The theoretical basis of CI was established on the basis of the scientific studies conducted by Prescott and Miller (2001), Fuld (2010), Fleisher and Blenkhorn (2000), McGonagle and Vella (2002a), Calof and Breakspeare (2004), etc.

It was therefore necessary to develop theoretical and empirical grounds to evaluate the organisational culture portrait and relationships with organisational processes. The relationship between organisational culture and organisational performance has received considerable attention in recent management literature (e.g., Handy, 1985; Gordon & Ditomaso, 1992; Anthony, 1994; Bate, 1994; Kotter & Heskett, 1992; Newman, 1996; Hofstede, 2003; Cameron & Quinn, 2006). Indeed, Harrison (2008), Handy (1985), Deal and Kennedy (2000), Cameron and Quinn (2011), Daft (2013) and others proposed various theories and diagnostic tools. Trust has been acknowledged by a number of authors, and is well documented, for example, Shaw (1997).

Since Latvian enterprises have practically no individual CI departments, they have no particular CI policy; however, particular techniques exist that focus on the efficiency of decision-making. Entrepreneurs' perception of privacy issues can complicate the process, as they do not want to reveal the process nuances associated with collection of competitive information. This can therefore restrict the number of received responses, which may affect ascription of data to the entire research project. Likewise, subordination of employees and supervisors engaged in the research may affect data credibility. CI functions are generally performed by marketing professionals and IT specialists, who could provide an unbiased view on CI as a cyclical process (Cekuls, 2014).

1.3. Research design

1.3.1. The research philosophy

The choice of the research philosophy is determined by several factors, which generally justify the selected methodology. In this regard, the research methodology selection described by Saunders et al. (2009) was applied in the present study, because, despite criticism by several authors regarding, for example, failure to indicate the exact place of epistemology and ontology (Dawood & Underwood, 2010), it offers a holistic view to the study approach on the whole, describing a number of process layers, which should be considered when choosing the course of research and should be accounted for before the research methodology is selected. The research process is compared to an onion by highlighting the layered approach to research (Figure 4).

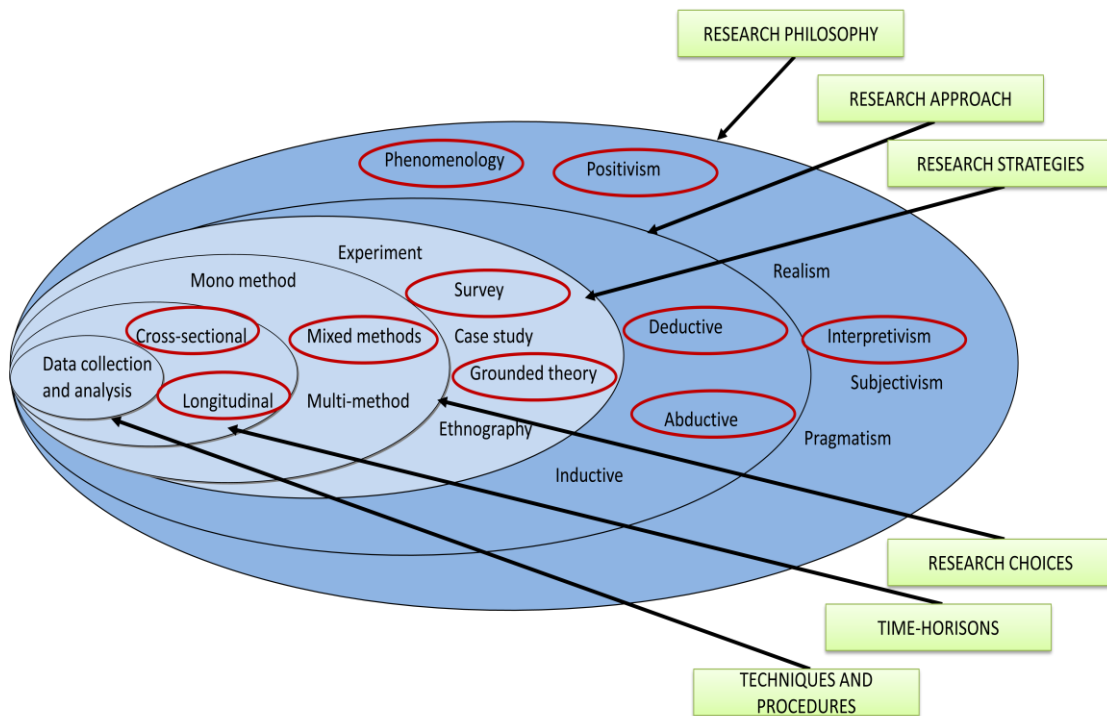


Figure 4. Research onion

(Adapted from Saunders et al., 2009)

Although such techniques and procedures as data collection and data analyses comprise the core of the research, a scientist should first make a decision regarding the research design and how the research object is perceived in the context of a study.

The scientific literature is dominated by two points of view of the study process: positivism and phenomenology (Gray, 2009). Choice of the research philosophy depends on the scientist's approach to, and understanding of, the development of knowledge. If positivism were selected, a researcher would carry out an objective analysis without allocation of his/her own values when interpreting data. In this case, the focus is on highly structured methodology, which has a high level of replicability (Gill & Johnson, 2010). In research philosophy, this means that the researcher is independent, and is not affected by the object of study. Positivism is a philosophical system that recognises only positive facts and visible events - things that can be observed, measured and taken as facts. The system is very similar to the conventional scientific view of the world. Indeed, the founder of positivism, Auguste Comte, drew his ideas from the 'scientific' world of his time and adapted them to the world of sociological thought. Positivism is not characterised by faith and feelings, although it sometimes appears as if it is part mysticism; the central focus is on interpretation of knowledge. Since it is a philosophical system, positivism believes that each rationally justified statement can be scientifically tested or logically explained or mathematically proved. Thus, positive philosophy excludes ideal previous assumptions, and is based on what was genuinely and originally given.

A phenomenological study relies on the evidence, on the gist, rather than on deliberate measurements. Phenomenology evaluates human experience as a unique source of data, believing that a true research finding cannot be measured simply in terms of physical phenomena. According to the originator of phenomenology, Husserl, the object of cognition does not exist (Weldon, 1999). The object reveals itself and is created as a result of the intuition directed towards it. The criteria of truth are a subject's personal experiences. Husserl formulated: 'Every type of first-hand intuiting forms a legitimate source of authority; whatever presents itself in "intuition" at first hand, in its bodily reality so to say, is to be accepted simply as it presents itself to be, though within the limits within which it presents itself' (Spiegelberg, 1984).

Analysing the philosophies of research, it should be concluded that there is no better or worse research system, because each of them is used for the study and assessment of different situations. Summing up the key features of positivism and a phenomenology research paradigm (Table 1), it should be admitted that choice of philosophy depends on the scientist's vision of the development of knowledge.

Table 1. Key features of positivism and the phenomenology research paradigm

(Easterby-Smith et al., 2002)

	Positivism paradigm	Phenomenology paradigm
General vision	The world is open and objective	The world is socially designed and subjective
	The observer is independent	The observer is a part of observation
	Science is free from judgmental speculations	Science is driven by human lack of concerns
Researcher's task	Focus on facts	Focus on values and significance
	Transform the investigated phenomena into simple elements	Observe the entirety of each situation
	Define and verify hypotheses and verify	Develop ideas using data inductions
Signs of the methods used	Operationality of the concept in order to take all measurements	Use of various methods to evaluate different views of the investigated phenomenon
	A wide selection	A narrow selection being studied in depth or over a long period
Results	The obtained results can be generalised	The obtained results cannot be generalised

Business situations are not only complicated, but also are also unique. They are created by the particular circumstances and participants involved. In this case, the question concerns generalisation of the study, where the goal is to summarise social situations of various complexity. However, some (e.g., Guba & Lincoln, 1994) believed that generalisation is not particularly important. In today's changing environment, circumstances of conditions are constantly altering, so a generalisation based on specific circumstances, is irrelevant. In addition, it is believed that organisations are unique, which still further reduces the value of generalisation (Saunders et al, 2009). Calof and Dishman (2002) pointed out that an holistic view of competitive intelligence has not yet been developed, nor has a process of intelligence been empirically verified.

Methods that are based on the phenomenological approach provide the opportunity to explore this level of organisational culture. For example,, studying the organisational culture Hofstede noted, *'Cultures that encourage inappropriate behaviour and inhibit change to more appropriate strategies tend to emerge slowly and quietly over a period of years, usually when firms are performing well. Once these cultures exist, they can be enormously difficult to change because they are often invisible to the people involved, because they help support the existing power structure in the firm, and for many other reasons'* (Kotter & Heskett, 1992). Schein believed that *'the power of culture is derived from the fact that it operates as a set of assumptions that are unconscious and taken for granted'* (Schein, 2010). If looking at the research philosophy from the perspective of research strategy, by assessment of data structure (quantitative and qualitative research), it should be concluded that both strategies are frequently used (Table 2).

Table 2. The research philosophy and data structure

Philosophy	Data structure	Example
Positivism	Quantitative	Financial data analysis
	Qualitative	Diagnostics in medicine
Phenomenology	Quantitative	A survey conducted to understand a particular investigated problem, for example, loyalty to the organisation, knowledge-sharing, organisational culture, etc.
	Qualitative	In-depth interviews on the factors affecting the progress of a particular, process, e.g. competitive intelligence

For any individual involved in social sciences research, two questions are of fundamental concern, answers to which will shape that individual's thought process and views of the world. The first concerns the nature of reality, or how do we know what reality is. The second is related to the nature of knowledge, or what is valid/acceptable knowledge for us (Sinha, 1963).

While searching for answers to these questions, scientists have launched a debate on ontological and epistemological issues, splitting into different groups, each with their own philosophy and confidence in fundamental issues.

Ontology issues are the primary ones because they explain the nature of the phenomenon, its essence. The key issue of ontology is whether the real world independent of our knowledge on it. There is the fundamental and the antifundamental position in ontology. Fundamental ontology refers to the natural truth that exists irrespective of the activities of persons involved in the study. For example, differences between men and women are naturally identified. Anti-fundamental position, for its part, indicates that reality is socially constructed.

If ontological position refers to the researcher's views on the order of the world, the epistemological position explores how people perceive and feel the outer world, how they understand their own and other people's adaptation to this world. Bringing in the ontological perspective, one major dimension to how we view the social world around us is by understanding the dichotomy that exists between 'objective perspectives' and 'subjective perspectives' (Burrell & Morgan, 1979).

'Objectivism' takes up the position that social objects exist in reality external to social actors while 'Subjectivism' is the view that special phenomena are ingrained in the perceptions and actions of these actors (Saunders et al., 2009).

Following the antifundamentalist ontology, a researcher cannot be an objective observer of the world, because he himself is in social relationships with the world, which affects the results of the study. In addition, while in these relationships, the researcher interprets the world or the studied phenomenon.

Epistemology is based on the cognition of what we can know about the surrounding world around and how we obtain knowledge. Epistemology tries to find out the limits of human understanding. Its key issues are the source of opinions, the opportunity to justify and verify them.

Representatives of epistemology speak about nature of knowledge and their dependence on the paradigm, which shows that knowledge is not neutral, but it always represents certain concerns, tendencies and impacts.

Along with the choice of research philosophy, you need to justify the research strategy. Table 3 shows fundamental differences between quantitative and qualitative research strategies.

Table 3. Fundamental differences between quantitative and qualitative research strategies

(Bryman and Bell, 2011)

Fundamental differences between quantitative and qualitative research strategies		
	Quantitative	Qualitative
Principal orientation to the role of theory in relation to the research	Deductive, testing of theory	Inductive, generation of theory
Epistemological orientation	Natural science model, in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism

The particular nature of ontology and epistemology of the qualitative approach becomes more understandable if confronted with the quantitative approach. The essence of quantitative methods is expressed by positivism, which is based on several assumptions: (1) human characteristics are relatively stable; (2) by form, the characteristics of all people are equivalent; (3) the researcher has instruments capable of measuring the differences; (4) the volume of the characteristics can be expressed in figures; (5) the study participants do not need to be aware of the characteristics being studied. In contrast, the most important aspects of the qualitative approach are like a mirror image of the positivist principles: (1) the study aims to discover how people see the world and not how many certain universal properties they possess; (2) the researcher and the respondent work together; (3) data interpretation includes concluding of general hypotheses resulting from the information obtained (Bryman & Bell, 2011).

The quantitative approach views the subjective factors as destructive elements that can disorganise the results, whereas a researcher using the qualitative approach attempts to accept the perspectives of participants and evaluate their experience in the system, revealing margins of experience during the research (Bryman & Bell, 2011).

The present study used two dimensions: epistemology, that is, from the perspective of the issues important for cognition, and methodology, that is, procedures applied in order to reply to the questions raised. From the epistemological perspective, qualitative research explored issues around how employees of an organisation perceive and feel the external environment, how they understand their own and other people's adaptation to the conditions of that organisation's internal environment, the way they decide on how to act in accordance with their own reality and how they communicate their understanding to others. The study evaluated the phenomena changing in progression, for example, trust. Using the qualitative research method (focus groups) issues clarifying the intentions and goals of employees were explored. In the qualitative phase, factors affecting organisational communication and the CI process will be described and explained. In this phase, it was possible to examine the substance of such phenomena as trust, loyalty, values, information, knowledge etc. Phenomenological information also exists, through the very microstructural variety differentiation that exists in a structured situation (Yolles, 2000). The knowledge was acquired by focusing on the direct experience of people in with their

everyday life. The phenomenological method was used to study the relationship of various research phenomena because it reveals versatile interaction.

The purpose of a quantitative study is to develop and use mathematical models, theories and hypotheses concerning natural phenomena. Measurements comprise the central element of quantitative research because they provide a fundamental link between empirical observations and mathematical expression of quantitative commitments. A functional or positivist paradigm, which is the foundation of the quantitative method, is based on the fact that the surrounding reality has an objective ontological structure, and we as the individuals, having created it by ourselves, respond to this reality in a certain way (Morgan & Smircich, 1980).

Adherents of positivism have argued that there is an objective truth, which can be measured and scientifically justified. In addition, quantitative data are more accurate, more valuable, they can be generalised and the causal link between the phenomena of objective reality can be determined (Cassell & Symon, 1994). Positivists believe that social sciences phenomena can be studied as constant facts, and that the relationships between them can be defined as scientific laws. Positivists believe that only such laws have the status of truth, and social objects can be studied in the same way as natural objects (Smith, 1998). Neither a qualitative nor a quantitative study performed alone can fully guarantee the accuracy and validity of the results for social sciences.

1.3.2. The research approach

Together with the formulation of the considered problem, the nature of its characteristic features should be established, rather than its numerical size.

'The strength of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue. It provides information about the "human" side of an issue – that is, the often contradictory behaviours, beliefs, opinions, emotions, and relationships of individuals. Qualitative methods are also effective in identifying intangible factors, such as social norms, socioeconomic status, gender roles, ethnicity, and religion, whose role in the research issue may not be readily apparent. Qualitative research can help us to interpret and better understand the complex reality of a given situation and the implications of quantitative data' (source: Qualitative Research Methods: A Data Collector's Field Guide).

In order to achieve the aim, the evaluation of the knowledge-sharing culture, emphasising the cultural values of the organisation, and to conduct an appropriate assessment of the impact of the cultural phenomenon on the efficiency of the CI process, the qualitative study was carried out first. Qualitative research offers some well-known advantages (Guercini, 2014). The qualitative tradition has encouraged the engagement of the researcher with the field, with context, with history and with the micro-detail of organisational and institutional life (Guthrie & Parker, 2012; Parker, 2008, 2012). The aim of qualitative research is to articulate the range of scenarios that may occur under different circumstances. In the case of management competencies, the aim is to understand the circumstances that account for the

differential make-up of competencies between managers who are within the same organisation/corporation (Murphy, 1995). All managers will make use of research as a source of information at some time in their careers; research findings and conclusions can be a valuable source of information with regard to improving the decision-making process (Milliken, 2001).

In management studies, the issue of research methodologies is particularly noteworthy in that it has significant effects on the possibilities for communication between researchers and business policy-makers, in both collecting data and disseminating results (Guercini, 2014). The three most common qualitative methods, explained in detail in their respective modules, are participant observation, in-depth interviews and focus groups. Each method is particularly suited for obtaining a specific type of data.

- Participant observation is appropriate for collecting data relating to naturally occurring behaviours in their usual contexts.
- In-depth interviews are optimal for collecting data on individuals' personal histories, perspectives and experiences, particularly when sensitive topics are being explored.
- Focus groups are effective in eliciting data on the cultural norms of a group and in generating broad overviews of issues of concern to the cultural groups or subgroups represented.

For this particular study, the focus group was selected as the most appropriate data collection method for high-quality research.

Zikmund and Babin (2010) summarised the advantages of such group discussions as '10 Ss' (Stokes and Bergin, 2006):

- (1) Synergy – the group process generates a wider range of information than would accrue from a comparable number of in-depth interviews.
- (2) Snowballing – respondent interaction creates a chain of thought and ideas.
- (3) Serendipity – a great idea can come out of the blue.
- (4) Stimulation – each respondent's views are brought out by the group process.
- (5) Security – respondents are more likely to be candid, as there will probably be other similar people there, and there is less individual pressure than in an in-depth interview.
- (6) Spontaneity – because no one individual is required to respond to a question, this encourages a spontaneous response when people have a definite point of view.
- (7) Specialisation – a trained moderator can interview more respondents in a given session.
- (8) Structure – it is easier for the moderator to reintroduce a topic not adequately covered before than in an in-depth interview.
- (9) Speed – quicker than individual interviews.
- (10) Scrutiny – can be observed by members of the research team.

The focus group discussion is suitable for the present study with regard to undertaking an in-depth investigation of opinions and responses within a definite target audience, as well as seeking new creative solutions.

Within the framework of the study, the method allowed the disclosure of respondents' behaviour, attitude and emotions, and resulted in the opportunity to understand and analyse the respondents' motives and arguments, as well as to receive feedback and generate new ideas regarding the topic of interest. As the topic for group discussion, the following was proposed: CI value chain (Powell, 1996), which illustrates how collected data and information are first transformed into actionable knowledge and intelligence during a CI process and are the used in the decision-making process. During the group discussion, the factors affecting efficiency of the CI process in Latvia were considered. Read more about the in Section 4, 'Research framework,' contains further details of the focus group research description

The purpose of group discussions is to obtain a range of opinions regarding the impact of the values of organisational culture, such as confidence, and habits, including exchange of knowledge, on the CI management process. Neither conclusions regarding the reasons, nor generalisations can be made on the basis of these opinions or views, because the number of participants is small; however, the range of the expressed opinions is wide enough to gain a perspective on the various aspects of the investigated phenomenon. Therefore, such examination of opinions was important and necessary in this study, due to the gnostic reason, which has two aspects:

1. Group discussions reveal the subjective views of society, the way an individual motivates his/her activity, which is a very precious material in the formation of the organisation management process.
2. Gnostic – materials of group discussions are indispensable for designing representative surveys. A group discussion, although expressed in simple phrases, contains a huge amount of information about the range of investigated issues, which will be used in the study process as a base material for designing a new measuring instrument – a questionnaire: by making hypotheses and formulating questions.

The results of the focus group discussions, as well as possibilities for their interpretation and application, should be repeatedly considered and weighted. To obtain a clearer idea of the information obtained from discussions, the following points were addressed:

- (1) The aims of group discussions,
- (2) A description of the opinions expressed in group discussions,
- (3) The structure and procedure of group discussions,
- (4) The conditions, opinions and values, which both directly and indirectly could affect the efficiency of the CI process in an organisation,
- (5) The use of the discussion results.

The survey data analysis served for investigation of reasons, where the subjective attitudes expressed by individuals were compared with the factological and classified information provided by respondents, including the multiparameter analysis that allowed the testing of the hypotheses. The conclusions were, to a certain extent, a dialogue between the opinions of individuals (the results of group discussions) and the conclusions drawn on the basis of the survey. Qualitative and quantitative research approaches complement one another. Table 4 compares the quantitative and qualitative research approaches.

Table 4. A comparison of quantitative and qualitative research approaches

	Quantitative approaches	Qualitative approaches
General framework	<p>Seek to confirm hypotheses about phenomena</p> <p>Instruments use a more rigid style of eliciting and categorising responses to questions</p> <p>Use highly structured methods such as questionnaires, surveys and structured observation</p>	<p>Seeks to explore phenomena</p> <p>Instruments use a more flexible, iterative style of eliciting and categorising responses to questions</p> <p>Use semi-structured methods, such as in-depth interviews, focus groups and participant observation</p>
Analytical objectives	<p>To quantify variation</p> <p>To predict causal relationships</p> <p>To describe characteristics of a population</p>	<p>To describe variation</p> <p>To describe and explain relationships</p> <p>To describe individual experiences</p> <p>To describe group norms</p>
Question format	Closed-ended	Open-ended
Data format	Numerical (obtained by assigning numerical values to responses)	Textual (obtained from audiotapes, videotapes and field notes)
Flexibility in study design	<p>Study design is stable from beginning to end</p> <p>Participant responses do not influence or determine how and which questions researchers ask next</p> <p>Study design is subject to statistical assumptions and conditions</p>	<p>Some aspects of the study are flexible (for example, the addition, exclusion, or wording of particular interview questions)</p> <p>Participant responses affect how and which questions researchers ask next</p> <p>Study design is iterative, that is, data collection and research questions are adjusted according to what is learned</p>
<i>Source: Qualitative Research Methods: A Data Collector's Field Guide</i>		

Guercini (2014) evaluated a number of qualitative research methodologies in a management study, and these are summed up in the following points:

- The idea of the hybridisation, combination or integration of research methods regards management as much as marketing, addressing issues that either overlap the two fields or that involve particular attention to research on the behaviour of consumption.

- Hybridisation includes solutions that call for the combination of qualitative methodologies with other, quantitative methodologies, or diverse qualitative methodologies used in conjunction.

The ways in which CI is practiced encompasses methods and results that involve both the qualitative and the quantitative (McGonagle & Vella, 2002b). CI professionals use qualitative studies to provide results that quantitative methods cannot: *'Using intuition, insight, and non verifiable knowledge...researchers can shorten the time required for a project, use all relevant information made available from whatever source, and examine any question-even those which cannot be explored in a rigorous [quantitative] manner'* (McGonagle & Vella, 2002b).

1.3.3. Qualitative research questions

It has been argued that the optimum way to measure the success of CI, in order to preserve and advance its qualitative benefits is to use a qualitative audit (McGonagle & Vella, 2002b).

Evaluation of the results of previous studies conducted in Latvia (Subsection 1.3) has allowed the formulation of several emerging problems: (1) In the business environment of Latvian enterprises, CI is topical; however, CI management is fragmentary. (2) Latvian enterprises lack consistency in CI management: the emphasis is mainly placed on definitive solutions in unique situations; information gathered within short period of time, as well as that obtained spontaneously upon request, is used for analysis. (3) The communication framework and lack of interrelations existing in enterprises do not contribute to the CI process. (4) Enterprises lack strict conditions regarding the information turnover process within the framework of their structure. (5) The results of the 2011 study revealed the importance of organisational culture in providing the CI process, and also showed that the corporate culture of enterprises does not encourage information circulation.

Following evaluation of the aforementioned problems and the background of research in Latvia (Subsection 1.2.), a question can be raised for qualitative research: why does the CI process in Latvian enterprises has inherently weak informative and reversible links?

The discussion began with a general clarification of respondents' ideas around how the CI process unfolds at enterprises, how information is collected, analysed and disseminated, what communication habits exist in organisations, what factors affect exchange of communication, how the organisational culture and its values influence knowledge-sharing in the organisation and whether these values affect the CI process. Next, the respondents' specific views and priorities were discussed with regard to which values the respondents considered as a priority. The respondents were interviewed in-depth on such values as trust in the organisation and management.

The main question of the qualitative research was:

Why does the CI process in Latvian enterprises have inherently weak informative and reversible links?

The author set out to identify possible reasons for the presented problem, according to the following proposals:

1. What units of contents describe the CI process in Latvian enterprises?
2. What concepts do the senior management of Latvian enterprises hold with regard to such organisational values as trust and honesty?
3. What concepts do the employees of Latvian enterprises hold with regard to such organisational values as trust and honesty?
4. Does confidence affect mutual sharing of knowledge and, respectively, the CI process?
5. Are the senior managers' concepts similar to the employees' concepts with regard to the CI management procedure?
6. Are the senior managers' concepts similar to the employees' concepts with regard to organisational values?

The qualitative research is designed so that the content items describing the proposed study topic were disclosed during the course of the study (Figure 5).

THE DESIGN OF THE QUALITATIVE RESEARCH

THE RESEARCH QUESTION

Why does the competitive intelligence process in Latvian enterprises have inherent weak informative and reversible links?

COMMUNICATION SATISFACTION

ORGANISATIONAL CULTURE AND VALUES
 ORGANISATIONAL TRUST AND HONESTY
 INTERPERSONAL TRUST
 COMMUNICATION BEHAVIOR

COMPETITIVE INTELLIGENCE PROCESS

(1) PLANING AND PROCESSING
 (2) DATA COLLECTION
 (3) DATA ANALYSIS
 (4) COMMUNICATION
 (5) PROCESS AND STRUCTURE
 (6) INFORMATION AND CULTURE
 (Calof and Breakspeare, 1999)



**COLLECTING DATA
 FOCUS GROUP RESEARCH DESIGN**

DATA ANALYSIS AND VALIDATION

Figure 5. The research design of the qualitative study

A qualitative question cannot be answered by formulating null hypotheses and testing these via analytical statistics. Qualitative research reveals the substance of the problem under study and its units of content.

The results of the qualitative study determined the content of the quantitative research surveys.

The selected design of the qualitative research was required for establishing hypotheses. In contrast with the qualitative research, the quantitative research began with the existing set of knowledge that already contains generalisations and explanations, namely, theories regarding the relationships between certain events. In this study, the qualitative and quantitative research were complementary phases, and were connected by an intermediate phase. This intermediate phase stimulated the formulation of hypotheses laid the foundations of the quantitative research.

1.3.4. Formulation of hypothesis questions

Both conclusive statistics and theoretical justification of the problem were used in the quantitative phase of the study. Correlation analysis is used as the method for statistical evaluation in this work. This method is used to numerically study the relationship between two or more variables that directly affect the subject of the study. The goal of correlation analysis is to assess the link between selected or randomly selected features that are described by a real process, i.e., competitive intelligence.

Using correlation analysis yields the following results:

1. The degree of correlation between two or more readings is measured and determined.
2. The factors that actually affect the results are selected based on the degree of relationship between the chosen readings.
3. The relationship with unknown readings and features are identified.

If a relationship between two variables is identified, it means that the change of one variable affects the other; variables affect each other in a given period of time. If a correlation based on numerical values is identified, it can be either positive or negative:

- A positive correlation is a relationship between two variables when if one variable increases the other one also increases, that is, a high numeric value for one variable means a high numeric value for the other as well.
- A negative correlation is a relationship between two variables when if one variable decreases, the other one increases, that is, a high numeric value for one variable means a low numeric value for the other.

The importance of the relationships are identified by looking at the resulting factor depending on the variable factor.

The study focused on the interrelationships between CI, communication satisfaction in organisation, trust (organisational, interpersonal and trust in top management) and knowledge-sharing. The studied concepts initially included the content that was discovered in the preliminary study. During the study

process, the hypothetical issues were supplemented in order to more accurately assess the nature of the problem.

The research explored the relationship between communication satisfaction in the organisation within the context of knowledge-sharing, the CI process and affecting factors.

The model was visualised, and was used to examine the interactions (Figure 6). The theory that underpins this model is based on the awareness that values of organisational culture stimulate communication behaviours, which affect the innovations of the CI process.

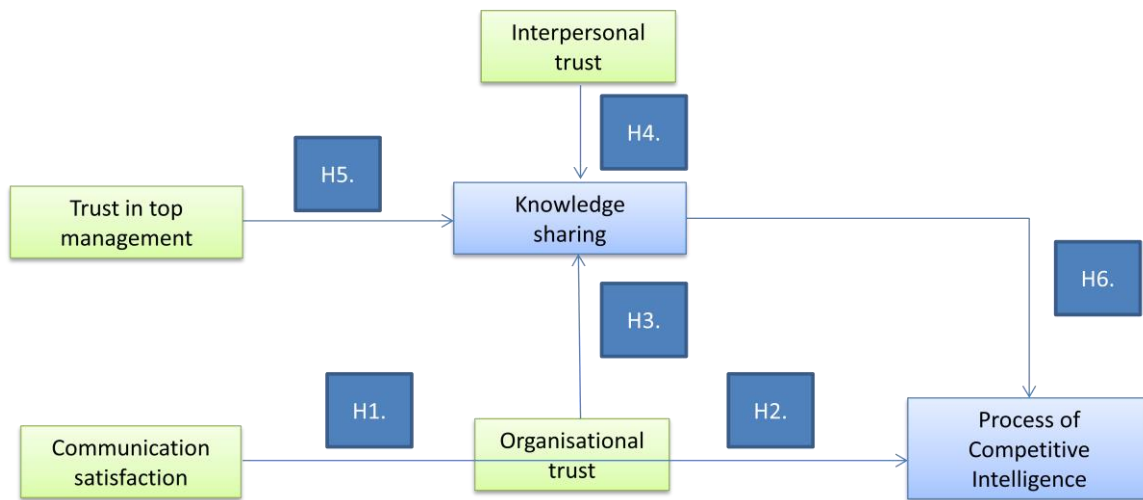


Figure 6. Conceptual model

Although scientists, practitioners and the results of a preliminary study conducted in Latvia found that organisational culture has a direct impact on numerous organisational habits, the present study set out to look for relationships that would justify how the CI process is affected by the values of organisational culture (e.g., trust, loyalty), which determine communication behaviour, and circulation of information within the organisation, that is, how assumptions and norms regarding the way by which employees obtain, analyse and share the information, influence the CI process.

Calof and Wright (2008) described CI as a permanent and evolutionary process, through which entrepreneurs can evaluate their existing and potential rivals' behaviour and possibilities in order to maintain and develop their company's competitiveness and advantages. As a result of the process, information from publicly available, generic news sources is used and analysed, transforming it into long-term knowledge, which ensures a company's competitiveness (Blenkhorn & Fleisher, 2005). CI produces knowledge of competitors and their marketing actions (Nasri, 2011), and involves the use of public sources to develop data relating to the competition, the competitors and the market environment (McGonagle and Vella, 2002a). The information obtained as a result of CI helps entrepreneurs in planning their strategic activities. Moreover, if the intelligence process has been developed as a

systematic and formal process, top managers are capable of making more well-informed decisions regarding future events (Calof & Dishman, 2008; Gilad, 2003). CI is formed through collection and interpretation of economic information with the aim of foreseeing economic activities. either immediately or in the future, in order to reach individual or collective goals (Levet & Paturel, 2006).

Numerous authors (e.g. Baumard, 1991; Marchand et al., 2000) have repeatedly emphasised that CI does not exist without the involvement of individuals or human resources, that is, without collective dimension. Collective dimension is always associated with the values of organisational culture and organisational behaviour. Organisational culture emphasises the culture of the organisation itself. Prescott, John and Miller justified the role of culture in CI theory and practice in 'Proven Strategies in Competitive intelligence' (2001), evaluating the cultural phenomenon as one of the basic elements of CI, without which it would not be possible to achieve results. Calof and Dishman defined the CI process as consisting of planning/focus, collection, analysis and communication, but asserted that this process is affected by particular contextual influences, that is, organisational culture/awareness and the formal infrastructure available, as well as employee involvement. The main function of communication is to coordinate the activities of system components, provide these components with valuable information and help to explain innovations, making the system process more efficient and growth-oriented, because each individual component is unable to implement what they can implement together (Kreps, 1996).

Previous studies have shown that corporate culture is now judged by many as being a major determinant of company success (Baker, 2002) in terms of performance (Cameron & Quinn, 2011), especially through improved employee morale (Coolican & Jackson, 2007). Understanding the culture of communication provides a guide as to how information will be used. Communication encompasses all communication and information relationships within a company - between supervisors and employees, mutual communication between employees, formal and informal communication, public and private communication, individual and mass communication, personal communication and communication through media. The flow of information can occur in three ways: downward, upward and horizontal (Andrews & Herschel, 1996).

In learning and consultation culture, sales and representatives and their managers might become highly involved in both the collection and evaluation of information (Fleisher & Bensoussan, 2007). Management must demonstrate openness and an honest interest in upward reports, thereby being capable of providing itself with the necessary information, received in the form of feedback, to efficiently manage the organisation (Byrne & LeMay, 2006). Satisfaction with communication is a multidimensional factor that includes satisfaction with the amount of information received by the employees, the communication climate, the upward, downward and horizontal communication and the attitude of staff towards communication, and is related to satisfaction with work in general (Downs & Hazen, 1977). The benefit of positive internal communication is greater support from employees regarding implementation of changes in the organisation (Clampit & Downs, 1993). Therefore, drawing on the presented arguments, the following hypothetical question could be posed:

H1. Does a relationship exist between satisfaction with communication in the organisation and CI?

In order to improve information turnover, studies have been conducted on a selection of various communication channels and the perception of information depending on these channels. The question of trust in supervisor and relationship with satisfaction with communication has also been considered. It has been shown that information received from a supervisor is highly appreciated, while trust is an important element of open and direct communication (Byrne & LeMay, 2006).

Several studies have acknowledged the atmosphere of mutual confidence as the cornerstone of knowledge-sharing culture (Figallo, 2002; Cohen & Prusak, 2001). Moreover, some earlier studies regarding habits and conditions of knowledge sharing discovered that the trust culture was the strongest factor that impacted knowledge sharing and-exchanging (Lucas, 2005; Park et al., 2004; Wang & Rubenstein-Montano, 2003; Sharratt & Usoro, 2003).

Today, in an era of information and technology, the nature of organisational work rapidly varies, making motivational and control approaches increasingly complicated. Work within organisations is more often arranged in mutually dependent teams. Administration cannot control everything; the result of work more or less depends on employees' voluntary engagement and collaboration. Cooperation and confidence are important prerequisites for the work environment.

The level of trust that exists between the organisation and its employees greatly influences the amount of knowledge that flows both between individuals and from individuals into the organisation's databases, best practices archives and other records (De Long & Fahey, 2000).

As such, the general hypothesis question was formulated, as follows:

H2. Does organisational trust mediate the relationship between communication satisfaction and CI¹?

Few previous studies have examined the factors affecting the sharing of knowledge within the CI process. However, as shown by the study previously carried out in Latvia, a possible lack of confidence within the organisational environment could be one of the key factors with regard to increasing the efficiency of CI process.

Some documented studies have also acknowledged a positive correlation between trust and knowledge-sharing (Butler, 1999; Adler, 2001; McEvily et al., 2003; Levin & Cross, 2004; Mooradian et al., 2006; Darvish & Nikbakshs, 2010; Holste & Fields, 2010; Lee et al., 2010). Moreover, Lin (2007) considered that unwillingness to share knowledge can be highly detrimental to organisational survival. Several studies have shown that people are reluctant to share knowledge, and that this is linked to the social dilemma related to sharing behaviours (e.g. Cabrela & Cabrela, 2002; Ridings et al., 2006).

¹ Hypothesis H2. The hypothesis with mediator

Renzl (2008) discovered that trust in management increases knowledge-sharing through a reduction of fear of losing one's unique value and an improving willingness to document knowledge. Analysing the previous studies, Downs and Adrian (2004) found that trust is related to acceptance of organisational values.

Ho et al. (2012) further concluded that trust in the workplace acts as a mediator in enhancing knowledge-sharing behaviour. Relationships between the line manager and the employee are related to the overall performance and results of the organisation (Liden et al., 1993). Confidence in supervisor is positively correlated with the quality of information received from senior management and line manager (Byrne & LeMay, 2006). On the basis of previous research findings, the following hypothesis question was formulated:

H3. Is there a correlation between organisational trust and knowledge-sharing? Scientific sources have shown that there is an assumption regarding trust as a phenomenon, in that trust stimulates transfer of knowledge, which is defined as knowledge-sharing between the source of information and the beneficiary, and thus can be applied (Ko et al., 2005).

H4. Is there a correlation between interpersonal trust and knowledge-sharing? Basaglia et al. (2010) described knowledge sharing as a process whereby individuals mutually exchange knowledge and together generate new knowledge. This is very significant in the CI process, because the aim of this process is the creation of added value to the knowledge necessary for making decisions.

H5. Does trust in top management support knowledge-sharing in the organisation? Trust within the company is evaluated by the accuracy of information received by employees from their direct supervisors. (Roberts & O'Reilly, 1974). For instance, a low level of trust correlates with few details and accuracy of the information (Byrne & LeMay, 2006).

The perceived link between trust and knowledge transfer in the literature is so strong that some authors have even equated trust with knowledge transfer (Sankowska, 2013). Within-organisation knowledge-transfer has been identified as a key factor in successful innovation.

Few studies have examined what exactly increases CI efficiency. Luu studied shipping companies in Vietnam to investigate whether organisational culture, ethics and emotional intelligence influence knowledge-sharing, which in turn enhances CI scanning. He concluded that knowledge-sharing also exerts a positive effect on CI scanning (Luu, 2013b). The results revealed that, in order to perform effective scanning for CI, knowledge should be shared among organisational members, which requires three building blocks: supportive knowledge-sharing, ethics or care and heightened emotional intelligence (Luu, 2013b).

H6. Is there a correlation between knowledge-sharing and CI? Several researchers (Hamel 2007; Senge, 2007) have agreed that the 21st century is based on knowledge, information and innovative economy. Organisations' success depends on employees' knowledge, experience and creative activity.

1.4. The structure of the dissertation

This study consists of the following sections: introduction, theoretical section, qualitative and quantitative section, proposals and a final section, containing discussion, conclusions, bibliography and appendices, as seen in Figure 7.

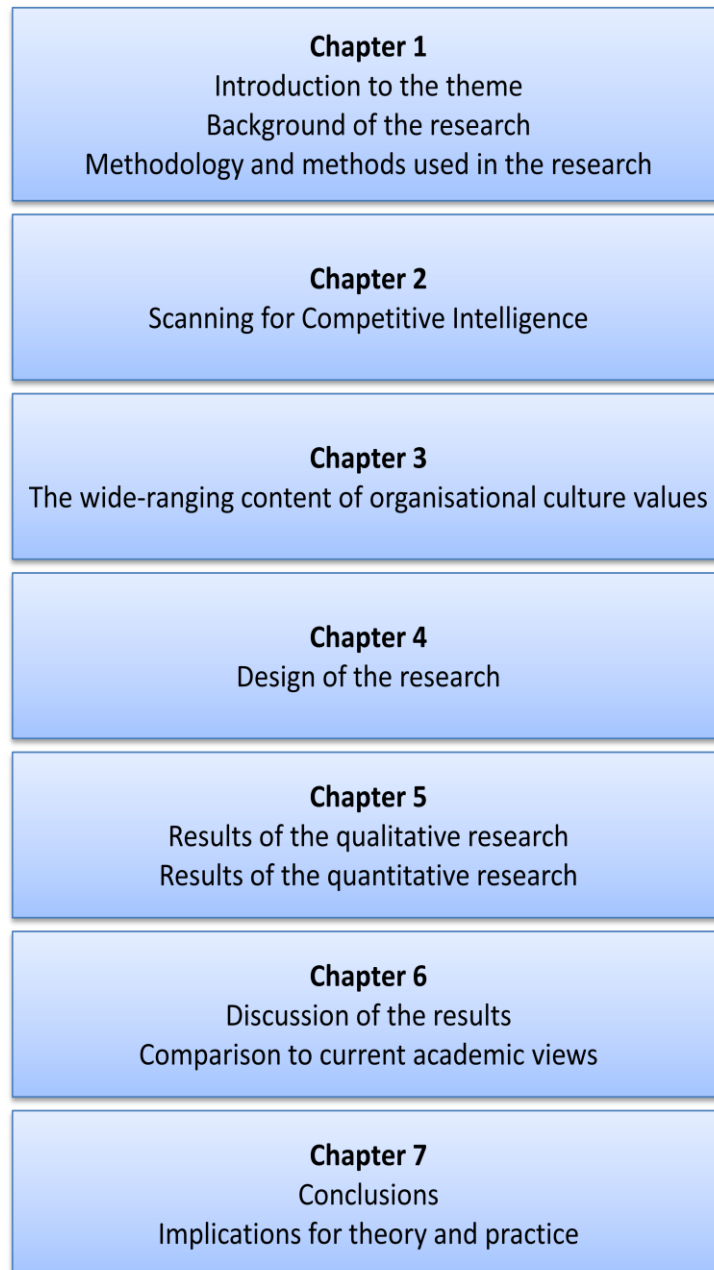


Figure 7. The structure of the dissertation

In the theoretical section, the determinants of global CI development are assessed; the primary conditions for implementation of CI are described. The impact of knowledge-sharing habits on CI management was studied in the Doctoral Dissertation. Large-scale contents of organisational values were evaluated from the scientific point of view, considering the possibilities of translating values such as trust and confidence into behaviours, which could favourably affect the process of CI and communication satisfaction.

In the empirical section, the results of the qualitative and quantitative investigation are described and analysed. In the final section, the main opinions formed as a result of the study and the conclusions will be advanced. As a result, recommendations for tackling the identified problems are developed.

The bibliography reflects the scientific sources, scientific studies and websites used in the process of work.

The appendices contain the related primary data tables and the tables of statistical indicators.

2. Scanning for competitive intelligence

2.1. Determinants of competitive intelligence development

CI obtained its present pattern in the mid-1990s, and, according to Bergeron and Hiller (2002), it was influenced by several factors relating to social experience and historical precedents: (1) military intelligence; (2) politics; (3) competition in business; (4) the economic situation; (5) development of technologies; (6) culture; (7) ethics; (8) geographical location.

Examining the significance of competitive intelligence from an historical point of view, it should be mentioned that an important role in battle planning and formation of tactics was attributed to scouts and spies in as early as 500 BC. In this period, the Chinese General Sun Tzu wrote a treatise, 'Art of War', in which the value of information obtained in the process of intelligence was emphasised. Sun Tzu's treatise became a basis for a variety of approaches to military intelligence (Griffiths, 2005). In approximately 1600, the Japanese emperor *Toyotomi Hideyoshi* successfully borrowed Sun Tzu's strategic theories.

In the 19th century, the first studies of market (marketing) were initiated in Europe and in America. Market research identified which market niche remained free for successful operation; however, to a certain extent, it was difficult to foresee how to use competitive advantages for occupation of such a niche, in that it meant outpacing the existing and anticipating potential competitors without previous knowledge of their developmental strategy.

In the mid-20th century, Japan experienced rapid economic growth. Western analysts of that period believed that Japanese companies were not capable of creating anything new, and that they could only copy in a perfect manner the existing technologies (Mumford and Hendricks, 1996). It was then that the Japanese Foreign Trade Organisation began taking active measures in collecting and accumulating business information and conducting investigations of competitors. The information obtained was processed and passed over to representatives of Japanese industry in order to ensure a continuous flow of information with regard to ongoing processes and possible changes in the business environment. Accurate CI in Japan at that time explains the so-called Japanese economic miracle. In Japan, information has always been regarded as a product having a genuine value.

In the 1950s, the Chinese government used intelligence systems to support scientific and technological research in their own country. During this time, several articles about industrial espionage appeared, whereby the information collecting techniques contravened laws or moral boundaries. In 1966, William Fair recommended the creation of a corporative 'Central intelligence agency' inside companies, to 'collect, check, compare, arrange, register, update and distribute information'. Since then, this recommendation has developed into a successful business structure with definitive working functions,

directly responsible for data collection, analysis and distribution (Kahaner, 1996). Investigation of competitors as a process concept for improving the competitiveness of an organisation was proposed only as recently as the 1970s (Dishman & Calof, 2008). In 1986, people professionally addressing CI established the International Society of Competitive Intelligence Professionals (SCIP) in the USA. Today, this society has over 7,000 members from 64 countries, including Latvia.

In each period of CI development, the role of business information analysis became more important, which is substantiated in Table 5, according to previous research.

Table 5. The evolution of competitive intelligence

TIME PERIOD	BRIEF CHARACTERISTICS	DESIGNATION OF THE PERIOD, CRITERIA	DESCRIPTION OF ACTIVITY	ANALYSIS OF INFORMATION	INVOLVEMENT OF TOP MANAGEMENT	DEPENDENCE OF DECISION-MAKING PROCESS ON COMPETITIVE INTELLIGENCE
1950 – 1980	DATA COLLECTION REGARDING COMPETITORS	ESTABLISHMENT OF TRADE ASSOCIATIONS, ACTIVITY OF THE JAPANESE FOREIGN TRADE ORGANISATION	TACTICAL	PRACTICALLY NO ANALYSIS CONDUCTED	NOT INVOLVED	LOW
1981 – 1995	ANALYSIS OF THE INDUSTRY AND COMPETITORS	PORTER'S BOOK 'COMPETITIVE STRATEGY'	OPERATIONAL	USE OF QUANTITATIVE METHODS BEGINS	LIMITED	MEDIUM
1996 – TO DATE	COMPETITIVE INTELLIGENCE IN THE BUSINESS ENVIRONMENT	CREATION OF THE ASSOCIATION OF COMPETITIVE INTELLIGENCE PROFESSIONALS' ACCOUNTS OF COMPETITORS' ACTIVITY	STRATEGICAL	METHODS OF QUANTITATIVE AND QUALITATIVE ANALYSIS	INVOLVED	HIGH

CI can also be viewed as an organisational function, ranging in scope between the broader area of business intelligence (BI) and the narrower version practiced as competitor analysis (Fleisher & Bensoussan, 2007).

The number of publications and citations (source: *Web of Science*) on the topics ‘Business intelligence’ and ‘Competitive Intelligence’ has been increasing with each year, and skyrocketed at the beginning of the 21th century (Figures 8 & 9).

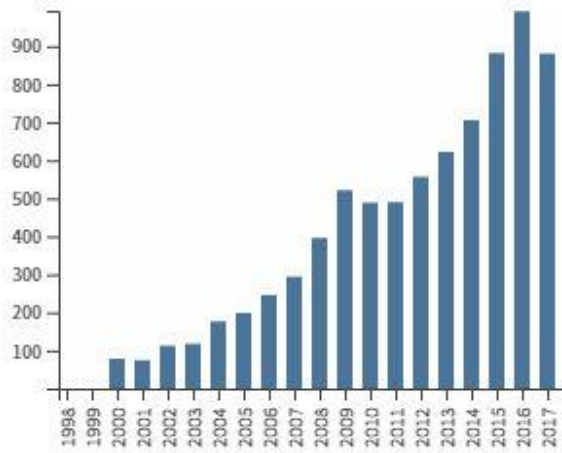


Figure 8. The dynamic of publications on competitive intelligence 2000-2017

(Source: *Web of Science*)

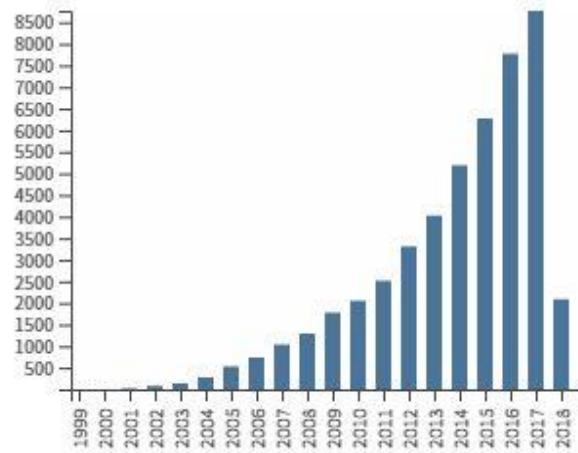


Figure 9. The dynamic of citations on competitive intelligence 2001-2017

(Source: *Web of Science*)

On the basis of these figures, it can be concluded that the demand for CI has grown objectively, and is a logical continuation of progress; it is a regular period in the development of world economics and management. In today’s rapid, innovative workplace, information technology (IT) faces many new challenges to overcome the requirements of multiple and flexible methods of working in all industries. Hence, it is vital to have flexible and efficient ways of working via technology initiatives (Gottschalk & Karlsen, 2005).

Numerous worldwide enterprises make use of external services for CI. The most recognisable global CI and communication efficiency assessment company is ‘Observer’, the history of which dates back 150 years. The ‘Observer’ Group operates in 12 countries (Great Britain, Sweden, Germany, Finland, Norway, Denmark, Portugal, Ireland, Estonia, Lithuania, Canada and the USA), and it employs over 2,600 information specialists and analysts. ‘Observer’ serves more than 50,000 clients all over the world, who work in both the private and the public sector, and represent most industries. There are large international corporations and leading enterprises of industry, as well as representatives of small businesses, and they include governmental institutions and non-governmental organisations.

The ‘Observer’ experts help organisations to study and analyse the strategies of competitors, markets and industries, as well as the efficiency of communications, positioning and reputation. To ensure high performance, the latest technological achievements in this field are used. The CI and communication efficiency assessment methods of the organisation have been approved by international professional associations. Services are tailored to each client’s specific needs and provide several options – from

delivery of regular operational information on aspects of the business environment to complicated research and analysis of competitors' strategies or return on investment in public relations. By asking professionally formulated and selected questions, specialists help to specify what information is required for the particular enterprise, and which aspects are the most important.

Under the impact of globalisation of economics and development of technologies, the business environment is changing more rapidly than ever before, which means that the role of CI is becoming increasingly important. In order to ensure stable and convincing development of an organisation, innovations and changes in business activity are followed on an ongoing basis. Some internal organisational resources, such as CI governance and the perceptions of CI characteristics influence the successful deployment of CI. Organisations that practice good CI governance with strong moral and financial support from upper management have an opportunity to realise the dream of having successful CI initiatives in place (Ahmad, 2015).

Modern means of communications and telecommunications radically expand the facilities of information turnover, often resulting in a delusion with regard to availability of informational resources. The majority of the information found on the Internet is useful; therefore, information supply staff, including acquirers of information, face a new challenge, namely, to provide the employees of their organisation with network information resources to the maximum possible extent, without simultaneously threatening the information holder's intellectual property or business secret.

2.2. Competitive intelligence as a management tool

The concept of CI is multidimensional, but its connecting component is strategic advantage. Calof and Wright (2008) described CI as a continuous and evolving process by which businesses assess the behaviour and capabilities of their current and potential competitors to assist in maintaining and developing a competitive advantage. Systematic CI is important in allowing organisations to keep step with the changing market conditions and avoid serious errors (Anderson & Hoyer, 1991; Patton & McKenna, 2005).

Pellissier and Nenzhelele (2013) have conducted a qualitative study on all identified sources establishing and analysing CI definitions. As a result of 50 definitions of CI, common and unique characteristics were identified. The following comprehensive and universal definition is therefore proposed for CI (Pellissier & Nenzhelele, 2013): A process or practice that produces and disseminates actionable intelligence by planning, ethically and legally collecting, processing and analysing information from and about the internal and external or competitive environment in order to help decision-makers in decision-making and to provide a competitive advantage to the enterprise.

It includes CI, as well as intelligence collected on customer, suppliers, technologies, environments or potential business relationships (Gilad, 1989). It involves discovering, analysing, and using intelligence from publicly available, non-proprietary information sources and converting this into knowledge on a continuing basis (Blenkhorn & Fleisher, 2007). CI plays an essential role in development and

implementation of business strategies in contemporary organisations (Hughes, 2005; Prescott & Smith, 1987; Dishman & Calof, 2008). It allows top managers to make better strategic decisions based on developed intelligence and a systematic and formal approach (Dishman & Calof, 2008; Gilad, 2003).

CI consists of two overall activities: first is the use of a public source to develop data (raw facts) on competition, competitors and the market environment; second is the transformation, by analysis, of those data into information (usable results) (McGonagle & Vella, 2002a). CI is not just market research (Bose, 2008; Pelsmacker et al., 2005) or business scanning, rather, it is a process of knowing what the competition is up to and staying one step ahead of them, by gathering information about competitors and, ideally, applying it to short- and long-term strategic planning (Wright et al., 2002; Dishman and Pearson, 2003; Jourdan et al., 2008). In fact, CI has long been proposed as a strategic business tool in an effort to increase a company's competitiveness (Pelsmacker et al., 2005).

There are numerous definitions of CI, but Calof and Skinner (1999) provided one that is simple: 'Competitive Intelligence is actionable recommendations arising from a systematic process involving planning, gathering, analysing and disseminating information on the external environment for opportunities, or developments that have the potential to affect a company's or country's competitive situation'. According to the SCIP, 'CI is a systematic and ethical program for gathering, analysing and managing external information that can affect your company's plans, decisions and operations' (SCIP definition). CI is not just the monitoring of secondary sources, such as news clippings, and it is also not a new business activity (De Pelsmacker et al., 2005). Furthermore, as intelligence is developed on a systematic and formal basis, it allows top managers to make more well-informed decisions regarding future events (Dishman & Calof, 2008; Gilad, 2003).

In fact, CI that refers to corporation or business intelligence is the art of collecting, processing and sorting information to be made available to people at all levels of the firm, in order to help shape its future and protect it against current competitive threats: it should be legal and respect codes of ethics, and it involves a transfer of knowledge from the environment to the organisation within established rules (Zangouezine had & Moshabaki, 2009). It could affect a corporation's competitive position (Rouach & Santi, 2001).

In 'Proven Strategies in Competitive intelligence' Prescott and Miller discussed 'the new world' vs. 'the old world' in the context of CI, and compared the new and the old world of the company 'Procter & Gamble', in order to emphasise the role of CI in increasing the competitiveness of the company (Table 6).

Table 6. Competitive intelligence at Procter & Gamble

(Prescott & Miller, 2001)

<i>'Old World'</i>	<i>'New World'</i>
<ul style="list-style-type: none"> • <i>Static competitive analysis</i> 	<ul style="list-style-type: none"> • <i>Dynamic competitive response modelling</i>

<ul style="list-style-type: none"> • <i>Routine report generation, reactive</i> • <i>Responsibility of CI analysts</i> • <i>Highly centralised and highly decentralised</i> • <i>Individually and functionally driven</i> • <i>'Need to know'</i> • <i>Limited and sporadic top-management support</i> 	<ul style="list-style-type: none"> • <i>CI embedded in strategy development and option analysis</i> • <i>Everybody's responsibility</i> • <i>'Hub & spoke'</i> • <i>Team effort</i> • <i>'Need to share'</i> • <i>Top management deeply involved</i>
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Intelligence is viewed as a process comprising a number of activities, steps or constructs that should follow on from one another without any of the steps or actions being overlooked (Kahaner, 1997). Key constructs or stages that have emerged in the literature are as follows:

- (1) Planning and focus - focusing on issues of highest importance to senior management (Daft et al., 1988; Herring, 1998; Gilad, 1989)
- (2) Collection - the focused collection of information from a variety of sources internal or external to the company (Collins, 1997; Herring, 1998)
- (3) Analysis - converting information into 'actionable intelligence' on which strategic and tactical decisions may be made (Gilad and Gilad, 1986; Kahaner, 1996; Calof and Miller, 1997; Herring, 1998)
- (4) Communication - packaging and communicating the results of the CI process or project to those with the authority and responsibility to act on the findings
- (5) Process and structure - those structures that ensure effective CI can be performed
- (6) Organisational awareness and culture - to ensure that CI is well executed, and that all should participate, there must be the right competitive culture and information-gathering (i.e. it should be on everyone's mind) (Kahaner, 1996).

Theoretically, it is thus postulated that CI consists of planning and focus, collection, analysis and communication of intelligence, as well as the necessary processes and structures and an organisational awareness and culture.

There is, however, agreement that the CI process is not just a function in the firm, rather it is an attitude towards organisational learning, information sharing, a co-operation driven management culture and a desire by decision makers to capitalise on gathered intelligence (Wright & Calof, 2006).

The importance of culture as the bedrock to successful information sharing has also been suggested by scholars (Blenkhorn and Fleisher, 2005; Wright and Calof, 2006; Desouza and Paquette, 2011; Hislop, 2013).

Several studies have shown that organisational and cultural issues are the most difficult problems to resolve, but produce the greatest benefits (Desouza and Paquette, 2011; Hislop, 2013).

2.3. A description of the competitive environment in Latvia

The development of the market is a lasting historical process that exists in interaction with all the other markets. An entrepreneur operating in the commodity market and developing production and trade is sure to turn to the labour market to purchase labour resources, and the financial market to gain funds to purchase factors of production.

The market must provide a chance to execute trades whose conditions depend on several factors:

- Is the market accessible to all consumers, or is the accessibility limited?
- Are all participants of an auction provided with complete information regarding a product's quality and offered prices, or is the information distributed asymmetrically?
- Are the products being sold alike, or can the consumers distinguish between separate copies of a particular product?

Notably, the success of a market depends on the associated necessary information.

Before the declaration of Independence in Latvia, distribution of information was economically idyllic. It was a form of political information, whereby little or no attention was paid to researching, collecting and analysing information to make decisions on its basis. These processes were conducted in an academic environment and for intelligence services, state security committees and militia purposes. Management of competition in its present form was not necessary. Although the activities performed to manage competition served a different purpose, this experience could be viewed as a factor that has affected the modern perception of competition management and acceptance in Latvian society.

At that time, the concept of 'exploration' was connected with activities of the intelligence service in fighting the so-called 'capitalistic' world. In addition, to the information gathered by intelligence, a civil system to spread scientific and economic information was in existence. The results of studies of scientific and technological innovations in the USSR were published in scientific magazines, while special news sheets contained information regarding achievements in various fields of research in foreign countries. This system was based on the publications of the so-called 'Institution of Information', which used various foreign publications as their sources. Inventions were registered at the united patent register of the USSR. On 2nd March 1993, following the restoration of independence, parliament passed the *Patent law* and established the national register of patents.

Although the economic system in existence at that time did not directly advance serious competition among commercial enterprises when distributing information about studies, it did influence the progress of innovation and its application in production. One of the ways of distributing information was the organisation of mutual meetings among commercial enterprises to share experience. Along with this practice, particular forms of comparative analysis appeared, for example, idea copying. Therefore, the

more successful commercial enterprises taking part in these mutual meetings attempted to hide their constructive solutions for production from competitors.

The first project, the *Freedom of information* law originated in 1993; however, 5 years passed before this was enacted. After passing several laws that regulated the accessibility of information in various segments, the *Freedom of information* law, which stated that information in state and local governments must be available to society at all times, unless the statutes prescribes otherwise, was passed in Latvia (as the first of the Baltic states and one of few East European countries) on 29th October 1998. Nonetheless, this law also contained a category that covered restricted information. In addition to the statutory regulations, an increasing number of state and private enterprises began to use the Internet to publish information in the late 1990s. The role of the Internet is significant in the CI process, although the value of the information regarding the competitors is controversial.

In accordance with the *Competition Law*, since 1st May 2004, Latvia has operated in the European Economic Area (EEA), where unified standards for manufacturing, safety, branding and supervision of exploitation are demanded, thus strictly regulating one of the market economy's guiding principles – fair competition. In this field, the directives prohibit, for example, to agree on a fixed price and divide the market among manufacturers and suppliers, as this limits the consumer's rights to choose what product and at what price to purchase, it also discourages price reduction and the long-term introduction to the market of new services and goods. A large section of EU rules in this field have originated from judgements of the European court in the first instance, which acknowledged good practices, and a penalty was imposed for those in violation of fair trade in the EU.

Until autumn 2006 the 'Observer' subsidiary company, 'Observer Latvia,' handled the management of CI and estimated the effectiveness of public relations in Latvia. According to the information provided by a given company, it helped organisations to research markets, industries and competitors' strategies, and to evaluate an organisation's positioning, reputation and communication effectiveness. The company's goal was to help the clients improve their performance by making better decisions through the use of information about markets, competitors and the organisation's communication effectiveness. The experts of 'Observer Latvia' used primary and secondary information sources. Solutions offered by 'Observer' helped clients to work structurally with the information and effectively distribute it within their organisation. Nevertheless, on 1st October 2006, the company's administration made a decision to stop working in Latvia and Estonia. According to a representative from 'Observer Latvia': *'the global administration of Observer has decided to concentrate on larger markets where a completely different yield can be achieved'*. Similar companies have begun competing for the 'Observer' clients who are looking for providers of equivalent services.

Services connected with information regarding the business environment, for example, information-gathering on enterprises and segments are offered by BNS and the Latvian news agency LETA and its Institute of Economics Research (IER). LETA offers information on the economic sector in its Web page *nozare.lv*, where the newest and most topical information regarding the 30 most important Latvian business segments is summarised. According to the agency's position, in order to successfully make

decisions, the workers of an enterprise must be informed of the business environment around them, which influences the successful operation and development of the enterprise.

It is possible to subscribe to several informative services, including an option to regularly receive information by email that details where, when and in which newspapers the materials of interest have been published. However, in collection and analysis of the information is not offered in any of these cases; therefore, the author concluded that the organisations focus primarily on information-gathering. There is no united understanding of CI field in Latvia; however, considering modern business tendencies, a systemised method for conducting research into CI, accounting for the ethical and legal conditions of information-gathering, is necessary.

The interior problem of Latvia is the ethics of gathering information about the business environment. The process of managing CI must be in accordance with the norms of ethics, which help to avoid losses as a result of unethical behaviour in enterprises in Latvia and worldwide. There are no separate business morals; they are the same nationally specific and universal values that are only adapted to suit the business environment.

Some Latvian entrepreneurs believe that the goal of business is solely profiting, thereby justifying unfair competition if it helps to profit in short-term. Such opinions are widespread, not only in the business environment, but also in Latvian society overall. However, others believe that the goals of business are wider than that, and act in accordance with this belief.

Business ethics are commonly described as serving others, providing them with goods and receiving income that justifies the investments and observes moral norms. Ethics in business increase profits and enhance reputations. Ethical norms in business are not set and categorical, and ethical values should harmonise with economic effectiveness and profitability.

A knowledge of business ethics allows the coordination of personal interests in economic activities with universal values, instructing on how to act ethically when solving moral conflicts, on what to base practical actions and behaviour. The ethical activities of an organisation are set by the organisational culture. They specify the ways, methods and means accepted by the organisation. Organisational culture plays an important role in CI, and provides for successful management of CI within the organisation, as well as forming the outlook on gathering information about external environment or criteria.

In 2004, a study into the possibilities of introducing business ethics in Latvia was conducted as part of the project Better Business Ethics in Latvia (BETIL), which was an initiative developed by the Latvian Chamber of Commerce and Industry and the Stockholm School of Economics in Riga to improve business ethics in Latvia.

In this project, the term 'business' was understood as all the relationships between an enterprise and an organisation or an individual that enables the operation of the enterprise. 'Business ethics' is a

normative evaluation of such relationships; consequently, 'business ethics' describe which particular business relationships are approved and which are disapproved.

The authors of the project believed that the introduction of business ethics in Latvia would create conditions to, firstly, form a dialogue whereby the entrepreneurs mutually agree on the goals for business and, secondly, to gain public support and convince society that these goals are significant and attainable. Arriving at a settled agreement is a complex problem of coordination as it is technically difficult to agree with so many participants of the market. The understanding of ethics differs; some entrepreneurs believe discussions of ethics to be a determination of a fact to reprimand them about. In Latvia, a concept whereby nobody is considered ethically perfect to criticise other participants of the market is quite common. People are scared to express their opinions on matters of business ethics.

If a similar view on values existed among enterprises, they could take responsibility for their actions together. The standard of business ethics is a mechanism for risk control and a guarantee of rights for enterprises. According to the authors of the BETIL project, the direct benefits of introducing ethical standards are as follows:

- 1) Reduced costs connected with searching for partners, starting collaborations, attracting funds etc. A fairly interpreted and applied standard of business ethics is a basis for mutual trust.
- 2) Improved exchange of free information and experiences with regard to everyday business activities. Such information exchange stimulates new coalitions for finding solutions to existing ethical problems.
- 3) The formation of an enterprise's public reputation, thereby creating indirect control over the formation of the customer range and attraction of new markets.
- 4) Clearly defining goals and mechanisms for their realisation will rearrange an enterprise's management and improve organisational culture.
- 5) Ethical enterprises that have the support of society will have the right to take part in negotiations with state and local government institutions from positions of power.
- 6) Ethical enterprises will be capable of demonstrating the basic principles of their activities to investors and collaboration partners.

According to a 2006 sample of the Latvian Code of Ethics of the association for public goods 'Transparency International Latvia "Delna"', the aims of the code are to form a business practice that is based on the underlying principles of ethics that help employees to find answers to questions connected with various ethical dilemmas. The ethical rules and norms of the code are connected with employee's attitude towards work, interaction with others and relationships with nongovernmental organisations and business partners.

The goal of all ethical judgments is to lead people in their everyday actions. The ethical principle(s) that becomes relevant depends on the topicality of the problem. Factors such as the globalisation of markets, the reduction of trade restrictions, the Internet and the end of the cold war, have promoted the

immense demand for strategic information, information about markets and, therefore, the interest in CI sphere.

2.4. Improvement of the organisational culture of Latvian enterprises in the competitive intelligence process

The basis of every successful CI approach is its inclusion in strategic business processes. The delivery of information can be realised in various forms, for example, comparative analysis, reports, meetings, etc. The way to ensure a systematic approach to CI depends on the requirements of the information users. Organisational culture is primarily formed by top executives when formulating, announcing and implementing the values that are required in order to successfully manage organisational processes; therefore, after analysing the CI model developed by Calof and Breakspeare, the author of this thesis has offered to make changes to the sixth stage of the CI model '*awareness and culture*', emphasising the overall importance of organisational culture as a separate phenomenon in managing the CI process. In order to understand how the CI process is received in the organisation and the transformation process of its separate job aspects, it should be accepted that the implementation process results in interaction with different functional subcultures of the organisation; in addition, this interaction also influences the introduction of the planned technology. In order to understand the line of negative phenomenon connected with this process of technology introduction, it should be examined in context of the organisational culture.

With the help of the research results and theoretical knowledge, the author of the thesis concluded that, despite the existence of a series of such notions as norms, values, models of behaviour, rituals and traditions, a concept of culture must be introduced in order to carry out the CI process in an organisation. This is because two important additional elements that are typical of culture set it apart from a simple definition of a body of concepts or values:

- 1) Culture provides a certain level of group structure stability. When an organisation is said to have a 'culture', it is understood that it possesses not only a certain body of elements, but also interrelationships and stability, which helps the organisation to adapt to the external environment
- 2) Another element that contributes to stability is the structuring or integration of those elements that connect separate elements. This provides an organised inner environment for introducing and accepting new processes. Culture ensures the existence of the desired approach, creating confidence among colleagues – one of the cornerstones of the CI process.

The implementation of the CI process must be analysed with regard to culture (Figure 10) - does the existing organisational culture support the implementation of the CI process?

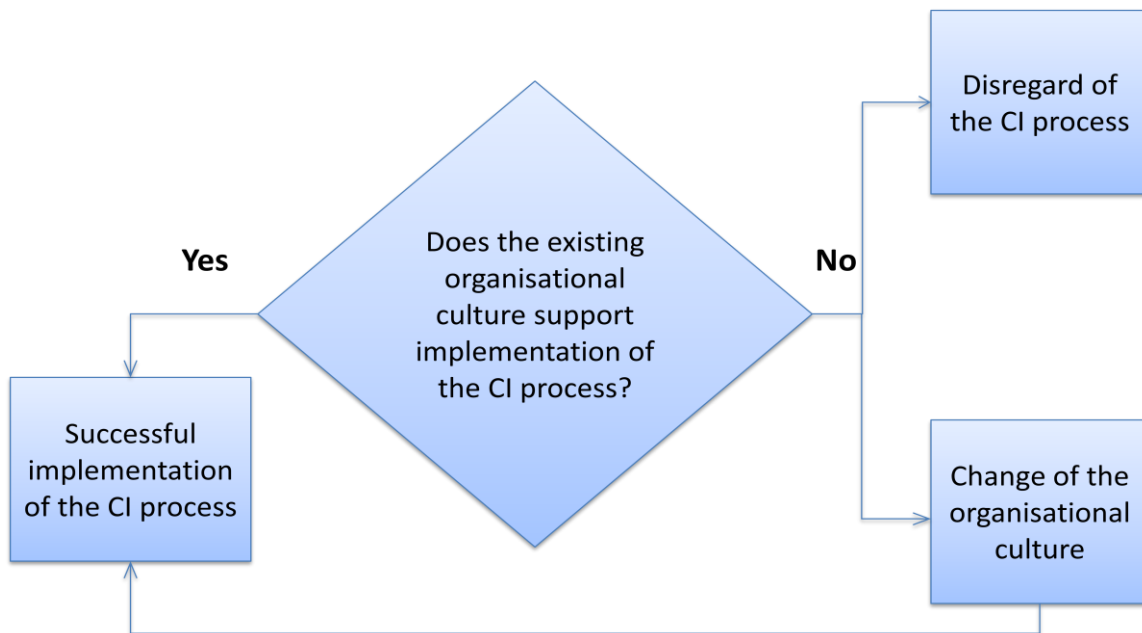


Figure 10. The role of organisational culture in the competitive intelligence process

(Cekuls, 2014)

Two alternatives may be considered: (1) to disregard culture in CI management. In this case, organisational culture can obstruct, or entirely stop, efficient implementation of CI in a company, and (2) to develop a culture that is compliant with organisational goals regarding CI. In such cases, the CI plan should be supplemented with measures focused towards learning, implementation and consolidation of the desired culture throughout the organisation.

The questionnaire about organisational culture carried out in Latvia showed that 85% of respondents agreed that organisational culture is capable of facilitating a successful process of CI in the company. A range of negative phenomena, possibly related to the CI process, can be understood if considered within the context of organisational culture.

In the analysis of the mutual coordination of CI and culture, a great deal of attention should be paid to the analysis of employees' values, as this influences the level of participation and loyalty. If the goals of the organisation correspond with these values, the effectiveness of job activities increases. If contradictions appear between the goals and the values, it can leave a negative impact on the organisational culture and personnel, thereby delaying the accomplishment of the organisation's goals.

The author believes that a supportive type of organisational culture, which is characterised by mutual trust between the organisation and its employees, is the most suitable for creating a successful organisational culture. Collaboration, helpfulness and team work are the leading values of such an organisation.

Collaborative culture serves as a foundation of effective executive leadership through encouraging reflection and learning at all levels of the organisation (Figure 11) (Fleisher & Hursky, 2016).



Figure 11. Collaboration as part of an intelligence-conducive work culture
(Fleisher and Hursky, 2016)

Standardisation of CI processes and accurate formulation of the researchable issues in the focusing stage, provide a basis for creation of a supportive culture. The goal for developing enterprise culture is to ensure that CI is integrated and inalienable, and makes a significant contribution to the decision-making process. CI is a social process; therefore, a plan for supporting culture is necessary.

There are several ways in which to create this encouraging plan for a supportive culture. On the basis of his own experience and the results of the research, the author of this thesis believes that it should be obligatory to include the following (Figure 12):

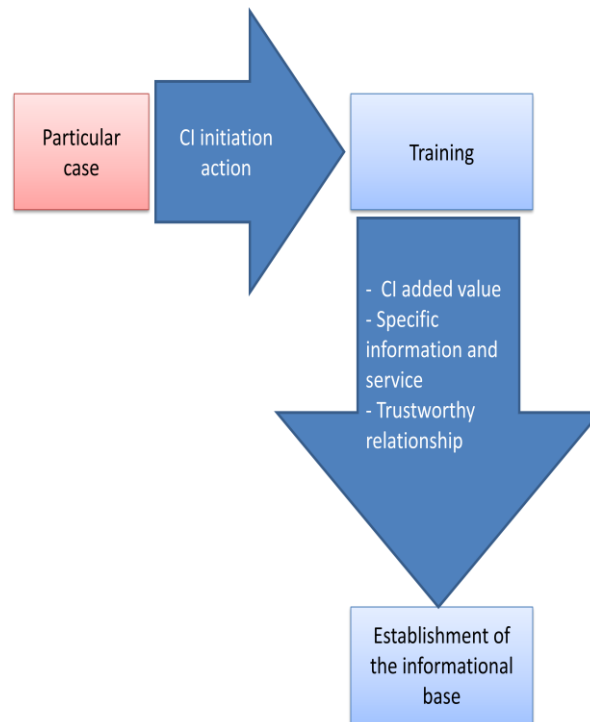


Figure 12. Formation of an appropriate culture. A summary of the preliminary research results

(Cekuls, 2014)

- Training for the management of the enterprise to realise the value of CI in providing information for making managerial decisions
- Training for the management to understand which type of organisational culture would be the most supportive with regard to the implementation of CI
- Formation of an information sources network within the organisation
- Access to handouts in printed or electronic form
- Individual discussions with employees to increase the value scale of classified information.

One of the contributory factors to a supportive culture is the development of a reliable relationship between the CI personnel in the business environment and the receivers of this information (Figure 13).

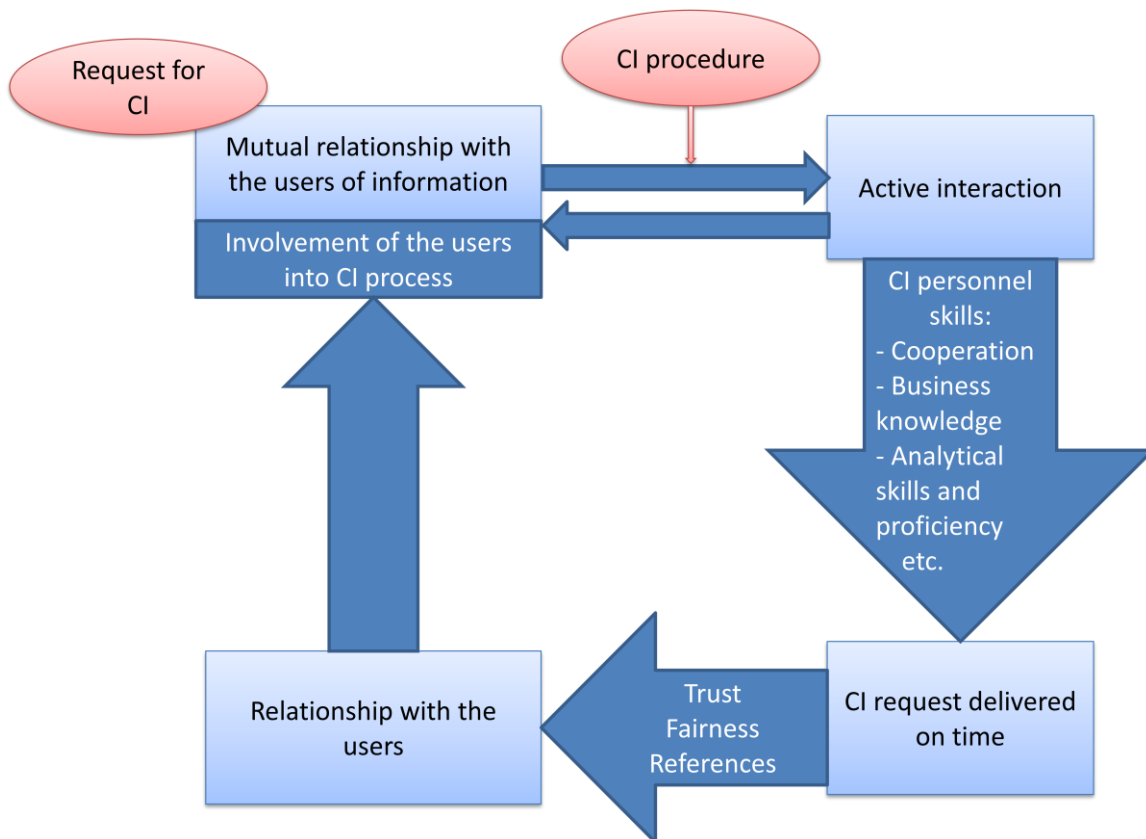


Figure 13. The development of interaction to increase the credibility of the competitive intelligence personnel

Source: The summary of the research results by the author

This process shows how to promote credibility for CI - offering the necessary information, as well as perfecting the results received in the process, to satisfy the needs of the information user.

Each enterprise's culture states the ways in which information circulation will function and the criteria that will be shared in order for the enterprise to reach its goals. The understanding of missions and strategies and the coordination of common goals in the enterprise depends on the type of organisational culture.

After summarising the theoretical knowledge and the results of the preliminary studies conducted in Latvian enterprises, the author of the thesis developed a CI model (Figure 14).

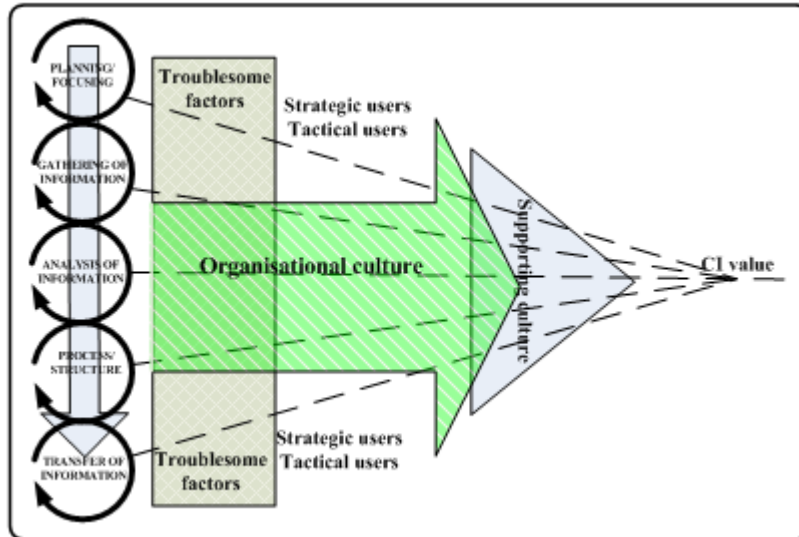


Figure 14. A model of competitive intelligence and CI value according to the research in Latvia

(Cekuls, 2014)

All elements (stages) of the CI process exist in potential interaction with each other. Troublesome factors are conditions that decrease the effectiveness of each stage, influencing the entire operation of the process. The better the understanding of values, the less bothersome are factors that delay the establishment of an appropriate organisational culture. An organisational culture that is unified in the entire organisation and that is changing into an appropriate culture helps to successfully manage CI.

3. Theoretical diversity: the wide-ranging content of organisational culture values

3.1. The role of organisational culture in the management of competitive intelligence

Organisational culture is the specificity or unique of each organisation. Hofstede G. (2003) stated that it is difficult to provide an accurate definition of the organisational or corporate culture. It is often referred to as the common assumptions, opinions or shared values of a certain group.

Today, it is believed that organisational culture provides a framework in which to implement business strategies (Coolican & Jackson, 2002). That is why managers must be aware of the culture, such that they will strengthen their strategic business ideas and, if necessary, make changes. However, it is well known that it is difficult to change organisational culture (Bresnen & Marshall, 2000).

Without a compatible culture, a common vision and a common organisational value-set, leadership is not the dynamic at work (Fairholm & Fairholm, 2000). The better the organisational members' understanding of values, the fewer interferences hinder the creation of an organisational culture that is consistent with technological changes.

As described in Section 2.2, CI consists of planning and focus, collection, analysis and communication of intelligence, as well as the necessary processes and structures and an organisational awareness and culture. Calof and Dishman (2002) proposed the following model (Figure 15) for CI:

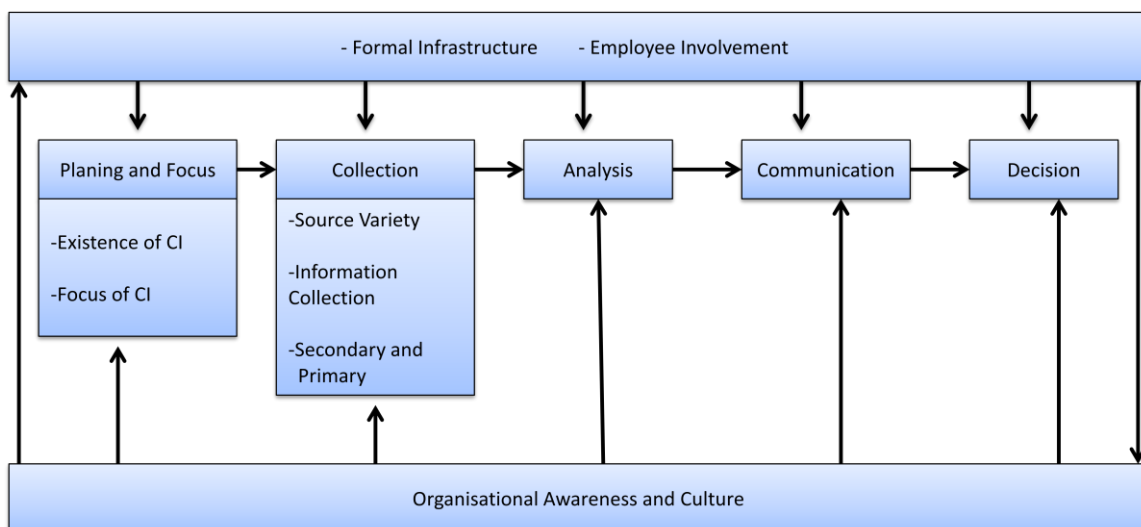


Figure 15. A model of competitive intelligence

(Calof and Dishman, 2002)

Figure 15 shows that this process is affected by certain contextual influences: organisation culture/awareness and the formal infrastructure that is available, as well as employee involvement. There is a limited range of scientific sources regarding aspects of organisational culture for successful implementation of competitive intelligence management (Rustman, 2002). When the culture is in accordance with the information system, the consequences may be as follows (Claver et al., 2001):

- It allows us to ascertain whether the implementation of IT/IS will be satisfactory.
- It establishes the patterns for the usage of information. Thus, it helps to identify which information is important, where it may be obtained and, above all, to whom it must be supplied.
- It is an important means of communication, both inside and outside the organisation (Schein, 2010), and it allows us to assess the effectiveness of IT when applied to telecommunications (Grote & Baitsch, 1991; Kanungo, 1998).
- It creates cohesion among the members of an organisation, as it explains 'the way things are done in a firm'.
- It allows the creation of social control within an organisation. For example, the implementation of an IS, and the correct predisposition of corporate members towards such an IS, is hardly controlled merely by means of formal measures. Cultural rules are also very important in this respect.
- It may help to increase the satisfaction of all internal collaborators in the organisation, as it facilitates environmental adaptation and internal integration, thus reducing the anxiety created by IS/IT.

Claver E. et al. (2001) proposed Figure 17 as an expression of the relationships between the IS and organisational culture. This figure is a good starting point in understanding how information is generated, such that an organisation may make strategic and tactical decisions. Assuming that the IS responsible for transformation of data into information, it is clear that the scope of data and their quality is the key factor. From this perspective, the term 'information-based culture', as used by Southern and Murray (1994) can be explained, as well as the justified need to create a qualitative IS for data collection; whereas, when collecting data, it is necessary to respect the ethical principles that depend on the existing general culture of each organisation (Claver et al., 2001). Here, the relationship of the data collection phase in the CI process to the cultural and ethical principles of each organisation should be emphasised.

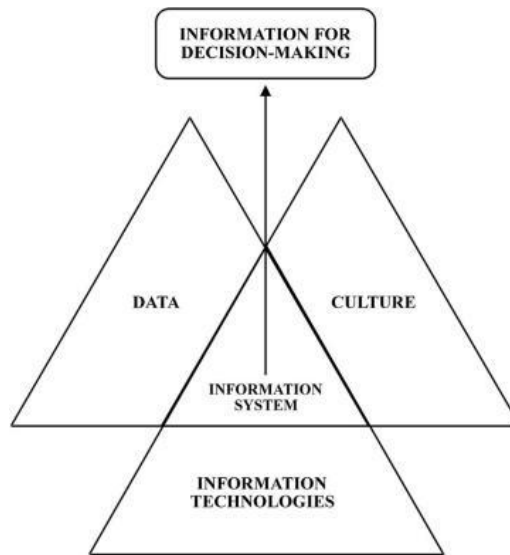


Figure 16. Influence among information technology, information system and organisational culture

(Claver E. et al., 2001)

Claver E. et al. pointed out that one should not neglect Proffitt's (1995) warning that organisations and IS that receive only data are static systems, the procedures of which are based on control culture, and they do not increase knowledge. Thus, several elements are required, and the IS is the one that establishes the specific character of an organisational culture; it plays a very important role in carrying out CI.

It is easy to recognise information culture in an organisation, because it is a material symbol of the culture (Claver et al., 2001). However, information culture is far more complicated than this. Although it is a material symbol of the culture, it comprises *'the people ± through the organisational behaviour ± the information and the data'* (Claver et al., 2001). All these ideas were summarised by Claver E. et al., as shown in Figure 17.

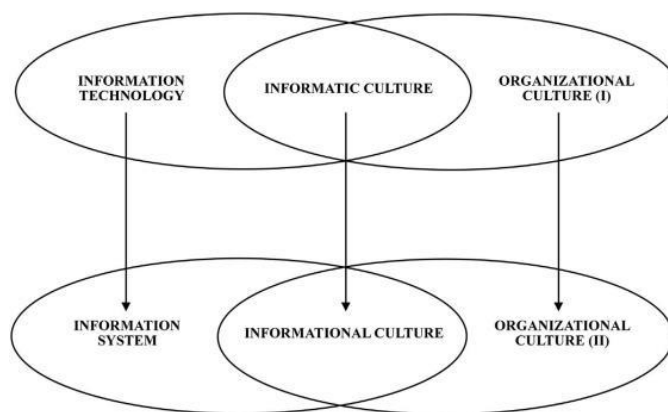


Figure 17. Informatic and informational culture

(Claver et al., 2001)

As Figure 17 shows, an efficient transformation of IT into a suitable IS cannot occur without changing the informatic culture into a culture that is informational. Compared to an informatic culture, an informational culture goes much further, for it understands the usefulness of IS for strategic and tactical decisions in the short-, medium- and long-term (Claver et al., 2001).

Experts of changes, Herold and Fedor (2010), discussed the difficulties caused by a turbulent organisational environment in the process of changes. Applying this concept to separate organisations, scientists have spoken of internal instability, which is felt by organisational members and which can encumber employees when they attempt to introduce some particular changes. Although the leader carefully considers what should be changed, and what will be done and how, the degree of interferences should be accounted for, because employees may be disappointed by a negative response to their plans. Interferences are conditions that reduce the efficiency of each stage of CI, thus affecting the course of the entire process. The fact that employees' ability to adapt to changes is restricted should be considered; therefore the way to make the best use of this ability depends on an organisation's leaders.

The changes, which include remarkable centralisation of power and resources, will result in a far more serious and negative reaction in an open and supportive culture than in a culture that is an extremely structured and bureaucratic. It should be noted that in organisations with hierarchical structure, differing views can emerge with regard to the way information turnover should develop among organisational members at different hierarchical levels. Therefore, it would be necessary to establish common criteria and values observed in the processes of CI management. Organisational culture can be supportive of changes when it corresponds with the prevailing values. Table 7 shows several scientists' different approaches to describing, in order to understand the core values that affect CI management.

Table 7. Approaches used for analysing value of CI in organisations

Approach	Description	Author (year)
CI as a system and knowledge sharing	CI is regarded as a system of environmental scanning that integrates the knowledge of everyone in the company.	Calof & Wright (2008)
	Knowledge sharing positively relates to CI scanning, and knowledge-sharing lifts CI scanning to a higher level.	Luu (2013a)
	The increased level of awareness in an organisation's competitive environment tends to be one of the foundations of the theories of organisational learning.	Garvin (1993), Sinkula (1994), Slater & Narver (1995)
	CI involves the collection of information, internal, external and from competitors, but also from customers, suppliers, technologies, environments and potential business relations.	Calof & Wright (2008)

CI as a process	CI supplies the inputs that tell managers what they need to know about current and future competition, including their own organisation's strengths and weaknesses, financials, major clients, what detailed inspection reveals about existing products in the marketplace, competitor strengths and weaknesses and more.	Gray (2005)
	An organisation's capacity to acquire information and knowledge is a critical success factor in business.	Lapointe (1995), Porter (1990)
	CI is conceptualised as a process that monitors the competitive environment in order to ensure genuine knowledge, which will ensure the competitiveness of the organisation.	Kahaner (1996), Calof & Miller (1997), Herring (1998)
	CI helps executives at companies rapidly understand the competition and move more quickly toward devising strategies and plans to maximise competitive advantage.	Wright & Calof (2006)
	CI benefits arise from an improved understanding of customers' buying habits, prediction of customers' future needs and introducing new products and services. CI benefits arise from an understanding of customers' buying habits, prediction of customers' future needs and facilitating the introduction of new products and services.	Cottrill (1998) Marin & Poulter (2004) Cavalcanti (2005)
	CI information may help in improving resource allocation decisions and thus maximise investment into the most profitable purpose.	Herring (1998)
	In order to use CI for evaluation of performance, it should be used in several measures of the entire process.	Lönnqvist & Pirttimäki (2006), Pirttimäki & Karjaluoto (2006), Blenkhorn & Fleisher (2007)
	The CI process includes the constructs of planning and focus, collection, analysis, communication, process and structure and organisational awareness and culture.	Calof & Breakspeare (1999), Calof & Dishman (2002), De Pelsmacker et al. (2005), Wright & Calof (2006), Viviers et al. (2005), McGonagle & Vella (2002a),

		Nolan (1999)
	All phases of the CI process are interrelated; therefore, the success of one will determine the success of the other.	Strauss & Du Toit (2010)
	The use of intelligence for investigation of future strategies and for focusing the problem through CI.	Liu & Wang 2008
	Efficient intelligence processes do not focus on collection of all the information, but focus on the issues that have the greatest role in senior management decision-making.	Daft et al. (1988), Gilad (1989), Herring (1998), Montgomery & Weinberg (1979), Porter (1980)
	Quality of the CI process construct includes accuracy, clarity, usability, depth, relevance, responsiveness, timing and comprehensiveness.	Teo & Choo (2001)
CI as a decision- making tool	CI may be regarded as the acquisition and use of information about competitors, new competitors, customers, suppliers and competing industries.	Anica & Cucui (2009)
	Every CI analyst may work in a different manner, some of their characteristics can be used to help define where they are least likely to be beneficial.	McGonagle & Vella (2002a)
	CI is capable of providing an organisation with a sustainable competitive advantage.	Santos & Corella (2010)
	Executives at companies with top-notch CI programs have a better understanding of the competitive landscape, such as having a universal view of where competitive threats and opportunities lie.	Vedder & Guynes (2002)
	The impact of CI on executives' decision-making support and subsequently on strategy benefits expansion in the organisation.	Chi & Yan, (2011)

CI as a part of organisational culture	In order for it to be successful, the primary impact on the CI operation is the management style, culture and structure that promotes trust, facilitates communication and provides an easy flow of information.	Wright et al. (2006)
	To successfully utilise CI, there must be an appropriate organisational awareness of CI and the culture of competitiveness.	Viviers (2005)
	CI should focus only on those issues of highest importance to senior management.	Gilad (1989), Herring (1998)
	Organisational culture, ethics and emotional intelligence affect knowledge sharing, which in turn improves the CI process.	Luu (2010), Luu (2013a)
	Organisations should create an environment that facilitates the collection and use of individual competitive intelligence, and this, in turn, positively affects individual performance. CI collection and use by sales and service representatives: how managers' recognition and autonomy moderate individual performance.	Rapp et al. (2015)

Table 7. shows a research gap, as, although several studies addressed CI as a process, few of them considered the role of organisational culture and knowledge sharing. CI can be viewed as a system of environmental scanning that integrates the knowledge of everyone in a company. Consequently, knowledge sharing directly improves the CI process.

Organisational culture includes core values and a consensual view of the things happening in an organisation. Culture can be defined as an active, living phenomenon, which refers to the ideas and values of people, and can affect people's actions without explicitly being noticed (Bolboli and Reiche, 2013). Many have judged organisational culture as being a major determinant of company success (Baker, 2002), particularly via improved employee morale (Coolican & Jackson, 2007). Ehlers (2009) pointed out that culture consists of the following elements: norms and values, patterns of thought, opinions and attitudes, stories and myths about changes, language habits and conduct and collective expectations. The majority of discussions of organisational culture (Cameron & Ettington, 1988; O'Reilly & Chatman, 1996; Schein, 1996) have agreed with the idea that culture is a socially constructed attribute of organisations, and serves as the 'social glue' that binds an organisation together. A majority of writers have come to an agreement that it refers to the taken-for-granted values, underlying assumptions, expectations and definitions present that characterise organisations and their members (Cameron, 2008).

The two main disciplinary foundations of organisational culture are sociological (e.g. organisations have cultures) and anthropological (e.g. organisations are cultures). Within each of these disciplines, two different approaches to culture were developed: a functional approach (e.g. culture emerges from

collective behaviour) and a semiotic approach (e.g. culture resides in individual interpretations and cognitions) (Cameron, 2008).

The development and implementation of the formal structures and processes required for maintain trust is a complicated. However, numerous business leaders believe that the hardest part of building competitive organisations and teams is managing the culture, or what is often considered the 'soft side' of organisational life. They understand that values, operating principles and norms are difficult to manage, yet demand attention, for these are often key in determining how well an organisation or team operates (Shaw, 1997).

Culture is an enduring, slow to change, core characteristic of organisations. The changing of organisational culture is a very difficult goal to achieve, not only because culture is largely unrecognised, but also because, once set, commonly shared interpretations, values and patterns are difficult to modify (Cameron, 2008). Organisational culture offers its members a system of common concepts that serve as the basis for communication and mutual understanding. In this manner, organisational culture creates a context that facilitates both encoding and interpretation of information. Each organisation creates its specific culture by means of language, traditions and communication style (Morgan, 2006). Frequently, communication does not receive the attention it requires until certain problems occur (Downs & Adrian, 2004).

3.2. Various aspects of communication culture

When describing communication culture, it wholly concerns communication and organisational culture as two closely linked aspects in any business organisation. Further, the way in which these two phenomena operate in an organisation is important.

Communication is vital in order to create and maintain relationships, as well as the ability to communicate effectively. Previous studies have concluded that efficient and sufficient communication can contribute to the production capacity and work of the organisation, as well as to customer satisfaction (Downs & Adrian, 2004; Pincus, 1986; Clampitt & Downs, 1993). The main function of communication is to coordinate the activities of system components, providing them with valuable information, to help to explain innovations, making the system process more efficient and growth-oriented, because each individual component is unable to implement alone what they can implement together (Kreps, 1996).

Hybels and Weaver (2011) described communication as any process in which people share information, ideas and feelings, and stated that it involves not only the spoken and written word, but also body language, personal mannerisms and style. Goleman (1998) stated that when working with other people, substantial elements of communication are sharing ideas, giving opinions, finding out what one needs to know, explaining what one wants, working out differences with others and expressing one's feelings.

Communication culture is generated through shared experiences and learning, and subsystems of communication culture are communication system and communication climate (Tukiainen, 2001).

Tukiainen (2001) asserted that communication culture operates as the unifier of functions of the organisation and subcultural groups, as well as the transmitter of valuations among other things, and defined communication culture as applying to communication within an organisation. The researcher believes that valuations describe how things should be and which things are most important for employees. Values and valuations are conceptually close to each other and are often used side-by-side (Tukiainen, 2001).

Communication satisfaction is defined as satisfaction with information flow and with mutual relationships among the members of an organisation (Pincus, 1986). It has previously been noted that internal organisational communication is important for improving employee productivity and performance, and for positive organisational outcomes (Goris et al., 2000; Rodwell et al., 1998; Argenti, 1998).

It has been pointed out that communication satisfaction determines how well the available information fulfils the individual's requests for information pertaining to the task-role or for simply being related to organisational activities (Putti, Aryee & Phua, 1990). Communication satisfaction is also related to work satisfaction, trust and motivation (Gregson, 1990; Orpen, 1997).

Communication satisfaction, '*the satisfaction with various aspects of communication in an organisation*' (Crino and White, 1981), is related to, but not synonymous with, communication practices. The relationship is one of antecedent (communication practices) and consequent (communication satisfaction). Communication satisfaction is an employee's affective appraisal of an organisation's communication practices and is a multidimensional construct. Although the exact number of dimensions that comprise communication satisfaction is not known, eight of these are routinely identified (Downs & Hazen, 1977):

- (1) Communication climate
- (2) Communication with supervisors
- (3) Organisational integration
- (4) Media quality;
- (5) Horizontal and informal communication
- (6) Organisational perspective
- (7) Personal feedback
- (8) Communication with subordinates.

The level of employees' satisfaction with communication is an important factor, and is closely related to the question of whether employees feel valued by management and by the entire organisation. Kozhevnikov (2007) stated that managers should not assume that all employees will share their preferred manner of handling information. Communication in the organisation is no longer just a

transfer of orders or information in one direction and feedback in the other, but is rather the exchange of ideas in all directions and dimensions.

According to Bartoo and Sias (2004), employees identify their immediate supervisor as one of the most important of all informational sources. Lewis (2006) stated that a supervisor's willingness to share information determines the success of change efforts in organisations. Employee perceptions regarding how much they are listened to, and how much their managers respect their opinions, determine their communication satisfaction, which in turn influences their feelings of trust towards the organisation (Zeffane, 2012).

Communication satisfaction can be considered in three contexts – the individual, the group and the organisational context. The feedback, the line manager's communication and communication with subordinates refer to the individual aspect; communication with colleagues and integration into the organisation refer to the group aspect; and the climate of communication and the quality of media refer to the organisational aspect (Mueller & Lee 2002).

Communication helps an organisation to address the internal environment and external adaptation tasks. In the context of organisational culture, internal communication is more important. Internal communication is any type of information that is consciously or unconsciously distributed within an enterprise. In principle, the question concerns formal and informal communication.

Formal communication is all information that is disseminated from the staff to the management or *vice versa*, or which is transferred or received among separate units of an enterprise. The information can flow in three ways: downward, upward and horizontal (Andrews & Herschel, 1996). A variety of information reports, orders, meetings, internal newspapers and the Internet, as well as face-to-face discussions with the supervisor, can be assigned to formal communication. It is very substantial in providing the CI process. Informal communication is represented by informal discussions, as well as rumours etc. This type of communication is also manageable.

Another dimension of communication flow that is critical to CI in organisations is time. CI, which is supposed to provide timely insight to decision-makers, its ability to be developed, transmitted, and understood quickly can differentiate those CI operations that succeed from those who perform less effectively. CI produce actionable insights for decision-makers (Fleisher, 2008).

Unfortunately, internal communication does not receive adequate attention at enterprises. Communication competence is set to become a critical success factor for businesses in the future, but this requires a broad understanding of communications; all too often, corporate communications is still understood simply in terms of press releases and media relations, or staff presentation and negotiation skills (Malmelin, 2007). The senior management of an enterprise often steer clear of the internal communication. In this manner, the main principle of communication is forgotten: communication cannot be one-sided, it should have feedback. Organisational culture creates the internal communication habits of the enterprise and provides for a comprehensive exchange of opinions.

The direction of communication flow depends on an organisation's structure or type (Pincus, 1986). Efficiency, or combination of each flow, should be analysed in an organisational context. New organisation management processes and technologies create the possibility that new, and possibly conflicting, communication flows will occur. Communication should occur with every employee at any level, and an organisation should be a flexible system that allows information to flow through various divisions and hierarchical levels in different ways (Mount & Back, 1999).

Claver et al. (1998) described the mutual influence of communications and corporate culture, and analysed whether communication is a part of culture or culture is a part of communication. He writes about a number of authors' (Alvesson & Berg, 1992; Lee & Barnett, 1997; Singelis & Brown, 1995) supporting position: communication is as part of culture (Claver et al., 1998) and for explanation, he mentioned the view of Bantz (1993), according to whom there are three lines of research that support the idea that communication determines culture: (1) The analysis of language and the fact that it is a collective and cultural action (Carbaugh, 1988; Gronn, 1983); (2) the theory of symbolic convergence, which underlines the notion that communication constitutes the social reflection of a collectivity (Bormann, 1985; Sharf, 1978), and (3) the theory of restructuring. Structuring refers to the production and reproduction of social systems through the application of generative roles and resources, and it describes communication as the basic generative mechanism (Deetz, 1982).

In contrast, Claver et al. (1998) considered the issue of culture as a part of communication, on the basis the opinion expressed by Pacanowsky and O'Donnell-Trujillo (1982), and asserted that the following features could describe this viewpoint: (1) Any communication can be better understood if the shared values are known previously; (2) cultural study can provide each member of the organisation with a global view of the organisation and the communication channels; (3) questions concerning culture allow interpretation of the existing communication habits; and (4) culture diagnosis reveals the habits of organisational communication and enables their comparison (Claver et al. (1998). Summarising these opinions, Claver et al. (1998) described 'communication in corporate culture', and visualised their idea, as shown in Figure 18.

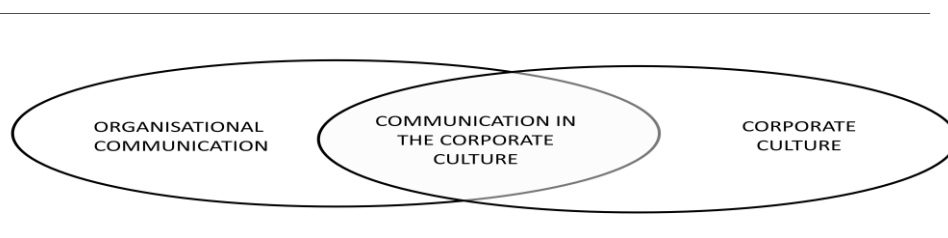


Figure 18. Communication in corporate culture

(Claver et al., 1998)

This view is very interesting, if we assume that any organisational communication and values of organisational culture have an immediate impact on an organisation. According to Prescott and Miller (2001), changes in organisational culture that focus on coaching and sharing, promoting collaboration and candor, trust and constructive confrontation should be provided. They emphasised: '*We're moving*

away from the concept of sharing on a need-to-know basis, and assuming a need-to-share basis', and believed that this is the way to change organisational culture with regard to CI. Even in cases where organisational culture is 'strong' enough to ensure a CI process, the elements ensuring communication culture should be strengthened. The communication culture of an enterprise serves for fast and open provision of distribution of business information, management decisions and changing reports, as well as being a support for the development of innovations and new ideas.

3.3. Translating organisational culture values into behaviours

The impact of organisational changes on the habits of individuals according to various aspects was documented as early as in the 1990s by Demers et al. (1996), who concluded that *'organisations tend to be very good at planning and orchestrating the technical and structural aspects of change, but poor at guiding and supporting the human side – the personal reorientation associated with change.'*

Coolican and Jackson (2002) pointed out that today's corporate culture basically provides the framework to implement and operationalise business strategies. It is important for managers to be aware of the existing company culture and to introduce strategically significant changes if necessary. Morgan (2006) stated that our understanding of culture is usually far more fragmented and superficial than the reality. Like organisational structure, culture is often viewed as a set of distinct variables, such as beliefs, stories, norms, and rituals that somehow form a cultural whole. Such a view is unduly mechanistic, giving rise to the idea that culture can be manipulated in an instrumental manner. Managers can influence the evolution of culture by being aware of the symbolic consequences of their actions and by attempting to foster desired values, but they can never control culture in the way that many management writers have advocated (Hoffstede, 2001). Schein believed that cultures cannot be changed arbitrarily, but can evolve as the group eliminates the dysfunctional or undesirable elements of the current culture and builds on the strengths and virtues of the desired culture. Bresnen and Marshall (2000) considered *'... organisational cultural change, at best, depends crucially upon a number of situational factors [including]: whether there is a shared perception of a need for change; whether the climate is supportive or not (i.e., encouraging open debate and trust); whether the existing culture is powerful, well established and mature (i.e., entrenched); and whether or not powerful and competing subcultures and countercultures exist'.*

In contrast, Bennis W. (1988) posited that positive change requires doing three things:

- (1) Gaining our trust;
- (2) Expressing their vision clearly so that we all not only understand, but concur;
- (3) Persuading us to participate.

Cameron (2008) believed that most people are unaware of their culture until it is challenged or a new culture emerges, or until the moment when the culture is transformed as open and clear by using, for example, a system or a model. However, if it is found that cultural changes are the intended goal of the

organisation, its members should engage in performing the cultural changes on a step-by-step basis, thus applying motion to the process of cultural transformation. The objective of these steps is to direct organisational culture from the current situation to the intended future situation, and they were described by Cameron, on the basis of several previous authors who had described successful change interventions aimed at organisational culture change (e.g. Hooijberg & Petrock, 1993; Kotter, 1995). These steps initiate change in individual and organisational processes, conversations, language, symbols and values, none of which alone ensures that a culture change will occur, but in combination create a huge momentum towards fundamental culture change in organisations (Cameron, 2008).

Inspired by Reger et al. (1994), Bolboli and Reiche (2014) illustrated the probability of members accepting a culture change (Figure 19).

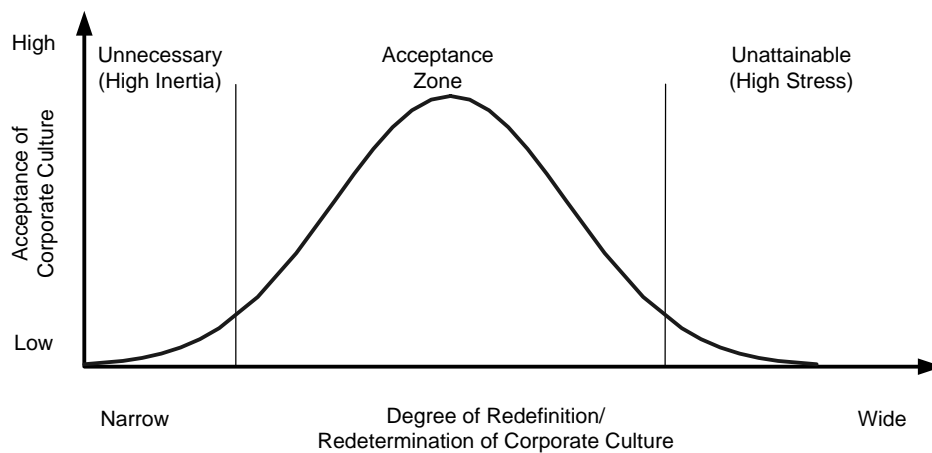


Figure 19. The probability of members accepting a culture change (Bolboli & Reiche, 2014)

As shown in Figure 19, if the degree of redefinition is low, people may perceive cultural changes as unnecessary and may believe that the current situation is adequate. The optimal situation for changes in the corporate culture will occur when the gap between the current and ideal situation is sufficiently large as to create the necessary stress for members, which finally results in a desire for changes. If the difference between current and ideal corporate culture is within a zone of acceptance, there is an increased probability that organisation members will accept changes in corporate culture. In this respect, the model developed by Claver et al. (2001) appears to be of interest.

If changes in organisational culture are introduced to improve efficiency of an IS and to promote the role of the CI process, attention should already be focused on changes before the introduction of an IS.

Bolboli and Reiche believed that if the change in organisational culture is defined as low (i.e. the current and ideal identity closely correspond), employees can admit that the culture change is needless and will believe that the current state of culture sufficiently equates to the ideal situation. However, if the scope of defined changes is extended, the gap between the current and the ideal situation will increase,

resulting in organisational stress and motivating employees to seek a solution in order to eliminate the gap. When changes in organisational culture occur, the optimal situation is for the gap between current and ideal situation to be large enough, but still insufficient to render the ideal situation unachievable. If the difference between current and ideal organisational culture is within the zone of the acceptance, the probability of the culture changes being accepted by organisational members will increase.

Cameron (2008) described a clear understanding of what the organisational culture change might mean and what it cannot mean as being one of the major steps in acceptance of culture changes. If the organisation is making progress towards one particular culture, it does not mean that other types of culture should be ignored or completely rejected. It only means that certain elements should be particularly emphasised so that culture changes are successful. In the transformation process, an organisation should not refuse the main features, which make it unique, although some of these features will be modified in the process of change. When defining culture change, one should be aware of what will be maintained and what will be altered as a result of transformation. In this respect, Claver et al. (2001) developed a model that summarises the four situations that may arise when implementing an IS, with regard to the specific cultural situation existing in an organisation.

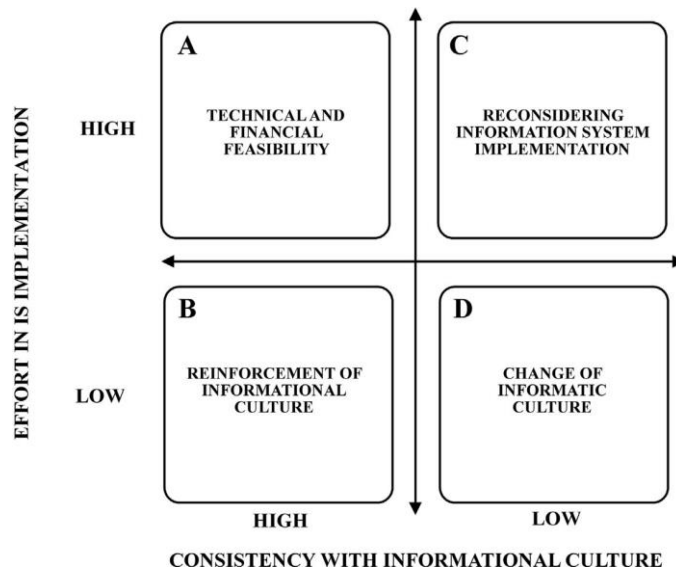


Figure 20. The performance of information systems

(Claver et al., 2001)

The vertical axis represents the effort in IS implementation; this refers to the degree of technical and financial feasibility of an IS that is based on the quantitative, measurable effort that an organisation must make in order to effect implementation. The horizontal axis shows the consistency with the informational culture. Before the new IT is introduced to develop the IS, it is necessary to audit the specific culture of an organisation, with specific reference to the common attitude of its members towards IS/IT (Claver et al., 2001).

Claver et al. explained that if the situation is like the one in cell A (Figure 20), where there is a suitable informational culture, but a great quantitative effort must be made to implement the IS, the decision is easily made. They pointed out that it is necessary to assess the technical and financial; if this is positive, then the IS will be easily and successfully introduced; otherwise, the investment must be reconsidered. If the situation is that illustrated in cell B, then the position is ideal, for the firm will profit from implementation of the IS and at the same time strengthen the informational culture. If the organisational situation is like that shown in cell C, there is a total lack of agreement between the two factors at stake. Here, the organisation should reconsider whether it is really interested in starting this process, as there are big disagreements. Finally, in a position such as D, the problem arises from a confrontation with culture. However, as it is technically and financially feasible, the possibility of IS implementation must be accounted for. Considering the fact that the culture will have been previously audited, the extent to which there is a genuine refusal towards IS/IT implementation will be known. If the existing culture is one of informatics, a procedure that will transform it into an informational culture must be envisaged. In addition, a situation might arise in which not even informatics values exist; in this situation, it would first be necessary to persuade everyone in the organisation to share these, so that they can later be transformed into informational values (Claver et al., 2001).

Cameron (2008) stated that it is absolutely clear that resistance to culture change will occur within an organisation. As a result of changes, an individual's basic way of life will be challenged and such a familiar and habitual environment will be changed. Therefore, fundamental change of certain features should occur, which could lead to strong resistance. Leaders of change should be capable of explaining the changing realities to employees.

It has been suggested that leadership is one of the most crucial factors contributing to the attitudes of employees towards their organisation (Buckingham & Coffman, 1999; Bass et al., 2003). A clear understanding of organisational culture is important for all leaders, because it influences the way that their organisations react to the changing demands of the business environment (Denison et al., 2014). Informing employees of the process of culture change is an instrument for reducing and overcoming resistance and its possible consequences. Explaining the reason why the culture change should be carried out might be the most important step in ensuring transformation. Previous research has suggested that people tend to explain 'why' to people they care about and hold in high esteem (Cameron, 2008).

Herold and Fedor (2010) studied the way in which leaders and followers perceive the specific aspects of changes managed by leaders and how this perception is related to the various results of changes – both personal and individual – and showed that, with regard to the behaviour of change launching and both stages of implementation, leaders believe that they perform better than their subordinates think. This research revealed that leaders are far more optimistic than their subordinates with regard to the process of changes. However, the data are interesting in that they show a broad consensus between both groups. This could indicate that leaders do not spend much time in evaluating the process of change, in ensuring feedback, in expressing supportive gratitude or in otherwise showing appropriate behaviour.

Herold and Fedor (2010) believed that this could be a characteristic feature of organisational culture rather than a quality of individual leaders.

Unsuccessful change can be a significant obstacle to motivation, particularly if it repeatedly occurs. It is important to take care of the maintenance of changes, to communicate mutually in order to find out the actual situation – how implementation of changes proceeds, so that there is a minimal difference between the opinions of leaders and subordinates.

It is important to focus on change leadership behaviour in general. An organisation's cultural values are frequently published in that organisation, pasted on the walls, and that is expected to change the culture. Successful organisations bring values to life in everything that happens in the organisation (Cook, 2008).

In many organisations, organisational behaviour is determined rather by organisational culture than by the directives of top management and implementation of strategy, since they contradict organisational culture (Jarnagin & Slocum, 2007). Schein (2010) stated that culture can be abstract, but its behavioural and relational consequences are definite. Expediency of culture can only be identified when it is observable.

3.4. Aspects of organisational culture influencing of knowledge-sharing habits

Previous research has shown that organisational culture is one of the key determinants among the factors contributing to, or hindering, knowledge exchange (Abzari & Teimouri, 2008; Al-Alawi et al, 2007; Stankosky, 2005; McDermott & O'Dell, 2001). However, comparatively little research regarding the impact of organisational culture on knowledge exchange has been conducted (Sackmann & Friesl, 2007). Today, knowledge sharing is widely-held to be inherently necessary to the health of most enterprises (Smith and McKeen, 2002). It is believed that a large part of organisational cultures acts as a barrier that hinders knowledge-sharing and should be replaced, so that the situation becomes more favourable (Gupta and Govindarajan, 2000). According to DeLong and Fahey (2000), there are four main reasons why culture is viewed as a condition for knowledge exchange in an organisation:

1. Culture forms people's assumptions of what type of knowledge is important.
2. Culture determines the relationships between the levels of knowledge, namely, which knowledge belongs to the organisation and which belongs to the individual.
3. Culture creates a context for social interaction regarding knowledge.
4. Culture contributes to the emergence and acceptance of new knowledge.

Cameron and Quinn argued that taken-for-granted values, underlying assumptions, expectations and definitions already in existence contributed to the reason for ignoring organisational culture as an important factor. Among various theories and models, the structural framework developed by Cameron and Quinn (1988) or the Organisational Culture Assessment Instrument is widely used for studies of organisational culture (Suppiah & Sandhu, 2011). The structural framework of organisational values is

based on the key indicators of organisational efficiency. Cameron and Quinn provided a list of organisational efficiency indicators determining the leading organisational values: clan, adhocracy, market and hierarchy.

The results of several studies have shown that the hierarchy culture does not contribute to knowledge exchange within an organisation. The values of hierarchy culture provide for strong policy, compliance with its rules and adaptation. Such adaptation to company policy is not always voluntary, but is determined by an employment relationship. Almost all processes within organisation are determined by the procedures maintaining the customary organisational rhythm of work, and organisation is integrated through formal regulations and official policy. In such organisation, success is determined by accurate performance of all operations and ability to forecast a long-term outlook. Leaders are proud of being rational coordinators and organisers (Deal & Kennedy, 2000).

Strict rules and policies can result in both formal and informal relationships in a company; however, employee interaction may be not so productive in the sphere of improving the intellectual capital and quality in the workplace. Mutual trust and knowledge-exchange governed by laws and regulations (e.g., employee X is obliged to contact employee Y) will not be sufficiently transparent. Previous studies have shown that in organisations with a dominating hierarchy culture, managers are reluctant to share knowledge with their subordinates (Lichtenstein & Brain, 2006).

Willem and Buelens (2009) showed that hierarchy and centralisation had no negative effect on knowledge-sharing. However, team-based structures and horizontal coordination resulted in a higher level of knowledge-sharing (Friesl M. et al., 2011).

In organisations with characteristics of a hierarchical culture, a difference of opinions can develop with regard to the method of building information turnover between people of different ranks of hierarchy. It is therefore necessary to establish uniform criteria, values or assumptions, which should be followed in the CI process. In the event that the organisation is ruled by conflicting views that are mutually exclusive, it means that the organisational culture is weak and lacks stability.

Knowledge-exchange within an organisation cannot be ensured by regulations or by force. A motivating environment should be created, which would promote knowledge sharing and in which there would be balance between individual and collective interests (Wasko & Faraj, 2005).

Clan culture is characterised by a friendly working environment, appearing to the employees like a large family, but the organisation is united by trust and traditions. The relationship between the individual and the collective (community, group, team or organisation) is the main condition promoting knowledge exchange (van den Hooff & Huysen, 2009). In such a culture, employees are usually involved in decision-making. Harmonious mutual relationships and a focus on human resource strategies that is characteristic of clan culture reduces the tension of interpersonal relationships and contributes to knowledge-sharing. The leaders or managers of the organisation are viewed as educators and parents, which emphasises the importance of long-term personal development.

In a company with a dominating market culture, the focus is on communication formed between the organisation and its customers (Luu, 2013b). At customer-oriented companies, there is a positive trend in knowledge exchange among middle-level employees (Ooi et al., 2012). Likewise, adhocracy culture also energises the momentum to change or innovate, especially in terms of technology, among members of the organisation (Luu, 2014a). Such a culture improves knowledge-absorption capacities, and stimulates dynamics of learning among members. Adhocracy culture allows the most successful implementation of new ideas within an organisation, to organise debates in order to reach an innovative strategy. Moreover, adhocracy culture involves members in complex problems, which stimulates them to bring knowledge and experience to the situation, and create, use and share tacit knowledge (Augier et al., 2001).

Adhocracy culture is characteristic of a dynamic, creative working environment that is full of initiative. Such a culture is characterised by the willingness of people to dedicate their time in favour of the common matter; organisation, for its part, stimulates individual initiatives and freedom. People are united by the idea of innovation and the constant implementation of innovations in the working environment (Deal & Kennedy, 2000).

Luu (2013a) argued that an organisation's orientation towards success or external orientation creates an incentive for employees to accept individual changes, as well as changes in the organisation. In such a manner, employees identify themselves as individuals within the team or within the entire organisation, and activate their impulses through sharing knowledge with their colleagues and other organisational members, while simultaneously filling gaps in their knowledge.

Previous research has shown that leaders and employees function at different levels, depending on their values orientation (Hall, 2001). Employees need to know how to translate the values. If people understand the meaning, how it links to what they do and the positive impact it can have on them and their colleagues, then employees will have greater motivation to put values into practice. Values must be well communicated if they are to become part of the culture of an organisation. Fukuyama believed that trust develops when people share a set of values, such that certain expectations of consistent and honest behaviour exist. Moreover, the particular character of the values is less important than the fact that they are shared. Leaders' values of their care for followers, integrity and competence are all necessary to foster interpersonal trust – an essential ingredient in servant leadership (Covey, 2009, Greenleaf, 2002; Russell, 2001).

Barrett (2006) believed that the primary task to be completed at the preparatory stage of changing the entire system is to evaluate general values of the particular company in order to find out employees' personal values and their views regarding the current and the desired cultural values. The process should begin with identification of the steering group's values and with the steering group's commitment to changing their behaviour.

In their study of the relative impact or contribution resulting from the manner in which a leader conducts certain changes, the leaders' general leadership styles and the willingness to work for the certain changes, Herold and Fedor (2010) found that personal trust overpowered the behaviour of the leadership of smart change. However, not all leaders enjoy such close relationships with their followers that they can use these relationships during the changes, and even those who have such behaviour at their disposal can replenish their personal competencies with a more relevant behaviour suitable for changes. For example, an organisation, the activity of which is hindered by poor internal relationships, could focus on building trust.

3.4.1. The trust influence of organisational knowledge sharing

Trust plays a fundamental role in the process of social exchange, by clearing individuals of their obligation (Blau, 1986). Blau believed that the maintenance of a relationship in the long-term is heavily dependent on the sense of trust established between two individuals. For instance, Cook and Wall (1980) defined trust between individuals and groups within organisations as a phenomenon that is a highly important ingredient in the long-term stability of these organisations and the well-being of its members.

Organisational trust is of increasing interest, due to its positive influence on organisational and member outcomes, including organisational effectiveness, job satisfaction and team performance (Coleman, 1990; Rousseau et al., 1998; Tannenbaum et al., 1992). In turn, on the theoretical level, Renzl (2008) provided empirical evidence for two ways in which trust has an impact on knowledge sharing: reducing fear of losing one's unique value, and improving knowledge documentation.

A state-based definition of trust in organisations is distinct from an interpersonal view of trust (Rotter, 1967), and also from an economical, transaction-based trust (Das & Teng, 1998), in two key ways. Firstly, a state-based definition of organisational trust specifies the boundary condition as the relationship between the trustor and the trustee; and secondly, it examines the influence of the organisational context on the development of trust (Mayer et al., 1995). Dietz and Den Hartog (2006) found that trust in the most-quoted definitions can be broken down into three constituent parts: trust as a belief, as a decision and as an action (Table 8).

Table 8. Common definitions of trust

(Dietz & Den Hartog, 2006)

The conscious regulation of one's dependence on another	Zand (1972)
The extent to which one is willing to ascribe good intentions to, and have confidence in, the words and actions of other people	Cook & Wall (1980)

A state involving confident positive expectations of another's motives with respect to oneself in situations entailing risk	Boon & Holmes (1991)
The extent to which a person is confident in, and willing to act on the basis of, the words, actions and decisions of another	McAllister (1995)
The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party	Mayer et al. (1995)
The specific expectation that another's actions will be beneficial, rather than detrimental, and the generalised ability to take for granted ...a vast array of features of the social order.	Creed & Miles (1996)
Confident positive expectations regarding another's conduct in a context of risk	Lewicki et al. (1998)
... reflects an expectation or belief that the other party will act benevolently	Whitener et al. (1998)
A psychological state comprising the intention to accept vulnerability [to another] based on positive expectations of the intentions or behaviour of another	Rousseau et al. (1998)

Several authors have confirmed that trust is the essential element allowing for interaction within relationships and social exchanges (Young, 2006; Bachmann & Inkpen, 2011). Thus, trust tends to crystallise the relationship between two individuals by building a virtuous spiral of exchanges (Paillé et al., 2013). Some studies have provided evidence to show that trust facilitates knowledge-sharing in an organisation (Ghoshal & Bartlett, 1994; Goh, 2002; Renzl, 2008; Holste et al., 2010).

Levin et al. (2004) described two distinct types of trust that are instrumental in the process of sharing knowledge: benevolence-based trust and competence-based trust. They further argued that trust can be developed even when there is only infrequent interaction between individuals, as long as competence- and benevolence-based trust exists between the two parties. Examining trust as an essential element of culture, we can understand how a lack of a trust culture permits discord and disharmony, not only in organisations, but also in social institutions from the family to the world (Greenleaf, 2002).

Some previous research has been conducted on the factors affecting the development of trust, and these are personal factors, such as communication (Selnes, 1998), ability (Sichtmann, 2007), educational

level attained (Massey & Dawes, 2007), experience with the task, expertise and disposition (Sarker et al. 2001). Experts of change Herold and Fedor (2010) showed that leaders who have established relationships of personal trust will enjoy followers' support during the period of certain changes, although they will not do everything 'by the book' when it comes to practical management of change. However, if this change-related behaviour is inappropriate or is not considered to be mutually favourable, it will exhaust the resources of trust and make changes much more difficult.

In as early as 1960, Argyris (1990) expressed the view that trust in management is an important condition for organisational activity. Trust in senior management encourages cooperation, which in turn is a precondition for knowledge-sharing, thus contributing to the growth of an organisation's success. Individuals are more willing to share or contribute knowledge in a trusting atmosphere (Dirks & Ferrin, 2001). Empirical studies have shown that positive cooperation among individuals is an essential precondition for knowledge-sharing (e.g., Levin & Cross, 2004; Lucas, 2005), which stimulates interpersonal knowledge-sharing and learning. Confidence can be studied from different perspectives: from trust as an individual feature to trust as a social reality. For example, previous studies have found a positive correlation between trust in management and organisational performance.

As trust is a key relationship commodity, if not *the* key relationship commodity, an understanding of how to operationalise the power of the trust concept is important for managers (Dowell et al, 2013). Leaders should persuade their followers to accept change on the basis of the strong mutual personal trust they have built with those whom they ask to change.

3.4.2. Barriers to the development of trust

Herold and Fedor (2010) showed that leaders who have established relationships of personal trust will enjoy their followers' support in the period of the concrete changes, even they do not do everything 'by the book' when they come to change management in practice. However, if this change-related behaviour is inappropriate or not viewed as mutually beneficial, it will exhaust the reserves of trust and make the changes far more difficult.

The building of trust in an organisation requires a leader to engage in a difficult task, one that is fraught with risk; several forces may hinder the development of trust among group members (Fairholm & Fairholm, 2000):

- (1) Individual (interpersonal communication, apathy and alienation, the risk of trusting others, personal selfish interest, leader sensitivity to follower needs);
- (2) Organisational: (authority structure, the lack of effective accountability mechanisms, a history of negative trust events, organisational structure);
- (3) Societal: (the general decay of moral values).

Shaw (1997) believed the key imperatives in building high-trust organisations and teams are achieving results, acting with integrity, and demonstrating concern, as shown in Figure 21.

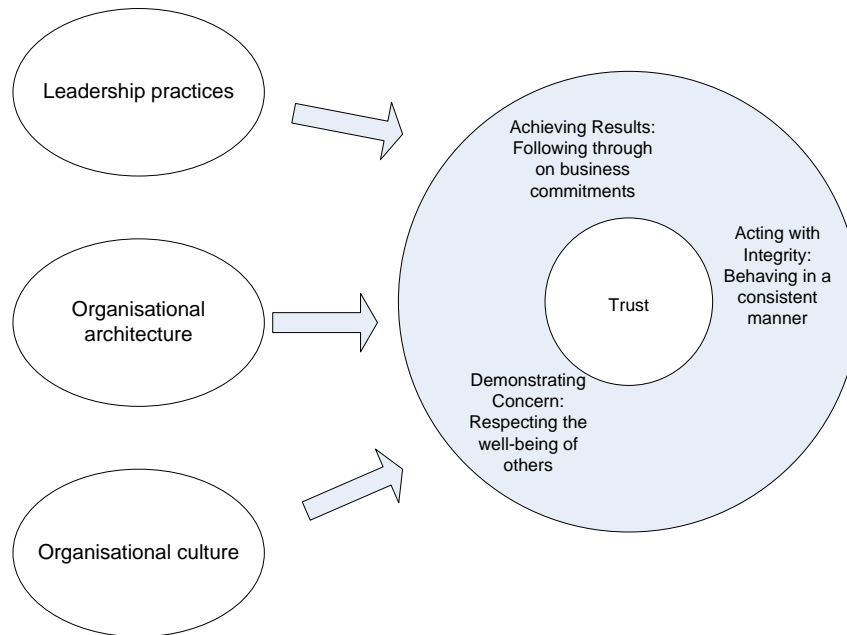


Figure 21. Building trust

(Shaw, 1997)

Sustaining an appropriate level of trust requires a balance of these imperatives - even when they come into conflict with each other. This balancing act requires superb leadership, as well as an organisation designed to sustain trust (Shaw, 1997).

It has been shown that the behaviour of leaders influences the perception of organisational culture among followers (Block, 2003), and it is thought that the types of practices involved arise from the basic assumptions that managers make in developing and attempting to implement visions/philosophies and/or business strategies that are necessary for the company's long-term survival (Igo & Skitmore, 2006).

The building of trust in an organisation requires a leader to engage in a difficult task, one fraught with risk (Fairholm & Fairholm, 2000). As trust is a key relationship commodity, if not *the* key relationship commodity, an understanding of how to operationalise the power of the trust concept is important for managers (Dowell et al., 2013). A leader should be capable of convincing their followers to accept the changes on the basis of the strong personal trust acquired from those whom they ask to change. These relationships are characterised by mutual support of different levels, and a mutual necessity – a satisfaction that will affect the followers' aspiration to act in the direction suggested by the leader. The followers will do this in accordance with the extent to which they trust their leader – that he/she has the required experience and resources for everything to be successful, and that the leader will support them throughout the process of change (Herold & Fedor, 2010). The leader of change will listen to others'

opinion, will be open to others' contributions, will obtain information, will identify problems together, will encourage, will create action plans and will celebrate the success.

He et al. (2009) argued that trust has been widely recognised in many studies as an important enabling factor in seeking knowledge.

3.5. The knowledge-sharing culture in terms of competitive intelligence

Some managers acknowledge the fact that organisational culture is the most relevant obstacle in creating and attracting knowledge assets (De Long & Fahey, 2000). Milne (2007) took the position that employees in general are motivated to accumulate, and not share, knowledge in order to maintain their competitive advantages. From the perspective of information turnover, organisational culture reflects the way of spreading knowledge or differences across the organisation, as well as the values preventing the organisation from ageing. McGonagle & Vella (2002a) pointed out the following:

'Each of the forms in which intelligence is delivered to end-users has unique characteristics, strengths, and limitations. While every CI analyst may handle them in a different manner, some of these characteristics can be used to help define where they are least likely to be beneficial. The goal is to see that the end-user in time for it to be useful and in a form that the end-user can deal with. Given a choice between taking additional time to communicate critical CI in the right form or sending it in the wrong way, keep in mind that form is never more important than substance quantitative.'

In order to enable knowledge sharing within a company, a specific role is played by the existing organisational culture, since certain organisational cultures promote more open information movement among members (Hofstede & Hofstede, 2010). Correctly selected organisational culture will support the knowledge-sharing experience among organisational members. In many organisations, organisational behaviour is determined by organisational culture rather than by directives of top management and implementation of strategy, since they contradict organisational culture (Jarnagin & Slocum, 2007).

In order to ensure a successful CI process, constant accumulation of experience and transformation of this experience into the knowledge that is required for the progress of the entire organisation, and for attainment of its goals, is necessary. As Tsai (2001) suggested, while each work division has its own specialised knowledge, it can also learn from other work divisions within the organisation. However, the reasons behind the stimulation or hindering of knowledge sharing within an organisation are comparatively difficult to identify and complicated to manage. Identification of motivating facts, which determines employees' mutual sharing of knowledge, is a matter of high priority (Davenport & Prusak, 1999).

Studies conducted on knowledge sharing and its impact on CI processes are scarce; however, there is a scientific and theoretical justification of the role of information and knowledge in CI management. Luu (2013a, 2014b, 2015, 2016) conducted a number of studies of this nature in order to ascertain whether organisational culture, ethics and emotional intelligence affect knowledge sharing, which in turn

improves the CI process. He believed that CI is the act of creating market opportunities from outwittingly discerning and zooming in on the right information, favourable as well as unfavourable to an organisation, in the competitive race (Luu, 2013b); members' unwillingness to share knowledge is detrimental to organisational sustainability (Lin & Tang, 2016) due to that organisation's poor CI. This study substantiated the fact that knowledge sharing positively relates to CI scanning, and Luu believed that knowledge sharing elevates CI scanning to a higher level (Luu, 2013b).

Knowledge can be considered from several perspectives. For example, it can be viewed as a state of mind, an object or a condition for access to information (Alavi & Leidner, 2001; Wasko & Faraj, 2005). Knowledge can also be considered as an individual's state of mind, which is adapted to an organisation's requirements (Wasko & Faraj, 2005). Knowledge can be stored, acquired and manipulated. While early studies highlighted organisation-level knowledge as embedded in routines, recent research has increasingly stressed the role of individual-level knowledge and the importance of knowledge-sharing and transfer between team and organisation (Friesl et al., 2011).

Several authors have admitted that it is necessary to view these phenomena and terminology from several perspectives: The process of transferring personal or body knowledge from one discipline to an individual is defined as knowledge sharing in knowledge management. Alternatively, the process of sharing could be defined as collection of data, as they are particularly structured for the purpose of a semantic web. Approaches used for the analysis of knowledge-sharing behaviours in organisations are summarised in Table 9.

Table 9. Approaches used for analysing knowledge-sharing behaviours in organisations

Approach	Description	Author (year)
Impact of culture on knowledge sharing behaviours	An organisation's culture is engaged within a national culture.	Hofstede (2003) Chow et al. (2000)
	In cultures with a high level of individualism, knowledge sharing may be more difficult than in cultures with highly pronounced collectivism. In cultures with a high power distance, a top-down flow of knowledge may be more characteristic than in cultures with a low power distance.	Ford & Chan (2003)
	Organisational culture is one of the main factors that contribute to, or hinder, knowledge sharing.	Abzari & Teimouri (2008) Al-Alawi et al (2007) Stankosky (2005) Sackmann & Friesl (2007)
	Culture determines the relationship between levels of knowledge, namely which knowledge belongs to the organisation and which knowledge belongs to an individual.	DeLong & Fahey (2000)

	In organisations with dominant hierarchical cultures, leaders reservedly share their knowledge with their subordinates.	Lichtenstein & Hunter (2006)
	In order to promote knowledge sharing in an enterprise, the emphasis should be placed on the existing organisational culture, as some of this promotes a more open flow of information between employees.	Hofstede & Hofstede (2010)
	In many organisations, organisational behaviour is more often determined by organisational culture, rather than senior management directives and implementation of strategy, as these may conflict with the organisational culture.	Jarnagin & Slocum (2007).
	Organisational culture, ethics and emotional intelligence affect knowledge sharing, which in turn, improves the CI process.	Luu (2013a), (2014)
	Transfer of knowledge and culture promotes knowledge sharing among employees, and it is crucial in order to allow an enterprise to achieve competitive advantages.	Bradley (2004)
	Hierarchical culture that focuses on efficiency and unity is positively correlated with employees' explicit knowledge-sharing; group culture that focuses on trust and belonging, is positively correlated with employees' tacit knowledge-sharing, and their relationship is fully mediated by employees' computer self-efficacy.	Shao et al. (2012)
Knowledge sharing phenomena from the perspective of personal factors	Recipients' characteristics play different roles in different situations (responsive and proactive knowledge-sharing) in triggering the knowledge-sharers' motivation to share.	Zhang & Jiang (2015)
	There are personal factors such as, experience with the task, expertise and disposition. Personal factors affect knowledge sharing, for example, educational level attained, experience in task performance, expertise and disposition.	Sichtmann (2007), Massey & Dawes, (2007) Sarkar et al. (2001)
	Employees are generally motivated towards accumulating and not towards sharing knowledge, in order to maintain their competitive advantages.	Milne (2007)
	Knowledge sharing in an organisation is promoted by such factors as organisational motivation and a system of stimuli.	Bock et al. (2005) Ardichvili et al. (2003) Hinds & Pfeffer (2003)

	Individual team members play a part in collective knowledge outcomes by focusing on the intra-individual processing of knowledge.	Weinberg (2015)
The role of trust for provision of knowledge sharing in an organisation.	In order to facilitate and stimulate creation of organisational knowledge, qualitative factors, such as truthfulness, beauty or goodness, are equally important to qualitative, economic factors, such as efficiency, cost or ROI.	Nonaka (1994)
	Trust in management increases knowledge sharing, reducing the fear of losing their unique value and improving readiness to document the knowledge.	Renzl et al. (2005)
	Trust in the workplace has a mediating effect on organisational knowledge sharing behaviour. There is a significant correlation between expected personal benefit via knowledge sharing and the development of trust in the workplace.	Kuo (2013)
	Trust facilitates knowledge sharing in an organisation.	Ghoshal & Bartlett (1994) Goh (2002) Holste et al. (2010)
	Social identification and trust in the workplace have a mediating effect on online knowledge sharing within organisations.	Li-An Hoe et al. (2012)
Co-worker support	External knowledge sharing is far more valuable if groups are structurally different. Members who are situated in various places, represent various functions, report to various business units and work in different business units can benefit from unique sources of knowledge outside of their particular group.	Cummings (2004)
	Both intragroup and external knowledge-sharing are important for performance in work groups.	Cummings (2004)
	Co-worker support and learning orientation is positively, but exchange ideology is negatively, related to knowledge sharing. When co-worker support is low, knowledge sharing is primarily dependent on each individual's characteristics. When co-worker support is high, employees show high level of knowledge sharing, irrespective of their individual characteristics.	Lee et al. (2015)

The role of mutual communication for provision of knowledge-sharing in an organisation	The differences in the level of knowledge sharing in high vs. low trust situations are significant. The effect is larger for affect-based trust and for implicit knowledge.	Rutten et al. (2016)
	Explicit knowledge is expressed in formal language; in turn, tacit knowledge is intuitive, inarticulate and is not verbalised.	Nonaka (1994) Li & Gao (2003)
	It is almost impossible to disseminate tacit knowledge without the active participation and cooperation of experts.	Davenport & Prusak, (1998) Nonaka & Takeuchi (1995)
	The results indicated that social interaction in a work group was positively related to group trust, and that task interdependence was positively related to group trust and a supportive climate for knowledge sharing.	Wu & Lee (2016)
The role of technologies in knowledge- sharing	Knowledge sharing in an organisation is facilitated both by information processing and by technologies.	Alavi & Leidner (2001) Haldin-Herrgard (2000) Hlupic et al. (2002)
	The computational power of computers has little relevance to knowledge work, but the communication and storage capabilities of networked computers make them knowledge enablers.	Davenport & Prusak (1998)

In recent years, theorists and practitioners set out to address the following: what it is that determines knowledge sharing, what the initial conditions should be in order for knowledge sharing to be implemented (Kane et al., 2005), identification of the role of knowledge sharing in creation of innovations (Tortoriello & Krackhardt, 2010) and how it affects changes in an organisation (Mohrmann et al., 2003). Several studies have shown that knowledge sharing within an organisation is facilitated by confidence and openness (Sackmann & Friesl, 2007).

Confidence as an advantage of communication turnover was also highlighted by Latvian respondents in a survey examining the role of organisational culture in the implementation process of technology. In order to trust, people must rely on assumptions that another person will behave or react in a particular predictable manner (Mayer et al., 1995).

Some researchers have considered knowledge sharing, knowledge flow and knowledge transfer as variable criteria. For example, Alavi and Leidner (2001) regarded knowledge sharing as equal to knowledge transfer and defined it as a process of spreading information across an organisation. Such spreading can occur among individuals, groups or organisations, using any type or number of communication channels. Davenport and Prusak (1998) defined knowledge sharing as a process comprising information exchange between an individual and a group.

Several studies have shown that people become involved in information exchange with the expectation that their demand for definitive information will also be met in future (e.g. Wasko & Faraj, 2005; Kankanhalli et al. 2005). The staff of an organisation are also motivated through exchange of experience with well-informed persons within that organisation (Brown & Duguid, 1998).

Nonaka (1994) believed that successful companies are those that constantly create new knowledge as solutions to unfamiliar problems, distribute these solutions across all their organisation and, before long, apply for development of new technologies and products. At the same time, Weick (1995) asserted that very few people actively seek knowledge, and emphasised the fact that most people reactively seek knowledge, connecting it with their task and whether or not it is necessary for completion of that task. This information indicates that there is need for people to search for new valuable information in order to develop new knowledge and solve unfamiliar problems.

Summarising the studies, several factors that are likely to affect an individual's behaviour in the information circulation process were identified. It was observed that knowledge sharing in an organisation is facilitated both by information processing and technologies (Alavi & Leidner, 2001; Haldin-Herrgard, 2000; Hlupic et al., 2002), and by such factors as organisational motivation and an incentive system (Bock et al. 2005; Ardichvili et al. 2003; Hinds & Pfeffer, 2003), national culture (Chow et al., 2000) and organisational resources that provide information, for example, over time and space (Davenport & Prusak, 1998; Haldin-Herrgard, 2000; Hinds & Pfeffer, 2003).

Studies have increasingly emphasised the positive role of knowledge sharing and the advantages that private individuals and organisations may gain from it (Jonsson & Kalling, 2007; Yi, 2009). In order to make organisations successful, specific attention to provision of information interaction is required (Davenport & Prusak, 1998).

Knowledge sharing occurs when organisational members share organisationally relevant information, suggestions, ideas and expertise with one another. However, while it is recognised that certain advantages are also obtained as a result of knowledge sharing, people are unwilling to share.

Numerous researchers (Wiig, 2011; Hall, 2001; Davenport & Prusak, 1998; Nonaka & Takeuchi, 1995) have used terms such as knowledge exchange, knowledge transfer, knowledge translation, knowledge mobilisation, knowledge sharing and knowledge utilisation interchangeably to describe the transmission of the knowledge from one person or group to another person or group.

It has been established that collective knowledge, and consequently knowledge sharing, both in *intergroups* and *intragroups*, affect organisational efficiency (Argote et al., 2000). Sources of knowledge can be either customers or suppliers outside the enterprise, or its own experts. In a study of knowledge sharing within and outside of work groups, Cummings (2004) showed that both internal knowledge sharing and productive work in internal work groups, as well as external knowledge sharing, including know-how, information turnover and feedback from customers, experts and external work groups, is an important aspect of efficient organisational activity (Figure 22).

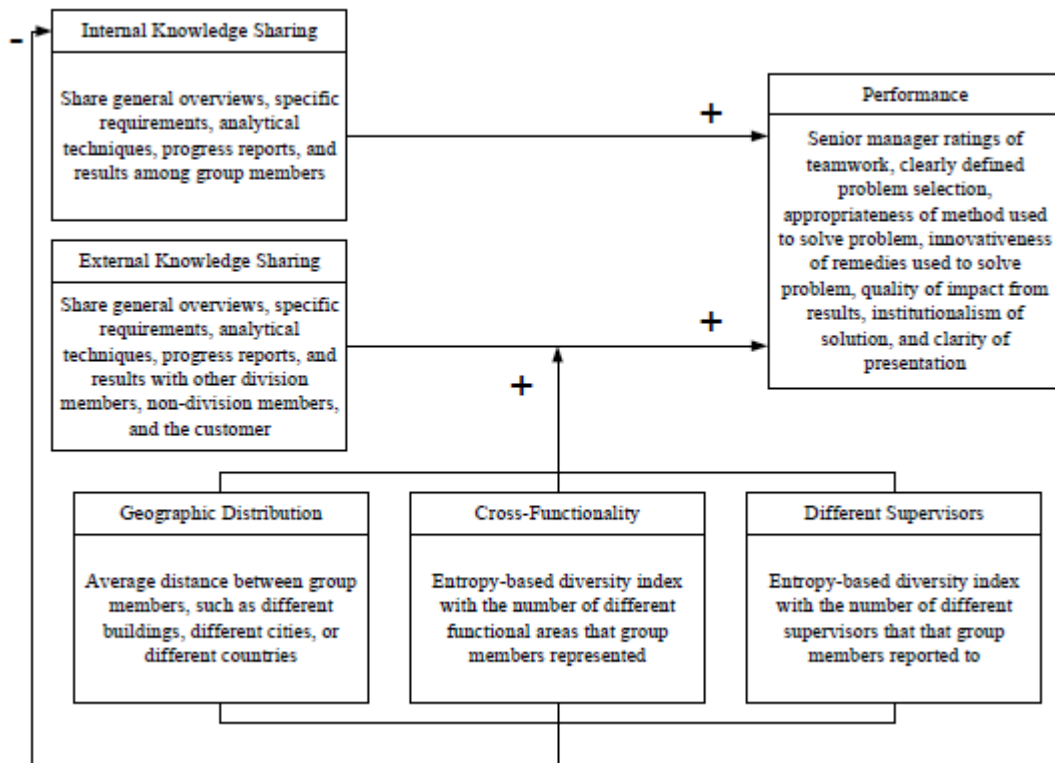


Figure 22. A model of knowledge sharing within and outside work groups

(Cummings, 2004)

Cummings believed that effectiveness results from a well-specified task, appropriate composition of membership and a supportive organisational milieu; however, even a superbly designed work group will not be successful if members cannot create a common understanding of both the organisational context and the task itself, via communication about their work (Cummings, 2004). Thus, the outcome of knowledge sharing depends on the knowledge inherent to the individuals involved in the knowledge-sharing process. When summarising the knowledge, it should be classified: that obtained in an intergroup and that acquired in an intragroup, since internal and external knowledge sharing differs with both intimacy between members of the group and frequency of interaction between individuals involved in knowledge sharing. Teams with near and close relationships between their members will differ in their knowledge-sharing behaviour from the teams with less open relationships.

Several studies have expressed the view that when collecting knowledge, the following fact should be considered: has the knowledge been acquired in an internal or an external group, and what relationships characterise this group? A variety of explanations for the hindering of knowledge circulation have been mentioned, among which organisational culture has consistently been identified by scientists as being key (Al-Alawi et al., 2007; Davenport & Prusak, 1998; McDermott & O'Dell, 2001). In addition, other studies have shown that knowledge sharing within an organisation is promoted by organisational culture and personal values (e.g. Janz & Prasarnphanich, 2003; Lee & Choi, 2003).

4. Research framework

The first issue to be addressed is whether a process such as CI can ever be properly measured; that is, evaluated on a quantitative basis, when the process itself is necessarily qualitative (McGonagle & Vella, 2002b). McGonagle and Vella described the CI process as '*quantitative efforts in a qualitative world.*' Utori considered CI and other similar processes to be essentially qualitative in nature, that is, they operate in contexts where the end product is the result of '*sift[ing] through mountains of data in search of nuggets of actionable information... The conclusions are usually not based on "hard facts"; instead they result from a number of independent observations*' (McGonagle & Vella, 2002b).

The objective of a CI process is to refine business data into useful and valuable knowledge and intelligence. The process, in which data and information are transformed into knowledge, is certainly affected by human insights and experiences determined by individual and organisational values.

4.1. Qualitative research description

In order to ascertain individuals' opinions and attitudes regarding the impact of such organisational values as confidence and honesty on mutual exchange of knowledge and on the CI process, two focus group discussions were carried out, one of which was held in groups of various-level managers (supervisors), while the other involved a group of different specialists (employees) (Appendix 7).

The results of the focus group discussions, as well as the possibilities for their interpretation and application, should repeatedly be considered and weighed. In order to obtain a clearer idea of the information obtained in the discussions, the following points were addressed:

- (1) The aims of group discussions with managers of various levels and specialists
- (2) A description of the opinions expressed in the group discussions
- (3) The structure and procedure of the group discussions
- (4) Use of the discussion results for preparation of a representative survey.

The purpose of the group discussions was to obtain a range of opinions of managers and specialists regarding the issues of an efficient CI process. The group discussions provided the views of managers and specialists on several issues, including stereotypes and state of mind of the employees of organisations.

Neither conclusions regarding the reasons, nor generalisations could be made on the basis of these opinions or views, because the number of participants was small; however, the range of the expressed opinions was wide enough to gain a perspective on the various aspects of the investigated phenomenon. Therefore, such an examination of opinions was important and necessary from the gnostic perspective.

Group discussions reveal the subjective views of society, as well as the way in which an individual motivates his/her activity, which is a very precious material in formation of an organisational management process. Group discussion materials are indispensable in designing representative surveys,

because a group discussion, although expressed in simple phrases, contains a huge amount of information related to the range of issues under investigation. Careful analysis of this information meant that it served as a base material for the design of a new measuring instrument – a questionnaire, as it allowed the development of hypotheses and the formulation of questions.

In order to conduct the study, groups of respondents were selected from the general body, that is, the business environment, which represented the entire general group. The selection was made on the basis of study goals and objectives (see Subsection 1.3); therefore, the selection was targeted. The way of performance was the mechanical selection, meaning that respondents were selected on the basis of a formal feature. In this particular study, the following formal features were considered: (1) the informant was employed in an enterprise in Latvia; (2) the position held by the respondent (supervisor, employee); (3) the informant represented a Latvian organisation in which CI is carried out; (4) the informant was an expert in the issues discussed (had a direct relationship with CI in the organisation). The aim was to obtain a variety of views on the subject of study, so it was important to have as many different discussion participants as possible. Therefore, additional criteria were (1) work experience in a company, and (2) diversity in the informants' age groups. The sector, in which the company operates was identified, but was not used as a criterion for selection.

4.2. Quantitative research description

Initially, the questionnaire used in this study was based on scientific research, theoretical approaches and the preliminary study conducted in Latvia in 2011. The design of the quantitative research had the potential to change, depending on the results of the qualitative research.

The survey data analysis served for investigation of reasons, where the subjective attitudes expressed by individuals were compared with the factological and classified information on them, including social demographic data, in brief, classification of all types of data, including the multiparameter analysis that allowed the testing of the hypotheses. The conclusions were, to a certain extent, a dialogue between the opinions of individuals and their motivation (the results of group discussions) and the conclusions drawn on the basis of the survey.

This qualitative study examined the relationships between the CI process and knowledge sharing, as well as the influencing factors: communication satisfaction, trust in organisation and organisational identification.

Several studies of the CI process and aspects have been performed in several countries, for example, CI has been investigated from the cross-cultural perspective, considering the process and scope of CI in the developed markets of Japan and the European Union, and the emerging markets of China, Russia, South Africa and the Middle East (Adidam et al., 2009); in the USA CI is investigated from a managerial perspective (Qiu, 2008); as well as in Greece (Gatsoris, 2012) and in South Africa (Vivers et al., 2005; Vivers & Muller, 2004). The quantitative research that has been conducted on the CI practices of organisations since that time includes a global survey by Sawka et al. (1995) and a survey of high-technology organisations in Canada, conducted by Calof and Breakspeare (1999). The CI-related

questions are based on the theoretical constructs and preliminary results from earlier research (Calof & Dishman, 2002; Viviers et al., 2005).

Competitive intelligence process

In order to investigate and analyse the aforementioned CI process in Latvia, the Competitive Intelligence Questionnaire developed by Saayman et al. (2008) was used (Appendix 1). The questionnaire of the global survey used by Sawka et al. (1995) was refined by Calof and Breakspeare (1999), Calof and Dishman (2002) and Viviers et al. (2002) in their research in Canada and South Africa, respectively (Saayman et al., 2008). Previous studies appeared to show support for there being distinct stages, or constructs in CI practices (Saayman et al., 2008) (see Table 10).

Table 10. Competitive intelligence stages

(Saayman et al., 2008)

CI stage	Characteristics
<i>Planning and focus</i>	During this phase, an assessment is made of what intelligence is required (Fleisher, 2001). CI should focus only on those issues of highest importance to senior management (Gilad & Gilad, 1985; Herring, 1998). This phase is required to determine the necessary resources for the CI project in the light of its purpose.
<i>Collection</i>	During this phase, information is collected from a variety of sources, both published and unpublished, as well as human sources (Marceau & Sawka, 1999; Fleisher, 2001). Collection also relates to ensuring that the information and sources of information are tested for reliability and credibility.
<i>Analysis</i>	Many practitioners believe that this is where 'true' intelligence is created, that is, converting information into usable intelligence on which strategic and tactical decisions may be made (Gilad, 1989; Gilad & Gilad, 1986; Kahaner, 1996; Calof & Miller, 1997; Herring, 1998).
<i>Communication</i>	The results of the CI process must be communicated to those with the authority and responsibility to act on the findings. Intelligence communication can occur via <i>ad hoc</i> reports, alerts, e-mails, presentations, news briefs, competitor files and specific memos (Fleisher, 2001).
<i>Process/structure.</i>	CI requires appropriate policies, procedures, and a formal or informal infrastructure so that employees may contribute effectively to the CI system, as well as gain from the benefits of the CI process. There is much support for a formal structure and a systematic approach to CI (Cox &

	Goodwin, 1967; Gilad & Gilad, 1985; Ghoshal & Kim, 1986).
<i>Organisational awareness/culture</i>	In order for a firm to successfully utilise its CI efforts there must be an appropriate organisational awareness of CI and a culture of competitiveness (Garvin, 1993; Sinkula, 1994; Slater & Narver, 1995). Previous studies have shown that CI units benefit from senior management support (Evangelista, 2005), since management support establishes legitimacy and importance (Fehring et al., 2006).

The questionnaire contained 38 CI-related questions, 17 of which related to the CI process and 21 of which related to the context in which CI takes place. On the basis of previous research conducted by Calof and Dishman (2002) and Viviers et al. (2004) the items that describe the CI process and the CI context, respectively, were identified and classified in factors (Appendix 8). The factors were named on the basis of the theoretical description of the constructs. The total reliability score of the scale was high $\alpha = 0.972$. The reliability scores of the scale sections were also high - $\alpha = 0.959$ and $\alpha = 0.946$ respectively.

Communication satisfaction. The Communication Satisfaction Questionnaire was developed by Downs and Hazen (1977) in an attempt to discover the relationship between communication and job satisfaction. The authors originally found nine dimensions, and described the nine factors that resulted from this analysis as follows:

- 1) Communication Climate measures the general response to the workplace on both organisational and personal levels.
- 2) Supervisory Communication includes the components of upwards and downwards communication and openness to communication, as well as listening by supervisor.
- 3) Organisational Integration revolves around the information that employees receive about their job and related items, such as policies and benefits. Also included is information regarding what is currently happening, what departments are doing and personnel news.
- 4) Media Quality examines communication as it travels through several channels (e.g., publications, memos and meetings). Employees are asked about the helpfulness and clarity of these information sources and the quantity of information.
- 5) Horizontal and Informal Communication relates to employee perceptions of the grapevine, and the extent to which informal communication is accurate and free-flowing.
- 6) Organisational Perspective refers to the information that is provided concerning the corporation and its goals and performance. It also encompasses knowledge regarding external events, such as new government policies, which impact the organisation.
- 7) Relationship with Subordinates is only completed by those in supervisory or managerial positions. It taps the receptivity of employees to downwards communication and their willingness and capacity to

send good information upwards. Superiors are also asked whether they experience communication overload.

- 8) The Personal Feedback dimension contains questions relating to superiors' understanding of problems faced on the job and whether or not employees feel that the criteria by which they are judged are clear.
- 9) Satisfaction with the Communication is considered in three contexts - individual, group and organisational. The feedback, the line manager's communication and communication with subordinates refer to the individual's aspect; communication with colleagues and integration into the organisation refer to the group aspect; the climate of communication and the quality of media refer to the organisational aspect.

The 40 items are used with a seven-point Likert scale of Satisfaction. Each factor has five items, which are averaged to give an overall a factor score (Appendix 2).

Trust in organisation. Numerous scales to measure relationships between an organisation and its public have previously been developed (e.g. Bruning & Ledingham, 1999; Grunig et al., 1992; Hon & Grunig, 1999). In the present study, organisational trust, interpersonal trust and trust in top management was measured using the organisation-public relationship outcomes scale developed by Hon and Grunig (1999) (Appendix 3). This scale consists of three dimensions: integrity, dependability and competence.

The reliability score of the scale is high $\alpha = 0.947$. The dimensional reliability scores are: integrity $\alpha = 0.894$, competence $\alpha = 0.942$ and dependability $\alpha = 0.808$, respectively.

Trust in supervisor is important when organisations face numerous different changes. Trust in supervisor is clarified using the Organisational Trust Inventory (Nyhan & Marlowe, 1997) subscale – an interpersonal scale that includes trust in the line manager (Appendix 4). The scale consists of four statements. The reliability score of the scale is high $\alpha = 0.892$.

Earlier studies have shown that trust to the supervisor positively correlates with having sufficient information about the job and the entire organisation as well as the quality of information received from senior management and line manager (Byrne & LeMay, 2006).

The relationship between supervisor and subordinate relates to the overall performance and results of the organisation (Nyhan, 2000). Nyhan believes that trust improves productivity (Nyhan, 2000). It has already been proven that trust has a positive impact on in the decision-making process (Wayne, 1978) and the progress of communication in the organisation (Cohen, 1958; Read, 1962; Roberts & O'Reilly, 1974). Trust is an important aspect of open and proper communication (Read, 1962).

Knowledge sharing. Numerous authors (Wiig, 2011; Hall, 2001; Davenport & Prusak, 1998; Nonaka & Takeuchi, 1995) have interchangeably used such terms as knowledge exchange, knowledge transfer, knowledge translation, knowledge mobilisation, knowledge sharing and knowledge utilisation to describe the transmission of knowledge from one person or group to another person or group.

In the present study, knowledge-sharing included posting a personal opinion of interest in a CI process. Knowledge sharing was measured using Cummings' knowledge-sharing scale, and included the following items: (1) general overviews (e.g., project goals, milestone estimates or member responsibilities), (2) specific requirements and data, (3) techniques (e.g., project management, know-how, training, process and tools), (4) progress and reports (e.g., project updates, budget, employees, etc.), and (5) project results (e.g., preliminary and final reports, etc.) (Appendix 5). The reliability score of the scale is high $\alpha = 0.898$.

The questionnaire contains two scales: Intragroup and external knowledge sharing in work groups. The reliability scores of the scale are $\alpha = 0.846$ and $\alpha = 0.944$, respectively.

Organisational Identification. The Organisational Identification Scale (Mael & Ashforth, 1992) was used as indicator of organisational identification (Appendix 6). The reliability score of the scale is high $\alpha=0.829$.

Organisational identification depends on other aspects of the organisations. Organisational identification often reflects the general trust within the organisation, the loyalty of employees to the organisation as well as every individual's attitude toward the organisation. In this study identification with the organisation is defined as being one with the organisation: "How do I ask an employee see myself within the organisation?" Ashforth has this definition: An individual has a shared identity and destiny with the organisation (Ashforth & Mael, 1989). Identification with the organisation is more than just job satisfaction or trust in the organisation. The highest level of trust and loyalty to the organisation is organisational identification: "*When someone praises this organisation, it feels like a personal compliment*" (Mael & Ashforth, 1992).

Demographic data. The demographic survey included the following information:

- about the enterprises:

- annual turnover (up to EUR 2 million, EUR 2–10 million, EUR 10–50 million, over EUR 50 million)
- the size of the enterprises:
 - Large-sized enterprises:
 - 250 or more employees
 - Annual turnover exceeds EUR 50 million;
 - Total balance sheet value is above EUR 43 million
 - Medium-sized enterprises:
 - 50–249 employees
 - Annual turnover does not exceed EUR 50 million;
 - Total balance sheet value is under EUR 43 million.
 - Small enterprises:
 - 10–49 employees
 - Annual turnover does not exceed EUR 10 million;
 - Total balance sheet value is under EUR 10 million.
 - Micro enterprises:
 - One to nine employees
 - Annual turnover does not exceed EUR 2 million;
 - Total balance sheet value is under EUR 2 million.

- about the respondents:
 - Gender
 - Age
 - Positional status in the organisation(employee/manager)
 - Work experience at the enterprise.

Figure 23 gives a schematic presentation of the quantitative research.

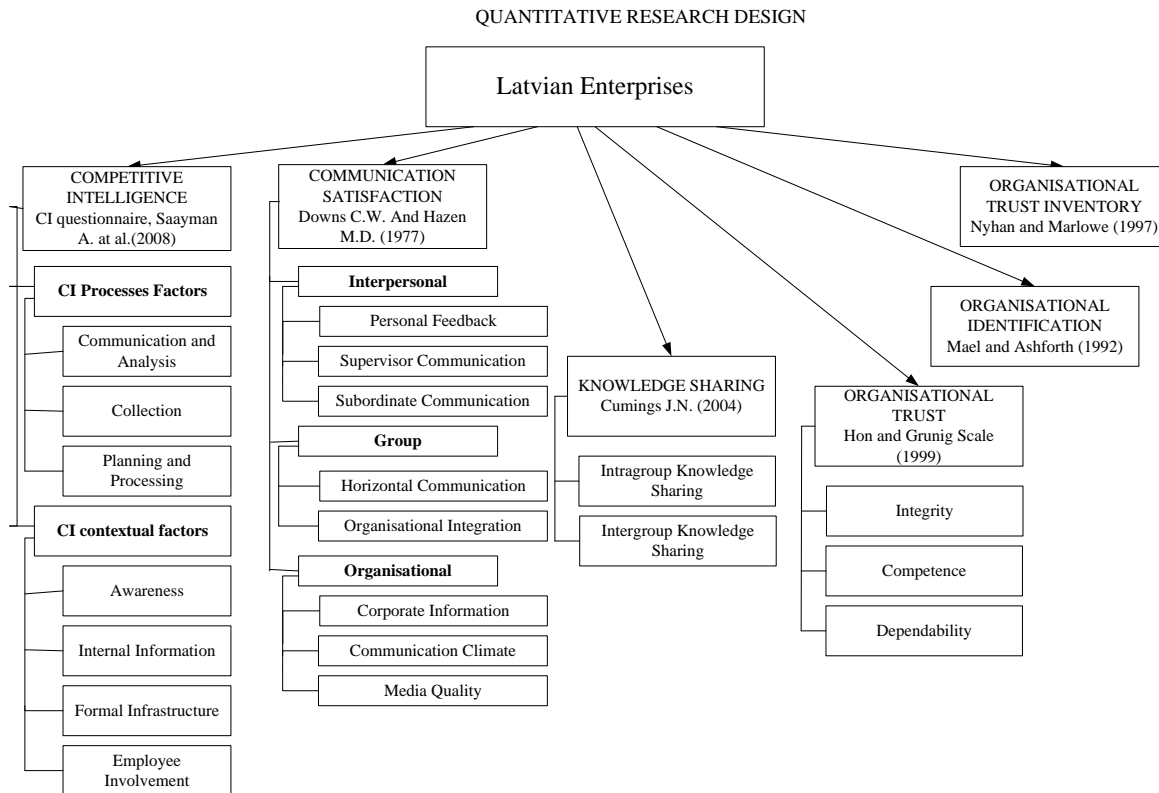


Figure 23. A scheme of the quantitative research

The initial step is approval of the questionnaire. Before wider use, each question was tested with a selected cluster of respondents to identify any possible errors made in the design of the questionnaire. A qualitative study led to the idea of two more hypothetical questions and relationships that could be tested during the study, so the main questionnaire was supplemented by another questionnaire - the Organisational Identification Scale. To prepare the questionnaire, first, the information that needs to be obtained through the questionnaire was compiled and taken into account, and, second, the target audience was set - the Latvian commercial companies. When creating the questionnaire, the content of each of the questions was determined, assessing whether the specific question was necessary and answering the question: "How will I, a researcher, use this information?". The questions in the questionnaire were designed in a way that the respondent provides a concrete, detailed answer, yet does not provide more information than truly necessary. Another difficulty that was to be assessed when the questionnaire was translated to the national language, Latvian, was: "Is it really not better to have several questions instead of a single one?" There are often situations in which a single question actually needs to be put in a number of questions, because it is not possible to give one correct answer to that particular question. It was important to reflect on whether the respondent had known and had had the access to the information so that he / she actually could answer the questions. The next issue

considered was: "Will the respondents provide the information?" Even if the respondents have information, there is always a question: "Will they share it?" Often people's reluctance to answer questions is related to the difficulty of formulating a response.

Since the survey had several parts, short informative sentences were used in-between the individual questionnaires, which helped the respondents change their thoughts and switch to other questions. At the beginning of the survey a brief set of instructions was given on how to complete the questionnaire correctly. The questionnaires were sent out in cooperation with the Latvian Personnel Association, which has been operating in Latvia since 1996 and combines more than 230 companies and members. In this way the accuracy of the respondents' audience was as high as possible the survey was received through the staff manager of the particular company, meaning, by a respondent whose sole function in the company is the CI, especially given that there is practically no separate CI department in Latvian companies.

Respondents for testing were selected from the same group of respondents for which the questionnaire was provided. A total of 12 respondents were engaged in assessment of the questionnaire (pre-test). The result was an improved and more accurate questionnaire for acquisition of information.

An incorrect translation of the questionnaire into the official language of the respondent or an unclear question may lead to the lack of willingness of the respondents to cooperate or to provide faulty or incorrect answers, therefore a pre-test was conducted. The words in the questionnaire were made in a way that most people would consider clear, but yet strictly followed the meaning of the original words. The translation of the questionnaire's responses were kept identical and unambiguous (Likert's scale as the baseline). After the pre-test some minor adjustments were made to the Competitive Intelligence Questionnaire. The Latvian language does not have a direct translation of "Competitive Intelligence", so the introduction of the questionnaire describes the CI functions in a few sentences, as well as the available translations of this term in Latvian. Other the other words and sentences used in the survey all have an official translation in Latvian and are available in the survey database, therefore the possibility of inappropriate or wrong translations was disregarded.

During the survey, questionnaires were issued to at least two representatives of a company - to a supervisor and to an employee or an industry expert.

The study data were collected in August and September 2015. Questionnaires were electronically sent to the study participants, and there was no time limit on completing the questionnaire.

5. Results

5.1. Qualitative research

A qualitative study - focus group discussions - was carried out in cooperation with the Latvian Personnel Association and took place in the association's facilities, which were convenient for the respondents and suitable for performing audio recordings, collecting information and preparing it for further analysis. The respondents had confirmed they wanted to be recorded. All the respondents were selected and invited by the Latvian Personnel Association for a focus group discussion. Such a type of respondents' selection was decided to be best, as the chief of staff of each company best knows the scope of the company's employees and can select the most qualified professional for the discussions on the research issues. The

discussion took place in a large room, the groups were sitting around a large round table. The length of the discussion was 120 minutes.

It was also taken into account that respondents might not have been able or were unwilling to formulate oral answers to some questions. That said, this did not mean that they did not have an opinion on a specific topic. Since the discussion involved identifying and exploring competition, sometimes it was difficult to obtain clear information. One cannot deny that one of the lessons that was learned when evaluating the views of group members was that group members often expressed not the experience of their company, but rather their own assumptions that often increased and exacerbated the issue. Participants in the debate often began their story with the words: *"I have heard that in the company X"*. This suggested that opinion building had a great influence on interpersonal communication, which can sometimes contribute to the spread of myths. Therefore, after the group discussion, hypothetical questions were put forward, the examination of which would then be followed by a survey, so that the respondent could express only his personal experience in the particular company in which he worked.

In general, when evaluating the progress of the discussions, it should be emphasized that the atmosphere was that of mutual trust and openness, despite the fact that on many issues the opinions of the participants were different. The groups were also assembled by age. Dividing the groups by was because of the fact that the perceptions that the views of generations differ considerably on many issues, given that the Latvian economy had long been operating under collective management conditions.

To obtain the group's range of opinions on the CI process and the impact of cultural values of the organisation, emphasising the role of knowledge sharing and mutual trust, the study was conducted within the framework of two focus group discussions, involving both specialists (employees) from different companies and managers (supervisors) of various ranks, in Latvia during March and April 2015. The results of the focus group discussions, as well as possibilities for their interpretation and use, should be repeatedly considered and weighted.

5.1.1. Aim and structure of group discussions

The aim of the group discussions was to obtain a range of opinions of employees and managers on the CI process and the impact of cultural values of the organisation, emphasising the role of knowledge sharing and mutual trust. These discussions provided the view of employees and managers on several processes, including stereotypes and general disposition. Neither conclusions regarding the reasons, nor generalisations can be made on the basis of these opinions or views, because the number of participants was small; however, the range of the expressed opinions was wide enough to gain a perspective on the various aspects of the investigated phenomenon. Therefore, such examination of opinions is important and necessary due to the gnostic reason.

Group discussions reveal the subjective views of participants, the way an individual motivates his/her activity, which is a very precious material in developing action programmes and in formation of organisational policy. Moreover, the materials of group discussions are indispensable for designing representative surveys, because a group discussion, although expressed in simple phrases, contains a lot

of information on the range of study issues. Carefully assessed discussion materials serve as raw material for the design of a new 'instrument', a questionnaire, by advancing hypotheses and formulating questions.

The survey data analysis served for an investigation of reasons, whereby the subjective attitudes expressed by individuals were compared with the factual information provided by respondents about themselves, and their organisation, that is, classification of various types of data, including the multiparameter analysis that allowed testing of the hypotheses. The final conclusion was, to a certain extent, a dialogue between the opinions of individuals, motivation (the results of group discussions) and the conclusions drawn on the basis of the survey.

In order to obtain a wide range of opinions, members of a variety of industries, and with different lengths of employment, were included in the discussion groups. The group discussions were attended by 41 individuals, representing staff and specialists (Group 1) and different management levels (Group 2). The selection of group members was subject to the requirement of representing large and medium-sized companies. This is due to availability of resources (human, financial etc.) at the disposal of companies to enable the most efficient use of CI in their economic activity.

The focus groups were formed in view of the age, gender structure and the period of time worked for the company. Information on the focus group members is summarised in Subchapter 4.1. The place of business of the companies involved is primarily Riga, but several members from other regions of Latvia were also included.

In general, the participants willingly involved themselves in discussions; however, it was evident that each of them had established a frame of confidentiality. Understanding of privacy issues by employees complicates the research process. The topic of study (CI, business information and analysis of business environment) is evaluated by business circles as highly confidential and is closely associated with observance of each company's ethical principles and associated opinions.

In order to make the discussion more open, the group members were not recruited by the industry of the represented company. This reduced the frame of confidentiality that could emerge during discussions. In total, the opinions of members from 41 different companies were summarised with regard to the aspects affecting the CI process.

5.1.2. A summary of the main themes

The results showed the specifics of the CI process in Latvian enterprises. The main problem pertains to organisational culture values: communication satisfaction, organisational and interpersonal trust, loyalty, motivation etc. The moderator summarised the issues of concern and nominated the most topical themes in each focus group. This information served as the starting point for the creation of a discussion.

Before the discussion, the participants were asked to write down three to five problems with the CI process at their companies. Following this, at the beginning of the discussion, the moderator presented the objective of the discussion and the rules of procedure. The discussion participants were asked to introduce themselves, and to provide a brief description of the industry of their company, etc. It was found that the most pressing challenges for the discussion participants were associated with the following aspects:

- Provision for the cyclic nature of CI.

Examples from discussion that reflect the aforementioned aspects:

Interviewee from the discussion group of managers K.(17): 'The company has no system for communicating important information.'

Interviewee Interviewee from the discussion group of specialists A.(19): 'We gather a lot of information, but it is not clear who needs it.'

- Knowledge-sharing behaviours.

An example from discussion that reflects the aforementioned aspects:

Interviewee from the discussion group of managers G.(10): 'The existing global situation requires involvement of all employees in knowledge-sharing.'

- Mutual communication satisfaction.

An example from discussion that reflects the aforementioned aspects:

Interviewee from the discussion group of managers A.(19): 'We stick to a strict hierarchy: I deal with the information available to me.'

- Trust.

An example from discussion that reflects the aforementioned aspects:

Interviewee from the discussion group of specialists L.(16): 'I have a feeling that nobody cares about my information, because everything has already been decided; no transparency; no certainty for preservation of copyright.'

Managers more often than specialists observed the problems associated with decision-making, using the obtained information (23 of 41). Managers and specialists mentioned the problems associated with communication satisfaction in the organisation with equal frequency (32 of 41); furthermore, specialists frequently related these problems with the level of trust and fairness in the organisation.

An example from discussion that reflects the aforementioned aspects:

Interviewee from the discussion group of managers G.(3): 'An employee will not always hand over all of the information to a manager.'

Issues related to sources of information were often mentioned, for example:

Interviewee from the discussion group of employees A.(10): 'The company has no special programmes that can be used to search for information.'

Interviewee from the discussion group of managers K.(17): 'We use Google and other search engines; information can be frequently obtained outside the company, from competitors.'

It was primarily the younger respondents who inquired about motivation issues, which would promote knowledge-sharing. Issues regarding clear lines of accountability were more often addressed by specialists (18 of 41), for example:

Interviewee from the discussion group of specialists A.(17): 'Trust and honesty correlate with job satisfaction; organisational values should be motivating.'

Four discussion topics were selected from the problems listed by respondents:

1. The cyclical nature of the CI process;
2. Communication satisfaction;
3. Determinants of knowledge-sharing: trust and honesty;
4. Mutual cooperation of the employees of organisation.

All participants related their experience of the CI procedure at their companies. During the discussion, the respondents were asked qualifying questions regarding the impact of cultural values of the organisation on knowledge sharing – whether trust affects information turnover; what is the role of trust and honesty between employees and top level managers?

After the first topic was considered, the group passed on to the next one. Three or four topics were considered during each discussion.

Summarising the information obtained from the focus group discussion, the following was elicited:

- What is the sequence (procedure) of the CI stages in the organisation?
- How is communication exchange performed within the organisation?
- What views on organisational values do managers and specialists hold with regard to improving the CI process?
- What views do company employees hold with regard to such organisational values as trust and honesty?
- What affects knowledge sharing in the organisation?

5.1.3. Employee viewpoint: description of focus group discussion No.1

A total of 21 specialists and subordinated employees of organisations participated in focus group discussion No.1, according to the established methodology, and this ran from 13 April 2015 to 24 April 2015. The discussion was assisted by a moderator and one technical assistant; their task was to record the discussion process. In view of each participant's different experience, they were asked additional questions if necessary, in order to clarify more precisely their experience in the most topical issues.

The group discussion results allowed identification of the range of problems affecting the CI process at the level of opinions and values. This was of great importance before the next stage of the study began, because it helped to build a complete view of the CI processes in organisations in their entirety, without placing any specific person or group in the foreground.

5.1.3.1. Employee opinions of the competitive intelligence process in Latvia

The assertion that environmental variability affects any organisation now appears to be fairly self-evident. Today, the environment – economics, social conditions, technologies – is rapidly changing, and an organisation must be capable of surviving or developing; therefore, the organisation should follow the changes in the competitive environment and be capable of introducing alterations. The discussion participants emphasised the point that changes denote a constant adjustment of one's activities and search for new opportunities. An organisation will never be successful if its management fails to notice changes or is unable to foresee them in future.

To identify the need for changes, a manager should follow events in the environment and analyse the extent to which they affect the performance of the organisation. The discussion participants agreed that a manager should have sufficient and justified information in order to make a decision. The introduction of change is not effective just for the sake of change. Implementation of unnecessary changes, that is, if such changes do not support attainment of the goal, can hinder the development of an organisation. The main types of changes nominated by the discussion participants were as follows: change in strategy, change in organisational culture, structural change and technological change.

The results of the discussions showed that it is important for a manager to be aware of the factors affecting the performance of the organisation. The discussion participants believed that a manager must obtain information concerning changes in the surrounding environment, analyse this information and revise goals or tasks in case the changes affect functioning of the organisation. This does not mean abandonment of the intended direction, but rather, early detection of problems or opportunities and a search for new solutions or adjustment of those already in place.

Although the participants willingly described their general attitude and experience with regard to CI issues, only a few mentioned definite measures and plans that they carry out or attempt to achieve in their companies. Most of them avoided using such terms as exploration and espionage, more often referring to the process, the planning of information and data collection. One of the participants

referred to the process of CI as *'white espionage.'* An explanation of this term states that the information is obtained in only a partly ethical manner, for example:

Interviewee A.(17): '...could pretend to be a customer of the competitive company and find out the information.'

Interviewee K.(20): '...look up the available information on the Internet or on paid-for databases...'

Similarly, the participants stated that no CI policy and ethics had been developed at any company. There is a set of separate strategic decisions that are taken in appropriate situations.

Almost all participants of the groups initially described CI more as a marketing function, reducing it to a SWOT analysis, for example:

Interviewee A.(19): '...by CI I understand, first, what are my competitors – their strengths, weaknesses, similarities, differences, how they position themselves, how we position ourselves.'

The answers showed that employees primarily perform CI in order to identify competition.

Examples from the discussion that reflect the aspect:

Interviewee G.(11): 'Evaluate our advantages over our competitors.'

Interviewee L.(21): '...assess competitors' operating principles.'

The participants frequently called the CI process 'spontaneous':

Interviewee A.(3): '...it does not occur on a regular basis.'

Interviewee G.(11): '...everything takes place spontaneously...'

The analytical instruments of CI, such as SWOT, are primarily used to make comparisons in order to identify the strengths and weaknesses of the company, as well as environmental opportunities and threats, leading to an analysis of the factors that could affect the quality of products and the results. During the discussion, the employee participants expressed the opinion that CI is more like identifying similar organisational processes in other industries and comparing these with those of their own organisation. Participants in the group of specialists and staff disclosed the fact that companies have no specific database or access to summarised information relating to the business environment, for example:

Interviewee G.(11): 'The process of CI in companies basically takes place in a narrow circle – It is dealt with by the marketing department, so employees have little involvement in the process.'

Interviewee K.(7): 'It is possible that administration later informs specialists of other departments.'

Interviewee P.(9): 'The process of CI in companies is rather limited for the staff, because an employee has no real ability to alter or to decide anything...'

The majority of the employees also stated that turnover of information is not interactive, and does not provide exchange of information and knowledge between staff and management and interaction between the two groups.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee P.(9): 'Employees are not really involved in CI.'

Interviewee A.(3): 'An employee and administration have various aims for acquisition of information, as well as different sources for obtaining information and different further application of it.'

Interviewee K.(7): 'Employees are guided only by the information obtained on a daily basis – from adverts, media, and feedbacks on competitors.'

However, in a more detailed discussion of their experience in CI, the majority of participants disclosed the fact that the result of their activity is not only marketing indicators, but also strategic goals, for example:

Interviewee R.(1): '...it is important to be aware of the company's competitiveness, because it influences the type of the company's strategy.'

Therefore, it can be concluded that the information obtained in the CI process is used by companies for taking strategic decisions, but that employees of the company often identify it in a different way. The discussion revealed that the information is often used for developing functional strategies.

An example from the discussion that reflect the aforementioned aspect:

Interviewee K.(20): '...should know how available are, for example, technical resources, specialists; what provision of specialists is there in companies...'

Some of the group members stated that in their company, competitors' organisational culture and values are analysed as one of the factors of competitiveness, for example:

Interviewee P.(9): 'Employees often do not feel the organisational values in practice, these are merely theoretical words.'

Interviewee A.(4): '...impact of organisational culture can seldom be given a precise definition.'

Interviewee L.(16): '...it cannot be "stolen" from the competitive company in order to increase the own company's competitiveness, its aim should be improvement of the quality of work and mutual interactivity.'

Interviewee G.(11): 'Nowadays, the ability to manage employees' behaviour is not sufficient; it is necessary to manage what people think, feel and express, i.e. the general mood of the organisation.'

For successful information exchange, strict distribution of functional roles is required, as well as a widely branched system of laws, regulations and instructions.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee D.(18): 'Unless the company values are clearly defined to the employee, he/she can fail to understand and fulfil them. It depends on firmness of control.'

Interviewee G.(11): 'For managers, values are items established by statutes etc., but an employee can leave these values unnoticed. Employees' values can manifest in the process of self-activity.'

During the discussion, the opinion that the CI process depends upon employees' loyalty to the company was expressed, for example:

Interviewee A.(19): 'The employee is interested in processes of competitive intelligence if he/she intends to develop his/her career at this company, if he/she cares for what goes on at his/her company, or if the employee's remuneration or other benefits depend on the company's performance.'

Opinions expressed in the discussion showed that the mutual cooperation of managers and employees is of great importance, because it is the staff that gather and process the information that is passed over to managers for decision-making. All participants of the group acknowledged the role of the CI process as an entirety and the added value of the organisation.

During the discussions of the group of employees and specialists, the opinion that in order to stimulate the CI process, a range of various hierarchical activities should be carried out, for example, control of processes, systematic addressing of issues, creation of schemes for decision-making etc., was expressed. The basis for creation of a supporting culture is ensured by standardisation of CI processes. The aim of company culture is to make CI an integrated and inseparable aspect, with an important contribution to decision-making. CI is a social process.

The results of the discussion of the CI process encouraged the separation of several issues: (1) an understanding of the nature of CI; (2) an understanding of the sequence of steps of the CI process; (3) the role of organisational culture values; (4) the role of organisational identification in ensuring managerial processes; (5) the role of motivation.

5.1.3.2. Factors affecting the competitive intelligence process, as observed by employees

The issue of organisational values was topical during the discussion, particularly with regard to the implementation of new technological processes or to change. The discussion participants believed that the definition of a value system is the first step in the creation of organisational culture, for example:

Interviewee K.(20): '...organisational values form the basis of its culture, so it is important that an employee's individual values are similar to organisational values.'

This provided a clear idea of how an employee should act in one situation or another. It is important that an organisation defines its system of values, establishing, for example, by-laws, or simply recording the values in a free narrative.

An example from the discussion that reflects the aforementioned aspect:

Interviewee L.(21): '...if permanent organisational culture is defined in the company, it enables every employee feel him/herself as a part of a single mechanism, and joint efforts help to achieve the goal – culture supports the business processes in the organisation...'

Trust and honesty were often referred to as a particularly important aspect of change implementation. Group members believed that a prerequisite for trust-building is that managers regularly inform their subordinates on what goes on at the company, provides feedback and explains various decisions and organisational principles, for example:

Interviewee A.(10): 'Trust helps to avoid communication problems among employees; trust in manager is a basis of successful operation of the company, as it facilitates cooperation.'"

Employees should be able to provide their manager not only with the positive, but also with the negative information. An example from the discussion that reflects the aforementioned aspect:

Interviewee L.(16): '...trust relieves of the "sense of fear" or "trust promotes confidence to express one's views and observations.'"

Participants emphasised that trust and honesty are largely associated with an employee's feeling of being valued. In order to facilitate positive knowledge sharing in a company, trust should flow in both directions. The absence of trust between the manager and staff in an organisation affects employee motivation and makes it difficult to move towards common objectives.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(10): 'CI at the company can increase employees' loyalty and adherence to the company.'

Interviewee D.(18): 'Involvement of an employee in the process of CI will motivate him/her to achieve the objectives.'

However, an opposite opinion was also expressed, for example:

Interviewee R.(5): 'It is not always beneficial for an employee to provide knowledge and to be absolutely loyal.'

Interviewee S.(12): 'Knowledge sharing can affect personal interests.'

The expressed opinion was based on the fact that an organisational environment does not always facilitate adherence to the organisation; therefore, knowledge is each employee's capital in the labour market. It was also advanced that trust in a manager is affected by the time worked for the company: how long the employee works with the manager, the manager's confidence in the employee and engagement in decision-making.

In order to ensure a successful CI process, a company should strive towards open communication and a dialogue-oriented culture. Knowledge primarily exists in the employees' minds, so it is important to be aware of individuals' specific attitude towards knowledge sharing. In contrast, when creating the information turnover system in an organisation, the focus should be not only on some additional element of human resource management, but also such a business environment should be built, which would stimulate and support knowledge-sharing processes.

An example from the discussion that reflects the aforementioned aspect:

Interviewee A.(4): 'Knowledge sharing should be facilitated both horizontally and vertically; awareness should take place at all levels, but access to information should be differentiated.'

Open communication at the vertical (management - staff) and the horizontal (employees - employees) levels is one of the prerequisites for the staff to clearly know and understand their place and tasks, and to build mutual trust at the company.

An example from the discussion that reflects the aforementioned aspect:

Interviewee A.(19): 'Trust affects knowledge sharing, which is vital for ensuring the process of CI.'

Interviewee D.(18): 'Collaborative attitude is a substantial factor contributing to knowledge sharing...'

It was important that management provided employees with feedback and an objective assessment of the employees' ideas and proposals. People wanted to be aware that management had noticed their contribution, for example:

Interviewee A.(3): 'Knowledge sharing encourages idea generation, which is necessary for organisational development.'

Interviewee S.(12): 'Knowledge sharing will provide a positive impact upon implementation of changes in the organisation.'

If this was not the case, the employees lose the motivation to engage in the measures of planning organisational development and in intelligence relating to the competitive environment.

An example from the discussion that reflects the aforementioned aspect:

Interviewee A.(3): 'Impaired knowledge sharing will affect reaching of the company's objectives.'

The results of the discussion showed that employees working in teams with open communication and mutual trust can achieve better results than those working individually without horizontal or vertical communication links. Teamwork requires awareness and balance between each employee's individual knowledge, skills, personal qualities and values with the common organisational values and goals.

5.1.3.3. Views on knowledge sharing habits in the organisation

During discussion, group members expressed views and beliefs based on their personal experience; inefficient communication is the main reason for problems in many organisations. Communication should not be unilateral – there must be feedback. The participants also emphasised the fact that information turnover should be timely, which is a substantial prerequisite for knowledge sharing to have an added value in the organisation. Always ensure that the other party has understood the information. Effective communication is a way of reaching mutual trust; however, excessive control can reduce trust.

The participants emphasised the fact that although information technologies are widely applied nowadays, the human factor should not be forgotten. If communication is not efficiently managed, an information gap occurs, which is filled by inaccurate information or rumour, and this does not create a motivating environment and does not facilitate the achievement of goals, for example:

Interviewee A.(17): 'Information obtained as a result of CI turns into useful knowledge if successful turnover of information takes place at the company.'

If information units are connected with each other, analysed or otherwise processed, knowledge originates. However, knowledge can be only acquired through information, its distribution and its use.

The participants emphasised the fact that knowledge in the organisational context is information integrated in a common system, is easily available and is used for ensuring operation of the organisation. Previously expressed knowledge can be supplemented by new information, as a result of knowledge-sharing among people during conversations, and it can again become source knowledge stored in memory. Knowledge is viewed as the basis for each separate employee's decision-making and action, and allows the employee to select the action most suitable to the situation. In turn, knowledge originates from data transformed through context into information, and from information transformed through experience into knowledge. As a result of employee interaction, transformation of knowledge from an individual's knowledge into common organisational knowledge is ensured. Transformation occurs via the process of activity as people share their knowledge.

Employee knowledge is one of the reserves of intellectual capital and an organisation's intangible resources that allow successful functioning of the organisation.

An example from the discussion that reflects the aforementioned aspect:

Interviewee A.(15):' "...knowledge sharing facilitates efficiency of a company.'

Evaluating the role of knowledge as a resource favouring competitiveness, the issue of the role of knowledge-sharing in the CI process becomes topical, for example:

Interviewee R.(5): 'Knowledge sharing ensures the company staff becoming more valuable, because when an employee's knowledge constantly increases, the employee learns.'

Interviewee L.(13): 'Knowledge sharing stimulates employees' expertise.'

It should be mentioned that a learning organisation can achieve transformation of organisational culture in accordance with the goals of the organisation. Organisational culture changes in the process of organisational learning. This enables the organisation to create the culture necessary for ensuring efficient CI. Knowledge sharing ensures that each employee both teaches and learns. This suggests that there is significant relationship between knowledge sharing and CI effectiveness, and between organisational culture and knowledge-sharing in the CI context.

Trust arises gradually and within a longer period of time, and only when employees and manager have verified it by their actions, for example:

Interviewee A.(10): 'A good company communication system providing information turnover encourages mutual trust. Trust is associated with A company's results and efficient process.'

Interviewee G.(11): 'Trust among employees ensures knowledge sharing'

The creation of an atmosphere of mutual trust within the collective body is one of the competencies that have a long-term crucial effect with regard to efficient operation of organisational processes.

5.1.3.4. The role of organisational culture and values as understood by employees

Group members' statements regarding the role of organisational culture showed that organisational culture is identified with the values dominating in the organisation, such as trust, support, respect, justice etc., which in turn affect mutual communication, cooperation, process of teamwork, decision-making etc. The discussion results showed that introduction of elements of collaborative culture can stimulate a successful CI process.

An example from the discussion that reflects the aforementioned aspect:

Interviewee A.(19): 'It is important that organisational environment would facilitate cooperation among employees in transfer of competitive information.'

The participants agreed that organisational culture management, as a stabilising factor of social systems, is a very complicated task. The primary task of any culture transformation programme is to support organisation members in implementation of new values and styles of behaviour. However, there are situations when cultural elements contradict other elements, and this results in conflicts. The discussions revealed that when attempting to carry out various activities referring to different organisational structures, people are unable to cooperate with one another because the level of conflict is exceptionally high.

For a successful change process, a very important task for the manager is the building of an environment, in which the intended changes are accepted; otherwise it is unlikely that they will reach the ideal target. While still planning the changes, the manager should talk to employees and ensure that the majority of them would support the changes. Managers should involve employees in implementation of changes; thus employees' joint responsibility and motivation would increase, and the changes would be implemented more successfully.

The view that a successful CI process will be ensured by an organisational culture that is uniform throughout the organisation, with elements of supporting culture, was expressed. The participants emphasised that before beginning the process of modifying the entire system, including cultural transformation, it is important for the senior management of the company to be aware of the factors that necessitate modification; in turn, employees need to know why the transformation process is being initiated.

The manager should clearly define organisational values and principles, as this ensures the trust of employees and a good reputation for the company.

An example from the discussion:

Interviewee A.(17): 'Employees' ideas of organisational values are formed from the manager's attitude, words and deeds.'

The discussion participants believes that the manager is responsible for the creation of the environment of organisational culture by establishing its basic values.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee D.(18): 'Basic principles of organisational culture shall be established by management on grounds of mutual respect and honesty.'

Interviewee A.(4): 'An employee shall be aware of organisational values.'

Interviewee E.(6): 'The manager's responsibility, however, is to explain them.'

Employees like to work in an organisation that openly expresses its values. In order to make sure that the values are genuine, employees will examine their manager's actions.

Interviewee A.(3): 'Organisational values should be clearly understandable both to managers and employees, and they have to work together in compliance with these values.'

Interviewee A.(4): 'The organisational values should be supported by the majority.'

Answers to the question of who is responsible for creation of the environment of organisational culture showed that, in practice, organisational culture is often determined by a manager's subjective view, the value system, personal goals and way of thinking. However, organisational culture does not exist in itself; it cannot be created by a single manager. It is built by people and groups in the organisation who interact mutually and with people from outside.

An example from the discussion that reflects the aforementioned aspect:

Interviewee G.(11): 'Employees have to adapt themselves to the existing organisational culture in order to successfully comply with the team.'

The participants believed that employees of the organisation should also be involved in the development of the value system.

Interviewee A.(17): 'An employee should feel, understand and fit into the organisational culture. Ideally, if the employee is involved in the process of creation... otherwise the employee will be in conflict with the organisation.'"

During the discussion, the opinion that a motivated staff is an organisational value was expressed. Motivated staff, creative approach and responsibility are substantial prerequisites for successful work in an organisation.

Interviewee L.(13): 'While an employee is satisfied with everything, he/she is honest, but if he/she is not loyal towards the organisation, problems can arise.'"

Employees play an important role in the development of the organisation. This means that, as the primary carrier, user and transmitter of information and knowledge to his/her colleagues, an employee is an important organisational value.

The value system dominant in the organisation, and the social norms based on it, compose the organisational culture level, where values determine what managers expect from their staff, but the staff expect from managers. The participants believed that an organisational culture that does not provide collaborative elements can hinder or stop the CI process in that organisation.

5.1.4. Supervisor viewpoint: description of focus group discussion No. 2

A total of 20 organisation managers of different levels participated in focus group discussion No.2, according to the established methodology, and this ran from 13 April 2015 to 24 April 2015. The group discussion was assisted by a moderator and one technical assistant; their task was to record the discussion process. In view of each participant's different experience, they were asked additional questions to more precisely clarify the participants' experience of the most topical issues, if necessary.

The group discussion results allowed identification of the range of problems affecting the CI process at the level of opinions and values. This was of great importance before the next stage of the study began, because it helped to build a complete view of the CI processes in organisations in their entirety, without placing any specific person or group in the foreground.

5.1.4.1. Supervisor opinions of the competitive intelligence process in Latvia

Summarising the results of the focus group discussions, it was found that group members representing company managers of various industries greatly appreciate the role of CI and its added value in ensuring the successful operation of a company.

An example from the discussion that reflects the aforementioned aspect:

Interviewee I.(11): 'Managers' aims are long-term activities.'

Participants expressed the opinion that information obtained as a result of intelligence of the competitive environment is important for calculating the strategies for company development, for example:

Interviewee A.(7): 'Everything is focused on more efficient management, earning a profit and "wise" investment.'

Other participants also agreed with this conclusion, believing that definition of strategies is the preserve of senior management level, and timely provision of information is undoubtedly important.

The discussion revealed that information obtained in the CI process is important when specific methods or techniques that offer competition to your product or service are identified.

An example from the discussion that reflects the aforementioned aspect:

Interviewee R.(16): 'Information obtained as result of CI affects the definition of pricing strategy, the marketing strategy and the offer.'

Interviewee A.(15): 'Strategy is a systematic study of market changes.'

Some participants revealed that they systematically follow the information on competitors' technologies, thus estimating competitors' financial resources and development, for example:

Interviewee K.(17): 'Competitors' technical support is an indicator of serious financial coverage.'

The participants' answers showed that managers in Latvian companies appreciate information obtained as a result of the CI process. Managers revealed that company values and competencies are described and identified in comparison with competitor values and competencies in the respective industry. An absence of experience and required competencies are assessed in comparison with competitors' capabilities and activities. Any company's capacity to penetrate a new market is where competitors' intentions and potential in this market niche are known.

A topical issue of the discussion was that of the formulation of a request for specific information. Some participants emphasised the fact that formulation of a request for information is the most significant part of the CI process.

An example from the discussion that reflects the aforementioned aspect:

Interviewee A.(8): 'It should be precisely formulated what goal we want to achieve with this information.'

They expressed the belief that a manager must create a dialogue on demand, rather than provide a simple confirmation of the need. If the request for information is inaccurate or poorly focused, competitive advantages may be threatened or considerably restricted.

The group members revealed that the range of themes for gathering information is vast, starting from general statistics, financial indicators, staff and customers, to national economic indicators, for example:

Interviewee A.(19): 'The competitive environment should be studied globally and not in detail.'

The discussion revealed that there is a customer database at each company; in turn, data describing the competitive environment are not permanently stored or gathered in the database of a particular company.

Interviewee A.(18): 'Information is processed by management, it is not stored anywhere.'

Data relating to the competitive environment are primarily obtained from databases describing a company's business, financial indicators, duration and range of products or services. Information connected with the competitive environment is obtained as required, focusing on a specific problem, and is more associated with a product or a service. Depending on the nature of the problem, certain employees or specialists working in the field of the problematic issue, and with day-to-day knowledge of the relevant field, are addressed; unless the certain specialist can provide information, monitoring of the competitive environment is carried out. The participants agreed that the information may be incomplete and often biased in such a manner, because it covers a relatively short period with regard to the data

referring to the problem; however, such practice can be observed in Latvia companies. A longer information collection period is required for 'becoming distinct and recognizable', and in such cases, several departments should be involved, for example, the Marketing Division and the Technologists Division.

Interviewee K.(17): 'For intelligence of competitive environment, it would be better to select an organisation directly dealing with environmental monitoring and to withdraw from competitive intelligence management at the company.'

Summarising the discussion results, most of the participants (14) revealed that, in their company, there is a particular strategy for how to follow market changes, and they believe that they gather information on a regular basis. Other participants admitted that information-gathering occurs, but irregularly. The discussion revealed that executives often become engaged in the gathering of information.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(14): 'CI is a manager's personal experience.'

Interviewee G.(10): 'The manager is more concerned about the CI process.'

Some managers stated that when taking decisions, they are not sure the received information is reliable and that the source of information is appropriate.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee D.(1): 'The employee shall be controlled and the information obtained by him/her shall be verified.'

Interviewee I.(11): 'An employee cannot be concerned 100% in the process of CI.'

Interviewee K.(17): 'Managers are result-focused.'

Interviewee A.(19): 'The manager sees the situation in its entirety.'

Therefore, board members, the Strategic Director, owners etc. are nominated as the main persons involved in the gathering of information.

An example from the discussion that reflects the aforementioned aspect:

Interviewee A.(14): 'CI is A manager's mission, since the manager makes decisions and is responsible for them.'

When changes are implemented, managers take the initiative and the responsibility, while employees are in the role of followers. However, all members of the group agreed with the statement that the CI process requires ready-made procedures for managing the flow of the competitive information process.

An example from the discussion that reflects the aforementioned aspect:

Interviewee D.(1): 'It is substantial to develop specific steps of the process in order to distribute responsibilities.'"

The discussion revealed that information is mainly disseminated through the organisational levels according to its content, but some participants emphasised the fact that movement of competitive information should take place only at the level of senior management.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(15): 'Manager should be responsible for the whole work of the organisation, but employees' functions are specific and restricted.'

Interviewee I.(11): 'Employees are not competent to use the whole information.'

Interviewee D.(1): 'The subordinates are already provided with sufficient information in order to fulfil their direct responsibilities.'

The group members were of the same opinion that the current situation in Latvia and worldwide means that companies increasingly think about their loyal and reliable staff; however, it is not easy to motivate staff to become loyal employees. During the discussion, the opinion that a loyal and reliable employee keeps to a *'framework of rules'* established by company culture, and also has a correct and favourable attitude towards the organisation, was expressed.

Employees are the main assets of a company, and they will always be, if the head of the company is capable of creating an organisational atmosphere that stimulates cooperation, mutual trust and knowledge turnover, and encourages employees to follow ethical standards or community of values. The discussion revealed that such changes can occur within an organisation if there is a greater focus on organisational culture.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(7): 'At present, there is not enough time to pay all attention to organisational culture; there are other problems, for example, how to sell products in view of the global political situation.'

Interviewee G.(10): 'It is clear that more attention should be paid to relationships with employees, but also employees need to understand that they are part of the company' or 'organisational culture is created by its participants, and anyone is able to change it.'

The views expressed during the discussion showed that the organisational environment does not motivate employees to provide information or share knowledge, which is required to ensure the CI process. Only two participants revealed that their company had ready-made procedures to ensure the information turnover process. However, employees considered the procedures to be incomplete, for example:

Interviewee A.(8): 'The procedures do not include all possible solutions; there are non-standard situations, which cannot be foreseen.'

The group members were of the same opinion that the senior management of each organisation plays an important role in ensuring that the staff support the CI process, because organisational culture is not only a system of formal and informal regulations. Deliberate measures for its creation help an organisation to advance its competitiveness in the market.

5.1.4.2. Factors affecting the competitive intelligence process, as observed by supervisors

Discussion of the factors affecting the CI process revealed that greater employee involvement in a company's activities is a key driver towards business success, for example:

Interviewee A.(19): 'Employees with a lower level of loyalty get less involved in company's activities and are often not interested in development of the company.'

The group members explained that in companies with a low level of employee loyalty, there is a high staff turnover, which creates major difficulties for the company with regard to achievement of its goals. In turn, this can affect the opinions of an organisation's customers and decrease the level of their loyalty to the organisation. In addition, such companies lack effective communication, and their employees are not sufficiently informed of the company's values

Interviewee I.(11): 'A manager should take interest whether the employee understands the organisation's values.'

It is the organisational culture that determines the internal communication and organisational stereotypes regarding all issues associated with the organisation. The participants expressed the opinion that organisations should be open to their employees, because companies with a low level of trust encourage people to hide their real objectives, thereby deceiving others.

The participants expressed the opinion that employees are loyal not to a particular manager or to a company, but they each have their own values and hope to find a company that meets these values. In one respect, this conclusion confirmed the role of employee loyalty in the organisation, as well as once again substantiated the role of organisational culture in ensuring various management processes in an organisation.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(19): 'Loyalty depends on how skilfully a manager motivates their employees.'

Interviewee K.(17): 'Lack of trust may affect CI from the ethical point of view.'

In another respect, a discussion resulted from the fact that employees' interests are often selfish and not oriented towards creation of added value, or their perceptions of values are different.

Some participants agreed with the conclusion that changes in organisational culture are not necessary if the existing management system are functioning efficiently. However, the opinion was expressed that if a company manager estimates only the employees' financial contribution to the company, and is unaware of the employees' value and potential contribution, then that manager is not focused on the development of loyalty.

The questions regarding aspects that affect the CI process resulted in a discussion of values, for example:

Interviewee D.(1): 'The values of managers and employees are different, because employees are often forced to adapt to the values established by the manager.'

Interviewee I.(11): 'Values serve as a manager's tool for team management'.

The discussion participants believed that, in order to ensure an efficient CI process, the manager should build a competent team that can be trusted. Trust was evaluated as being the most important factor in the facilitation of knowledge-sharing and loyalty to an organisation.

5.1.4.3. Supervisor views of knowledge sharing habits in the organisation

The group members expressed the opinion that knowledge sharing within the framework of the CI process in an organisation is an additional guarantee of company stability, for example:

Interviewee A.(7): 'Information may not be spontaneously obtained and analysed in our industry, it is a serious risk because you can easily become a loser.'

Interviewee G.(10): 'The existing global situation requires involvement of all employees in knowledge sharing.'"

The discussion revealed the dominant views on knowledge-sharing habits in an organisation:

- 1) The information turnover system of the organisation does not facilitate mutual knowledge sharing in an organisation.

Interviewee A.(7): 'Employees receive ready information, and no objections are accepted.'

Interviewee A.(18): 'Other employees are acquainted with ready orders.'

- 2) Questioning of competency.

Interviewee K.(17): 'Managers themselves process information'

Interviewee I.(11): 'An employee cannot be by 100% interested in the process of CI.'

Interviewee G.(10): 'Employees' functions are restricted.'

- 3) Unilateral decision-making by managers at a senior level.

- 4) Information turnover and knowledge sharing usually occurs in a narrow circle.

The opinion that in order to promote knowledge sharing, a manager must change the style of management, for example, from authoritarian to democratic depending on the situation, was expressed.

Perhaps one of the most important internal communication functions is the involvement of employees in decision-making and the expression of their views and ideas, for which a space should also be provided in the strategy of internal communication. The participants also drew attention to the fact that the role of aspects of organisational culture is a relatively new theme in Latvia, but it is very topical, because with a transition to market relationships, the system of relationships between employers and workers, social values and communication systems changed. An understanding of organisational culture helps with regard to becoming aware of problems and introducing required changes, coordinating strategy of changes with organisational culture. During the discussion, it was stated that evaluation of culture is one of the primary tasks in the process of change; therefore, the topic of cultural diagnostics is very current, because it directly affects both the communication process, which should provide knowledge sharing, and organisational values that are constantly being exposed to unpredictable external influences.

The participants expressed the opinion that the main values in ensuring the CI process are solidarity and mutual support, dominant teamwork and loyalty among employees and to management.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(8): 'Trust is the most important factor affecting knowledge sharing'

Interviewee E.(6): 'Trust promotes affiliation to the organisation.'

Interviewee I.(11): 'Communication is the basis of collaboration; it builds trust, eliminates ignorance and uncertainty, increases productivity and unites the team.'

During the discussion, the idea was expressed that obtaining results depends on mutual collaboration, including efficient knowledge sharing.

The discussion participants were of the same opinion that a company's internal communication serves for fast and open dissemination of company information, management decisions and change reports, as well as for development of innovations and new ideas in the company, ensured by an efficiently managed CI process, for example:

Interviewee A.(19): 'Information provides advantages when making decisions and drawing up offers.'

Interviewee K.(17): 'Information becomes outdated very fast, and it should be refreshed very often.'

Interviewee A.(18): 'Recently, CI can sooner be called a company policy focused on capacity building of the company.'

Subsequently, the group members expressed the opinion that organisations must adapt to the environment nowadays, and change according to its speed of change. The fastest changes occur in the

field of information; therefore, incorrect internal communication can result in a variety of both short-term and long-term negative consequences for the organisation.

The discussions revealed that, as observed by supervisors, organisational culture is largely identified with efficiency, focus on success, continuous improvements, information circulation and mutual cooperation in the workplace. Enterprise managers also mentioned such components of organisational culture as organisational symbolism, rituals and ceremonies, etc. Some focus group participants revealed that the main organisational values at their enterprises are declared by the management and are fixed in the organisational documentation. Answers to the question of whether an enterprise controls its culture, show that organisational culture is never controlled and that its values are not openly expressed.

The way values are reflected often turns into contradictions, which manifest themselves in the personal behaviour of executives, managers and employees, and in an organisation's collective behaviour. However, all participants agreed that the values of the enterprise are reviewed and discussed from time-to-time, and are transformed, if necessary.

The participants expressed the view that with changes in beliefs and in what is admitted as a value, action and behaviour also change. Several participants revealed that they had thought about cultural transformation. For example:

Interviewee K.(17): 'I believe that today, when so much is being said about the impact of mutual relationships upon the business environment, it is important to review the company's culture and to alternate along with the times.'

Interviewee S.(5): 'I think that companies avoid responsibility; to my mind, values of organisational culture should be radically reviewed and responsibility should be one of the main values regardless of the business activities of the enterprise.'

Opinions on the role of organisational culture were different.

Some participants thought that organisational culture today is one of the conditions of an organisation's competitiveness, while others expressed the view that organisational culture refers only to a company's internal environment, and that a company's culture determines only the relationship between employee. For example:

Interviewee I.(11): 'Organisational culture is undoubtedly the company's added value if it contributes to competitiveness. For example, if one of the organisation's values is "customer focus.'"

Interviewee A.(8): "I think that organisational culture is given too much attention. For example, in our enterprise, all processes are strictly declared and written down, everything takes place according to the regulated procedure and particular individual values shall not be specifically emphasised.'

Some participants expressed the view that employees should not be involved in determination of the organisation's vision, mission and values. A view that the smooth running of the CI process, and other processes at a company, are affected by the existence of strictly regulated rules was expressed.

Likewise, some members of the group expressed the view that regulated procedure of receipt and transfer of information facilitates both supervisors' and employees' work, because a manager has to monitor developments at the enterprise.

However, other members objected, stating that it is a matter of trust.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(14): 'To my mind, the cultural values of an organisation should be determined by management. Likewise, managers establish the vision and mission of an organisation. In turn, employees must comply with the established values and strive to adopt these as their own personal values.'

Interviewee P.(12): 'In our company, for example, there are prescriptions that determine how information is transferred from one department to another. In this way, we avoid misunderstandings and unnecessary mutual conflicts.'

Interviewee N.(4): "'I think all the written instructions are related to trust. If one employee of the company does not know what the other is doing, there is poor communication and mutual distrust, then everything perhaps should be strictly laid down in writing, but then the question is whether such a company is able to respond to changes.'

Interviewee G.(10): 'Trust is one of the main cultural values of an organisation.'

The views were contradictory, because the discussion participants simultaneously emphasised both the advantages of a strictly regulated culture and the importance and benefits of an open culture for ensuring success of various processes, manifesting itself both in relationships among employees, in exchange of information (verbal and data network), and in rapid response to changes.

It was argued that the purpose of organisational culture is to provide a high level of information at an enterprise, so that employees were aware of business goals and constantly strived to achieve them. The group members emphasised external manifestations of the organisational culture: employee behaviour and appearance, particularly in the banking sector, interior and design of an organisation.

Many supervisors expressed the view that the design of a company and its office is visually most noticeable on its business card, which helps in trust building. Likewise, attention is drawn to the layout of premises that show a preference for the features of a democratic management style.

Interviewee A.(15): 'In my opinion, as soon as you enter the enterprise, you can tell what organisational culture is dominant here.'

Interviewee R.(20): 'The appearance of the staff often tells a lot about the organisational values and whether it can be trusted at all.'

The group members agreed that organisational culture is the system of organisational values and social norms. The following were named as an organisation's fundamental cultural values: responsibility, focusing on results, honesty, achievements, continuous learning, mutual respect and trust. Several members of the group emphasised, for example, that if a company's value is a focus on results, then that company makes a profit and can meet the needs of its members.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(8): 'I believe that the basis of any organisational culture should be the focus on success, otherwise the company will not be ready to change anything and people will not have motivation to work.'

Summing up the discussion, it can be concluded that the members of the supervisor group appreciate such values of organisational culture as trust and awareness. They emphasised values that do not interfere with, but stimulate, mutual communication, and do not question the manager's authority.

The foundations of organisational culture are built by such components as organisational symbolism, rituals and ceremonies, etc. The participants emphasised such values of organisational culture as responsibility and a focus on results, which are directly related to the work done: the more you invest, the more you receive.

As observed by the discussion participants, the organisational culture should be aimed at reaching objectives and should promote the quality of performance. It not only makes the employees play an active role in order to reach organisational goals, but also attracts customers and increases a company's competitiveness.

5.1.4.4. The role of organisational culture and values, as understood by supervisors

The results of the supervisor group discussions revealed that organisational culture as understood by supervisors is largely identified with efficiency, a focus on success, continuous improvements, information circulation and mutual cooperation in the workplace. Enterprise managers also mentioned such components of organisational culture as organisational symbolism, rituals and ceremonies, etc. Some focus group participants revealed that the primary organisational values at their enterprises are declared by the management and are fixed in the organisational documentation

Answers to the question of whether an enterprise controls its culture showed that organisational culture is never controlled and its values are not openly expressed. The way values are reflected often turns into contradictions, which manifest themselves in the personal behaviour of executives, managers and employees, and in an organisation's collective behaviour.

However, all participants agreed that the values of an enterprise are reviewed and discussed from time-to-time, and are transformed, if necessary. The participants expressed the view that with changes in beliefs and in what is admitted to be a value, action and behaviour also change. Several participants revealed that they had thought about cultural transformation. For example:

Interviewee K.(17): 'I believe that today, when so much is being said about the impact of mutual relationships upon the business environment, it is important to review the company's culture and to alternate along with the times.'

Interviewee S.(13): 'I think that companies avoid responsibility; to my mind, values of organisational culture should be radically reviewed and responsibility should be one of the main values regardless of the business activities of the enterprise.'

Opinions on the role of organisational culture were different. Some participants thought that organisational culture today is one of the conditions of an organisation's competitiveness, while others expressed the view that it refers only to a company's internal environment, and that a company's culture determines only the relationship between employees. For example:

Interviewee K.(17): 'Organisational culture is undoubtedly the company's added value if it contributes to competitiveness. For example, if one of the organisation's values is "customer focus."'

Interviewee A.(7): 'I think that organisational culture is given too much attention. For example, in our enterprise, all processes are strictly declared and written down, everything takes place according to the regulated procedure and particular individual values shall not be specifically emphasised.'

Some discussion participants expressed the view that employees should not be involved in determination of an organisation's vision, mission and values. A view was given that smooth running of CI process, and other processes at the enterprise, are affected by the existence of strictly regulated rules. Likewise, some members of the group stated that regulated procedure of receipt and transfer of information facilitates both supervisors' and employees' work, because a manager has to monitor developments at the enterprise.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(19): 'To my mind, the cultural values of an organisation should be determined by management. Likewise, managers establish the vision and mission of an organisation. In turn, employees must comply with the established values and strive to adopt them as their own personal values.'

Interviewee E.(6): 'In our company, for example, there are prescriptions that determine how information is transferred from one department to another. In this way, we avoid misunderstandings and unnecessary mutual conflicts. The whole process is traceable.'

Interviewee N.(4): 'I think all the written instructions are related to trust. If one employee of the company does not know what the other is doing, there is poor communication and mutual distrust, then everything perhaps should be strictly laid down in writing, but then the question is whether such a company is able to respond to changes.'

Interviewee G.(10): 'Trust is one of the main cultural values of an organisation.'

The views were contradictory, because the discussion participants simultaneously emphasised the fact that both the advantages of a strictly regulated culture and the importance and benefits of an open culture for ensuring success of various processes manifest themselves both in relationships among employees, in exchange of information (verbal and data network), as well as in rapid response to changes. During the discussion, it was argued that the purpose of organisational culture is to provide a high level of information at an enterprise, so that employees are aware of business goals and strive to achieve them.

The group members emphasised external manifestations of the organisational culture: employees' behaviour, appearance, especially in the banking sector, interior and design of an organisation. Many supervisors expressed the view that the design of company and its office is visually most noticeable on that organisation's business card, which helps in trust-building. Likewise, attention is drawn to the layout of premises preferring features of a democratic management style.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(15): 'In my opinion, as soon as you enter the enterprise, you can tell what organisational culture is dominant here.'

Interviewee S.(13): 'The appearance of staff often tells a lot about the organisational values and whether it can be trusted at all.'

The members of the supervisor group agreed that organisational culture is the system of organisational values and social norms. The following were named as the organisation's fundamental cultural values – responsibility, focusing on results, honesty, achievements, continuous learning, mutual respect and trust. Several members of the group emphasised, for example, that if a company's value is focused on results, then the organisation makes a profit and can meet the needs of its members.

Examples from the discussion that reflect the aforementioned aspect:

Interviewee A.(7): 'I believe that the basis of any organisational culture should be the focus on success, otherwise the company will not be ready to change anything and people will not have motivation to work.'

Interviewee S.(15): 'The indicator of organisational culture at the company is whether the staff educates constantly, what is their potential for growth, how much competition exists between employees.'

Employees' answers to the question of who is responsible for creation of the environment of organisational culture showed that organisational culture is most often determined by the manager and the manager's system of values; however, all participants agreed that the organisational culture cannot be built by a manager alone. However, the participants did not agree with the opinion that employees of an organisation should also be involved in the development of the value system. During the discussion, the view was expressed that managers define values, but that the psychological climate is created by all employees of the organisation through mutual interaction.

Summing up the discussion, the members of the supervisor group appreciated such values of organisational culture as trust and awareness. The discussion participants emphasised values of organisational culture that do not interfere with, but stimulate, mutual communication and do not question the manager's authority. The foundations of organisational culture are built by such components as organisational symbolism, rituals and ceremonies, etc.

The participants emphasised such values of organisational culture as responsibility and a focus on results, which are directly related to the work done – the more you invest, the more you receive. As they observed, the organisational culture should be aimed at reaching objectives and should promote the quality of performance. It not only allows the employees to play an active role in order to reach organisational goals, but also attracts customers and increases a company's competitiveness.

5.1.5. Advancing new hypothesis questions on the basis of qualitative research

The focus group discussion results showed that it is important for supervisors to be aware of the factors affecting the performance of the organisation. Teamwork requires an awareness and balance of each employee's individual knowledge, skills, personal qualities and values with the common organisational values and goals. The results regarding the variables influencing knowledge sharing behaviours are summarised in Table 11.

Table 11. A summary of the variables influencing knowledge sharing behaviours in the focus groups discussions

Variables influencing knowledge sharing behaviours	Citation frequency	Variables influencing knowledge sharing behaviours	Citation frequency
Introduction of common values, norms and rules	38	Motivated staff	21
Trust	39	Managers regularly inform subordinates	23
Clearly defined values	40	Open communication at the vertical (management - staff) and the horizontal (employees - employees) levels	37

Changes: <ul style="list-style-type: none"> • Change in strategy • Change in organisational culture • Structural change • Technological change 	37	Support	24
Confidence	24	Respect	16
Interpersonal trust	31	Justice	16
Organisational trust	37	Loyalty	33
Involvement in decision-making	31	Strict distribution of functional roles	25

The results showed that it is important for a manager to be aware of the factors affecting the performance of an organisation. The participants of the group believed that a manager must obtain information relating to changes in the surrounding environment, analyse the information and revise goals or tasks in case the changes affect functioning of that organisation. This does not mean abandonment of the intended direction, but rather the early detection of problems or opportunities, and a search for new solutions or an adjustment of the existing solutions.

The most frequently mentioned aspects influencing habits of communication in the Latvian competitive environment are summarised in Table 12.

Table 12. Aspects influencing habits of the communication framework in the Latvian competitive environment

Aspects influencing habits of communication	Citation frequency	Aspects influencing habits of interpersonal communication	Citation frequency
Trust	39	Organisational culture	32
Faith in intentions of management	23	Learning organisation	18
Honesty	19	Motivated staff	21
Confidence	24	Support	24
Interpersonal trust	31	Respect	16
Organisational trust	37	Justice	16
Motivation	27	Loyalty	33
Open communication and a dialogue-oriented culture	28	Open communication at the vertical (management - staff) and the horizontal (employees- employees) levels	37
Involvement in decision-making	31		

The qualitative research resulted in the discovery of several variables that influence the habits of communication in the Latvian competitive environment. The greatest citation frequency was associated with the following concepts:

1. Trust
 - a. Organisational trust
 - b. Interpersonal trust
2. Open communication at the vertical (management - staff) and the horizontal (employees- employees) levels
3. Loyalty
4. Organisational culture
5. Involvement in decision-making

In the framework of this study, the term 'loyalty' was discussed from the point of view of organisational identity, which addresses social identity in the context of an organisation. It is important for individuals to understand who they are as an organisation, so loyalty towards that organisation in connection with job position was analysed. Loyalty towards organisation is employee identification and involvement in that organisation.

In order to evaluate aspects influencing communication frameworks and interrelationships, two further hypothetical questions were considered in the quantitative research process (Figure 24):

H7. Is there a significant relationship between organisational identification and CI?

H8. Is there a significant relationship between organisational identification and knowledge sharing?

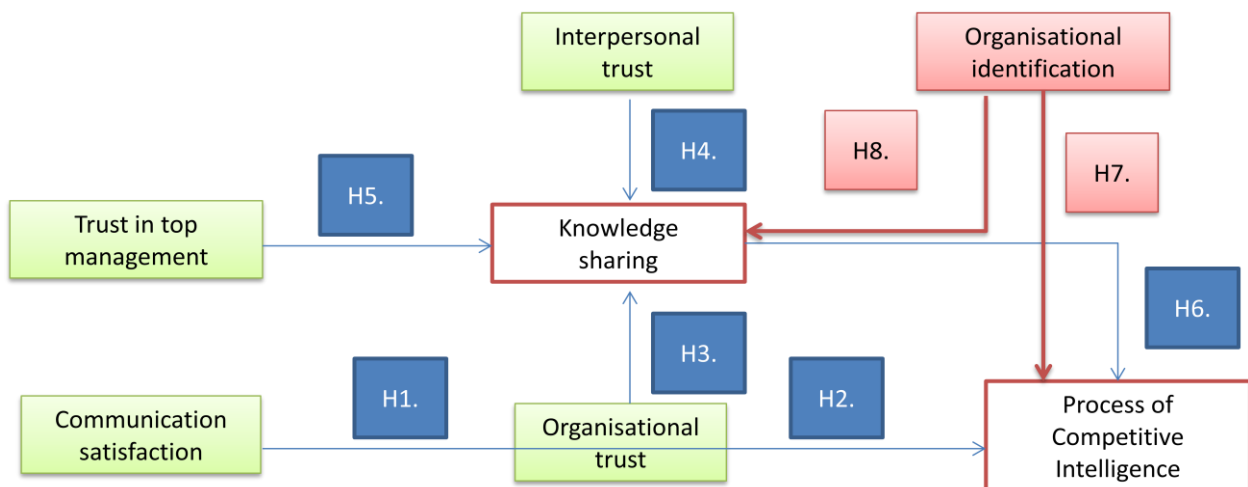


Figure 24. The revised quantitative research conceptual model

Interpretation of Organisational identification more or less overlaps with trust in an organisation, loyalty towards an organisation, mutual concord between a person and an organisation, and psychological

adherence. Organisational identification is defined as unity with the organisation, where an individual's identity and destiny become entwined with the organisation (Mael & Ashforth, 1992).

Organisational identification is more than trust in it or job satisfaction. The highest degree of loyalty towards an organisation is identification with it, where an employee defines him/herself in organisational categories. It is understood as a process, as an interaction between individuals and organisation.

5.2. Quantitative research

A total of 100 electronic questionnaires were sent to potential participants. Of these 73 were returned, and 66 were used; seven questionnaires were only partially completed, so they were excluded from the study. The number of enterprises included in the representative sample were as follows: 17 (26%) large-sized enterprises, with 250 or more employees and an annual turnover exceeding EUR 50 million; 19 (29%) medium-sized enterprises, with 50 to 249 employees and an annual turnover not exceeding EUR 50 million; 18 (27%) small enterprises, with 10 to 49 employees and an annual turnover not exceeding EUR 10 million; an 12 (18%) micro enterprises, with one to nine employees and an annual turnover not exceeding EUR 2 million.

The representative sample consisted of 37 (56%) female and 29 (44%) male participants, aged from 20 to 55 years. A total of 11 (17%) participants had been working in their present organisation for up to 1 year 34 (51%) from 1 to 5 year, 13 (20%) from 6 to 10 years and 8 (12%) survey respondents had been working in their current organisation for 10 years or more. A total of 45 (68%) of respondents were specialists and 21 (32%) were supervisors. The results of descriptive statistics and correlation analysis are summarised in the Appendices 9, 10 & 11.

5.2.1. Hypothesis question 1: Is there a relationship between communication satisfaction and competitive intelligence?

The purpose of the research was to explore the relationship between satisfaction with communication in an organisation within the context of knowledge sharing and the factors affecting the CI process. The results showed a statistically significantly weak correlation ($r=0.215$, $\alpha=0.01$) between satisfaction with communication in the organisation and the entire CI process (Table 13).

Table 13. The relationship between communication satisfaction and competitive intelligence

		Correlations			
		CI	CI Proseses factors	CI Context factors	Satisfaction with communication
CI	Pearson Correlation	1	,969**	,957**	,215
	Sig. (2-tailed)		,000	,000	,082
	N	66	66	66	66
CI Proseses factors	Pearson Correlation	,969**	1	,857**	,225
	Sig. (2-tailed)	,000		,000	,069
	N	66	66	66	66
CI Context factors	Pearson Correlation	,957**	,857**	1	,187
	Sig. (2-tailed)	,000	,000		,133
	N	66	66	66	66
Satisfaction with communication	Pearson Correlation	,215	,225	,187	1
	Sig. (2-tailed)	,082	,069	,133	
	N	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

Therefore, there is a correlation between satisfaction with communication as a multidimensional factor, including satisfaction with the amount of information, with the upward, downward and horizontal communication etc. and with CI. Similarly, there was a weak correlation between organisational satisfaction and the CI process ($r=0.225$, $\alpha=0.01$) and very weak correlation between CI context ($r=0.187$, $\alpha=0.01$).

In general, a statistically significant, but, very weak or weak, correlation between CI factors and organisational satisfaction dimensions was shown. Analysing the relationships between the organisational satisfaction dimensions and CI process factors, the most significant correlations should be mentioned. The selected parameters showed a significant relationship between the CI process factor 'Planning and Focusing' and organisational satisfaction interpersonal context ($r=0.288$, $\alpha=0.01$). For example, a significant relationship existed between the CI process factor 'Planning and Focusing' and the organisational satisfaction dimension 'Subordinate Communication' ($r=0.293$, $\alpha=0.01$) and 'Personal Feedback' ($r=0.251$, $\alpha=0.01$). Similarly, a significant relationship exists between the CI Process factor 'Collection' and the organisational satisfaction dimension 'Media Quality' ($r=0.293$, $\alpha=0.01$) and 'Personal Feedback' ($r=0.266$, $\alpha=0.01$).

Analysing relationships between organisational satisfaction dimensions and CI Context factors, it must be concluded that there was a statistically significant relationship between the CI context factor

'Employee Involvement' and the communication satisfaction dimension 'Corporate Information' ($r=0.285$, $\alpha=0.01$). This organisational satisfaction dimension describes whether employees receive information on the supervisory activities that affect the organisation, as well as on changes, the financial situation and on an organisation's strategy and goals. Likewise, a relationship exists between 'Employee involvement' and the communication satisfaction dimension 'Horizontal and Informal Communication' ($r=0.280$, $\alpha=0.01$) and the dimension 'Media Quality' ($r=0.260$, $\alpha=0.01$), which refers to satisfaction with various channels of information and scope of information.

The results showed a relationship between the communication satisfaction dimension 'Subordinate Communication', which describes the extent to which subordinates are responsive and trust their superior, and the CI Process factor 'Awareness' ($r=0.330$, $\alpha=0.01$), and between the organisational satisfaction dimension 'Personal Feedback', which describes staff understanding of evaluation principles and standards, and the CI Process factor 'Awareness' ($r=0.332$, $\alpha=0.01$). Similarly, a weak correlation was observed between the organisational satisfaction dimension 'Organisational Integration' ($r=0.267$, $\alpha=0.01$), which reflects individual satisfaction with the information received by the employee on the organisation and the immediate work environment, and the CI process factor 'Awareness'.

When estimating the results of employees' responses in the context of the research, significant relationships between communication satisfaction and CI were identified (Table 14).

Table 14. The relationship between communication satisfaction and competitive intelligence in employees

		Correlations			
		CI	CI Processes factors	CI Context factors	Satisfaction with communication
CI	Pearson Correlation	1	,968**	,958**	,508**
	Sig. (2- tailed)		,000	,000	,000
	N	45	45	45	45
CI Proceses factors	Pearson Correlation	,968**	1	,855**	,477**
	Sig. (2- tailed)	,000		,000	,001
	N	45	45	45	45
CI Context factors	Pearson Correlation	,958**	,855**	1	,504**
	Sig. (2- tailed)	,000	,000		,000
	N	45	45	45	45
Satisfaction with communication	Pearson Correlation	,508**	,477**	,504**	1
	Sig. (2- tailed)	,000	,001	,000	
	N	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

The results showed a significant moderately strong correlation between communication satisfaction and CI ($r=0.508$, $\alpha=0.05$). Likewise, a significant moderately strong correlation exists between communication satisfaction and the CI Process ($r=0.477$, $\alpha=0.05$) and the CI context ($r=0.504$, $\alpha=0.05$). Significant relationships between all CI factors and communication satisfaction organisational content were found. There was a strong correlation between communication satisfaction's Organisational Content and CI context ($r=0.601$, $\alpha=0.01$). Likewise, a strong correlation between CI Context and the communication satisfaction dimension 'Communication Climate' ($r=0.646$, $\alpha=0.01$). There was a significant relationship between communication satisfaction's Organisational Content and the CI context factor 'Awareness' ($r=0.463$, $\alpha=0.01$), 'Internal information' ($r=0.585$, $\alpha=0.01$), 'Formal Infrastructure' ($r=0.454$, $\alpha=0.01$) and 'Employee Involvement' ($r=0.539$, $\alpha=0.01$).

There was moderately strong correlation between all CI factors and the communication satisfaction dimension 'Media Quality' ($0.4 < |r| < 0.6$), described by satisfaction with various channels of information. The degree of satisfaction with the arrangement of meetings, written orders and the scope of information is of primary importance. Likewise, there were moderately high statistically significant correlations between all CI factors and the communication satisfaction dimension 'Communication Climate', reflecting communication from organisational and staff levels. On the one hand, this reflects satisfaction with the way organisational communication motivates achievement of the goals of the organisation; while on the other, it includes satisfaction with the extent to which supervisors know and understand the problems faced by their subordinates. A weak negative correlation between the CI Process factor 'Collection' and the communication satisfaction dimension 'Relationship with subordinates' ($r=-0.383$, $\alpha=0.01$) was observed in the staff group.

When estimating the results of the supervisors' responses, significant negative relationships between communication satisfaction and CI were identified (Table 15).

Table 15. The relationship between communication satisfaction and competitive intelligence in supervisors

		Correlations			
		CI	CI Proceses factors	CI Context factors	Satisfaction with communication
CI	Pearson Correlation	1	,976**	,931**	-,276
	Sig. (2- tailed)		,000	,000	,227
	N	21	21	21	21
CI Proceses factors	Pearson Correlation	,976**	1	,830**	-,142
	Sig. (2- tailed)	,000		,000	,538
	N	21	21	21	21
CI Context factors	Pearson Correlation	,931**	,830**	1	-,469*
	Sig. (2- tailed)	,000	,000		,032
	N	21	21	21	21

Satisfaction with communication	Pearson Correlation	-,276	-,142	-,469*	1
	Sig. (2-tailed)	,227	,538	,032	
	N	21	21	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The results showed a weak negative correlation between communication satisfaction and CI ($r=-0.276$, $\alpha=0.01$) and a very weak negative correlation between communication satisfaction and the CI Process ($r=-0.142$, $\alpha=0.01$). A significant negative relationship ($r=-0.469$, $\alpha=0.01$) between communication satisfaction and CI context was observed.

Analysing the results of the supervisors' responses, it can be concluded that there was a negative correlation overall. A statistically significant negative correlation between the CI Process factor 'Communication and Analysis' and the communication satisfaction dimension 'Personal Feedback' ($r=-0.451$, $\alpha=0.01$) was observed, and a statistically significant negative correlation between the CI Process factor 'Communication and Analysis' and communication satisfaction's Interpersonal Content ($r=-0.440$, $\alpha=0.01$), including such communication satisfaction dimensions as 'Personal Feedback', 'Supervisor Communication' and 'Subordinate Communication' was identified. A moderately strong negative correlation existed between the CI Process factor 'Collection' and the communication satisfaction dimension 'Communication Climate' ($r=-0.443$, $\alpha=0.01$) and the CI Process factor 'Collection' and communication satisfaction's Interpersonal Content ($r=-0.443$, $\alpha=0.01$).

Several statistically significant negative correlations between CI Context and communication satisfaction dimensions ($0.4 < |r| < 0.6$) were observed. For example, a moderately strong negative correlation existed between CI Context and the communication satisfaction dimensions 'Communication Climate' ($r=-0.510$, $\alpha=0.01$), 'Media Quality' ($r=-0.470$, $\alpha=0.01$), 'Subordinate Communication' ($r=-0.519$, $\alpha=0.01$), 'Personal Feedback' ($r=-0.548$, $\alpha=0.01$) and 'Organisational Integration' ($r=-0.484$, $\alpha=0.01$). Likewise, a statistically significant negative correlation between CI context and communication satisfaction's Interpersonal Content ($r=-0.547$, $\alpha=0.01$) was observed in the group of supervisors.

Summarising the results, the hypothetical question H.1 (Is there a relationship between satisfaction with communication in the organisation and the process of CI?) was answered in the affirmative. Although the correlation was statistically weak ($0.2 < |r| < 0.4$), positive correlation between communication satisfaction and the CI process in general was observed, which could indicate a trend. However, looking at the correlation from the perspective of employees, communication satisfaction in the organisation was generally predictive of CI and was statistically significant ($0.4 < |r| < 0.6$).

5.2.2. Hypothesis question 2: Does organisational trust moderate the relationship between communication satisfaction and CI?

Another factor that could affect CI was considered; it was examined as to whether organisational trust acts as a mediator between communication satisfaction in an organisation and the CI process. The data obtained show that organisational trust acts as a significant mediator between CI and communication satisfaction in an organisation.

The research showed a statistically significant correlation between organisational trust and CI in general, as well as with each separate CI factor.

A highly statistically significant correlation between organisational trust and CI ($r=0.876$, $\alpha=0.01$) was found. Analysis of the obtained results showed a very strong correlation between organisational trust in CI context ($r=0.859$, $\alpha=0.01$), including such factors as 'Awareness', 'Internal information', 'Formal Infrastructure' and 'Employee Involvement'. A statistically significant correlation between organisational trust and Communication satisfaction in the CI aspect was also observed ($r=0.324$, $\alpha=0.01$), and a weak correlation between organisational trust and the Communication satisfaction dimension 'Organisational Information' ($r=0.307$, $\alpha=0.01$) was also found. There was a weak correlation between organisational trust and communication satisfaction's 'Group Content' ($r=0.321$, $\alpha=0.01$), including such dimensions as 'Organisational Integration' and 'Horizontal Communication'.

Analysing employees' opinions on this issue, the data showed a high positive correlation between organisational trust and CI, $r=0.888$, $\alpha=0.01$. The employee survey results showed a moderately high positive correlation between organisational trust and communication satisfaction in the competitive intelligence aspect ($r=0.596$, $\alpha=0.01$). According to the employees' responses, there was a weak correlation between CI and all CI factors and the communication satisfaction dimension 'Communication Climate, thereby only indicating trends. A moderately high correlation between organisational trust and the communication satisfaction dimension 'Communication Climate' ($r=0.624$, $\alpha=0.01$) and CI and the communication satisfaction dimension 'Communication Climate' ($r=0.644$, $\alpha=0.01$) was observed. It was also shown that organisational trust supports communication satisfaction in the aspect of organisational context ($r=0.613$, $\alpha=0.01$). These are such aspects as Communication Climate ($r=0.624$, $\alpha=0.01$), Media Quality ($r=0.594$, $\alpha=0.01$) and Organisational Information ($r=0.479$, $\alpha=0.01$). There was also a moderately high correlation between communication satisfaction (Organisational Context) and CI ($r=0.600$, $\alpha=0.01$). A moderately significant positive correlation between organisational trust and the CI Planning and focusing factor was observed. Thus, organisational trust supports a moderate relationship between CI and certain organisational satisfaction dimensions, more in Organisational Content.

With regard to CI, the employee responses data showed a moderate correlation between organisational trust and the Employee Involvement factor in the CI aspect ($r=0.822$, $\alpha=0.01$). It is significant that there was a moderately high correlation between the CI Process factor 'Collection', reflecting data collection in the CI process, and the communication satisfaction dimension 'Media Quality' ($r=0.646$, $\alpha=0.01$). This could indicate the role of trust in the CI data collection stage.

Analysing supervisor opinions on this issue, a high positive correlation between organisational trust and CI, respectively $r=0.746$, $\alpha=0.01$ was found. The results of the supervisors' survey showed a statistically insignificant correlation between the organisational trust and communication satisfaction elements in the CI aspect. A weak negative correlation between organisational trust and the communication satisfaction dimension 'Subordinate Communication' was shown. This could be explained by mutual distrust between employees and supervisors. The supervisors' responses showed moderate negative correlations in several communication satisfaction dimensions. In general, a moderately negative correlation between the CI Context factors reflecting such stages of the process as 'Awareness', 'Internal Information', 'Formal Infrastructure' and 'Employee Involvement', and communication satisfaction's organisational content, including such dimensions as 'Communication Climate', 'Media Quality' and 'Organisational Information' was observed. A moderately negative correlation between the CI context factors and the communication satisfaction dimension 'Communication Climate' ($r=-0.510$, $\alpha=0.01$), as well as between CI context and the communication satisfaction dimension 'Personal Feedback' ($r=-0.548$, $\alpha=0.01$) was shown. Likewise, a moderately negative correlation between the CI process factor 'Collection' and the Communication Climate dimension 'communication satisfaction' ($r=-0.443$, $\alpha=0.01$), and also between the CI process factor 'Communication and Analysis' and communication satisfaction's Interpersonal Content ($r=-0.470$, $\alpha=0.01$), including such communication dimensions as 'Personal Feedback', 'Supervisory communication', and 'Organisational Integration' was found.

Hypothetical question H.2: (Does organisational trust moderate the relationship between communication satisfaction and the CI process?) is answered affirmatively, as the results showed a statistically significant correlation in this respect overall. The results showed that organisational trust supports a moderating relationship between communication satisfaction and the CI process by employees. However, this relationship does not exist in supervisors' responses. Organisational trust does not support relationship between communication satisfaction and process of CI in the group of supervisors.

5.2.3. Hypothesis question 3: Is there a relationship between organisational trust and knowledge sharing?

Evaluating indications regarding the correlation between organisational trust and knowledge sharing in the organisation, the selected parameters showed a statistically weak correlation ($r=0.291$, $\alpha=0.01$). No statistically significant correlation exists between the organisational trust dimensions: Integrity, Competence and Dependability, and knowledge sharing in general. Moreover, no statistically significant correlation between organisational trust and Intragroup knowledge sharing was observed; however, the answers showed a weak positive correlation ($r=0.330$, $\alpha=0.01$). A weak positive correlation between the organisational trust dimension 'Dependability', describing employees' awareness that the organisation will act in accordance with the words, and the Intragroup knowledge-sharing scale ($r=0.319$, $\alpha=0.01$) was also shown. A weak positive correlation between the organisational trust dimension of 'Competence', describing the awareness that organisation will be capable of implementing its promises, and the Intragroup knowledge sharing scale results ($r=0.339$, $\alpha=0.01$) was observed. There was a weak

correlation between the results of the Intragroup knowledge-sharing scale and the organisational trust dimension 'Integrity', indicating that an organisation believes in organisational honesty($r=0.268$, $\alpha=0.01$).

The results analysis showed a moderately strong correlation between organisational trust and knowledge sharing in the organisation, according to employee responses ($r=0.400$, $\alpha=0.01$). There was a correlation between the organisational trust dimension 'Integrity' and knowledge sharing ($r=0.477$, $\alpha=0.01$). A positive correlation between the organisational trust dimension 'dependability' and knowledge sharing ($r=0.395$, $\alpha=0.01$) was also observed. A weak positive correlation between the organisational trust dimension 'Competence' and knowledge sharing, a weak correlation was characteristic ($r=0.293$, $\alpha=0.01$) (Table 16).

Table 16. The relationship between organisational trust and dimensions and knowledge-sharing by employees

		Correlations				
		Organisational trust	Organisational trust, Integrity	Organisational trust, Competence	Organisational trust, Dependability	Knowledge sharing
Organisational trust	Pearson Correlation	1	,949**	,965**	,993**	,400**
	Sig. (2-tailed)		,000	,000	,000	,006
	N	45	45	45	45	45
Organisational trust, Integrity	Pearson Correlation	,949**	1	,845**	,923**	,477**
	Sig. (2-tailed)	,000		,000	,000	,001
	N	45	45	45	45	45
Organisational trust, Competence	Pearson Correlation	,965**	,845**	1	,958**	,293
	Sig. (2-tailed)	,000	,000		,000	,051
	N	45	45	45	45	45
Organisational trust, Dependability	Pearson Correlation	,993**	,923**	,958**	1	,395**
	Sig. (2-tailed)	,000	,000	,000		,007
	N	45	45	45	45	45
Knowledge sharing	Pearson Correlation	,400**	,477**	,293	,395**	1
	Sig. (2-tailed)	,006	,001	,051	,007	
	N	45	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

The employee responses showed a weak positive correlation between organisational trust and dimensions and the intergroup knowledge-sharing scale (Table 17).

Table 17. The relationship between organisational trust and dimensions and the intergroup knowledge-sharing scale by employees

		Correlations				
		Organisational trust	Organisational trust, Integrity	Organisational trust, Competence	Organisational trust, Dependability	Intergroup knowledge sharing
Organisational trust	Pearson Correlation	1	,949**	,965**	,993**	,146
	Sig. (2-tailed)		,000	,000	,000	,340
	N	45	45	45	45	45
Organisational trust, Integrity	Pearson Correlation	,949**	1	,845**	,923**	,216
	Sig. (2-tailed)	,000		,000	,000	,154
	N	45	45	45	45	45
Organisational trust, Competence	Pearson Correlation	,965**	,845**	1	,958**	,063
	Sig. (2-tailed)	,000	,000		,000	,680
	N	45	45	45	45	45
Organisational trust, Dependability	Pearson Correlation	,993**	,923**	,958**	1	,145
	Sig. (2-tailed)	,000	,000	,000		,343
	N	45	45	45	45	45
Intergroup knowledge sharing	Pearson Correlation	,146	,216	,063	,145	1
	Sig. (2-tailed)	,340	,154	,680	,343	
	N	45	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

Evaluating the correlation between organisational trust and dimensions and the Intragroup knowledge sharing-scale, all parameters showed high correlations (Table 18). The results showed that organisational trust predicted Intergroup knowledge-sharing ($r=0.777$, $\alpha=0.01$), and revealed a high positive correlation between the organisational trust dimension 'Integrity' and Intergroup knowledge-sharing ($r=0.830$, $\alpha=0.01$). In addition, a high positive correlation between the organisational trust dimension 'Competence' and the Intergroup knowledge-sharing ($r=0.668$, $\alpha=0.01$) and the organisational trust dimension 'Dependability' and Intergroup knowledge-sharing was observed ($r=0.765$, $\alpha=0.01$).

Table 18. The relationship between organisational trust dimensions and intragroup knowledge-sharing scale by employees

		Correlations				
		Organisational trust	Organisational trust, Integrity	Organisational trust, Competence	Organisational trust, Dependability	Intragroup knowledge sharing
Organisational trust	Pearson Correlation	1	,949**	,965**	,993**	,777**
	Sig. (2-tailed)		,000	,000	,000	,000
	N	45	45	45	45	45

Organisational trust, Integrity	Pearson Correlation	,949**	1	,845**	,923**	,830**
	Sig. (2-tailed)	,000		,000	,000	,000
	N	45	45	45	45	45
Organisational trust, Competence	Pearson Correlation	,965**	,845**	1	,958**	,668**
	Sig. (2-tailed)	,000	,000		,000	,000
	N	45	45	45	45	45
Organisational trust, Dependability	Pearson Correlation	,993**	,923**	,958**	1	,765**
	Sig. (2-tailed)	,000	,000	,000		,000
	N	45	45	45	45	45
Intragroup knowledge sharing	Pearson Correlation	,777**	,830**	,668**	,765**	1
	Sig. (2-tailed)	,000	,000	,000	,000	
	N	45	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

The supervisor response data showed a statistically insignificant correlation between knowledge sharing and organisational trust and all dimensions. There was a weak negative correlation between organisational trust and knowledge sharing ($r=-0.281$, $\alpha=0.01$), between the organisational trust scale 'Integrity' and knowledge sharing ($r=-0.365$, $\alpha=0.01$) and between the organisational trust scale 'Dependability' and knowledge sharing ($r=-0.249$, $\alpha=0.01$). A statistically insignificant positive correlation was observed between the organisational trust dimension 'Competence' and knowledge sharing ($r=0.015$, $\alpha=0.01$).

Table 19. The relationship between organisational trust and knowledge sharing by supervisors

		Correlations				
		Organisational trust	Organisational trust, Integrity	Organisational trust, Competence	Organisational trust, Dependability	Knowledge sharing
Organisational trust	Pearson Correlation	1	,928**	,554**	,997**	-,281
	Sig. (2-tailed)		,000	,009	,000	,217
	N	21	21	21	21	21
Organisational trust, Integrity	Pearson Correlation	,928**	1	,210	,914**	-,365
	Sig. (2-tailed)	,000		,361	,000	,104
	N	21	21	21	21	21
Organisational trust, Competence	Pearson Correlation	,554**	,210	1	,565**	,015
	Sig. (2-tailed)	,009	,361		,008	,947
	N	21	21	21	21	21

Organisational trust, Dependability	Pearson Correlation	,997**	,914**	,565**	1	-,249
	Sig. (2-tailed)	,000	,000	,008		,276
	N	21	21	21	21	21
Knowledge sharing	Pearson Correlation	-,281	-,365	,015	-,249	1
	Sig. (2-tailed)	,217	,104	,947	,276	
	N	21	21	21	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

There was a statistically weak negative correlation between Organisational trust and the Intergroup knowledge-sharing scale ($r=-0.266$, $\alpha=0.01$) in the supervisor response group. There was a statistically significantly weak negative correlation between the organisational trust dimension 'Integrity' and the Intergroup knowledge-sharing scale ($r=-0.386$, $\alpha=0.01$).

Table 20. The relationship between organisational trust dimensions and the Intergroup knowledge-sharing scale by supervisors

		Correlations				
		Organisational trust	Organisational trust, Integrity	Organisational trust, Competence	Organisational trust, Dependability	Intergroup knowledge sharing
Organisational trust	Pearson Correlation	1	,928**	,554**	,997**	-,266
	Sig. (2-tailed)		,000	,009	,000	,245
	N	21	21	21	21	21
Organisational trust, Integrity	Pearson Correlation	,928**	1	,210	,914**	-,386
	Sig. (2-tailed)	,000		,361	,000	,084
	N	21	21	21	21	21
Organisational trust, Competence	Pearson Correlation	,554**	,210	1	,565**	,173
	Sig. (2-tailed)	,009	,361		,008	,452
	N	21	21	21	21	21
Organisational trust, Dependability	Pearson Correlation	,997**	,914**	,565**	1	-,259
	Sig. (2-tailed)	,000	,000	,008		,256
	N	21	21	21	21	21
Intergroup knowledge sharing	Pearson Correlation	-,266	-,386	,173	-,259	1
	Sig. (2-tailed)	,245	,084	,452	,256	
	N	21	21	21	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

The supervisor responses results showed a statistically weak negative correlation between Organisational Trust, trust dimensions and the Intergroup knowledge-sharing scale. A weak negative correlation between Organisational Trust and the Intragroup knowledge-sharing scale was shown ($r = -0.245$, $\alpha = 0.01$).

Hypothetical question H.3 (Is there a significant relationship between organisational trust and knowledge sharing?) was not answered affirmatively overall, because a statistically insignificant correlation between Organisational Trust and knowledge sharing was shown ($0.0 < |r| < 0.2$). There was no statistically significant correlation between organisational trust, dimensions and the Intergroup knowledge-sharing scale overall. However, note that a high positive correlation exists between Organisational Trust, organisational trust dimensions and the Intragroup knowledge-sharing scale in the employee responses ($0.8 < |r| < 1.0$). The supervisor responses did not confirm statistically significant correlations between Organisational Trust and knowledge sharing in general.

5.2.4 Hypothesis question 4: Is there a relationship between interpersonal trust and knowledge sharing?

There were weak and very weak correlations between Interpersonal trust and knowledge sharing (Table 21).

Table 21. The relationship between interpersonal trust and knowledge-sharing and scales

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Interpersonal trust
Knowledge sharing	Pearson Correlation	1	,774**	,907**	,172
	Sig. (2-tailed)		,000	,000	,167
	N	66	66	66	66
Intragroup knowledge sharing	Pearson Correlation	,774**	1	,436**	,391**
	Sig. (2-tailed)	,000		,000	,001
	N	66	66	66	66
Intergroup knowledge sharing	Pearson Correlation	,907**	,436**	1	-,016
	Sig. (2-tailed)	,000	,000		,898
	N	66	66	66	66
Interpersonal trust	Pearson Correlation	,172	,391**	-,016	1
	Sig. (2-tailed)	,167	,001	,898	
	N	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

In general, the selected parameters did not show a statistically significant correlation between Interpersonal trust and the Intragroup knowledge-sharing scale results; there was a very weak negative correlation ($r=-0.16$, $\alpha=0.01$). There was a weak correlation between Interpersonal trust and the Intergroup knowledge-sharing scale ($r=0.391$, $\alpha=0.01$).

Estimating the indications of employees' responses, it should be concluded that the relationship between Interpersonal trust and knowledge sharing parameters was generally weak (Table 22).

Table 22. The relationship between interpersonal trust and knowledge-sharing and scales by employees

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Interpersonal trust
Knowledge sharing	Pearson Correlation	1	,620**	,940**	,202
	Sig. (2-tailed)		,000	,000	,184
	N	45	45	45	45
Intragroup knowledge sharing	Pearson Correlation	,620**	1	,315*	,656**
	Sig. (2-tailed)	,000		,035	,000
	N	45	45	45	45
Intergroup knowledge sharing	Pearson Correlation	,940**	,315*	1	-,041
	Sig. (2-tailed)	,000	,035		,787
	N	45	45	45	45
Interpersonal trust	Pearson Correlation	,202	,656**	-,041	1
	Sig. (2-tailed)	,184	,000	,787	
	N	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

It can be concluded that Interpersonal trust predicted Intergroup knowledge-sharing in the group of employees. A strong correlation was shown between Interpersonal trust and the Intergroup knowledge-sharing scale ($r=0.656$, $\alpha=0.01$). The correlation between Interpersonal trust and the Intragroup knowledge sharing scale was statistically insignificant.

The supervisor responses showed no statistically significant correlation between Interpersonal trust and knowledge-sharing and scales (Table 23).

Table 23. The relationship between interpersonal trust and knowledge-sharing and scales by supervisors

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Interpersonal trust
Knowledge sharing	Pearson Correlation	1	,913**	,900**	-,013
	Sig. (2-tailed)		,000	,000	,954
	N	21	21	21	21
Intragroup knowledge sharing	Pearson Correlation	,913**	1	,644**	,106
	Sig. (2-tailed)	,000		,002	,647
	N	21	21	21	21
Intergroup knowledge sharing	Pearson Correlation	,900**	,644**	1	-,139
	Sig. (2-tailed)	,000	,002		,549
	N	21	21	21	21
Interpersonal trust	Pearson Correlation	-,013	,106	-,139	1
	Sig. (2-tailed)	,954	,647	,549	
	N	21	21	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

The correlation of indications of the selected parameters in the supervisor group was very weak and statistically insignificant.

Summarising the results, the hypothetical question H.4 (Is there a significant relationship between interpersonal trust and knowledge sharing?) was only weakly supported in general ($0.0 < |r| < 0.2$). However, it should be emphasised that a strong correlation between Interpersonal trust and the Intergroup knowledge-sharing scale was shown in the employee group ($0.6 < |r| < 0.8$).

5.2.5. Hypothesis question 5: Does trust in top management support knowledge sharing?

No statistically significant correlation between trust in top manager and knowledge sharing in the organisation was found (Table 24).

Table 24. The relationship between trust in top manager and knowledge-sharing

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Trust in top management
Knowledge sharing	Pearson Correlation	1	,774**	,907**	-,096
	Sig. (2-tailed)		,000	,000	,445
	N	66	66	66	66
Intragroup knowledge sharing	Pearson Correlation	,774**	1	,436**	-,132
	Sig. (2-tailed)	,000		,000	,291
	N	66	66	66	66
Intergroup knowledge sharing	Pearson Correlation	,907**	,436**	1	-,048
	Sig. (2-tailed)	,000	,000		,701
	N	66	66	66	66
Trust in top management	Pearson Correlation	-,096	-,132	-,048	1
	Sig. (2-tailed)	,445	,291	,701	
	N	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

Analysing employees' opinions on this issue, the data showed a weak positive correlation between trust in top manager and knowledge sharing in the organisation overall ($r=0.228$, $\alpha=0.01$). No correlation between Trust in top manager and the Intergroup knowledge-sharing dimension was shown (Table 25). A moderate positive correlation between trust in top manager and Intragroup knowledge-sharing ($r=0.509$, $\alpha=0.01$) was observed, which indicates that employees share knowledge with group members during a project.

Table 25. The relationship between trust in top manager and knowledge-sharing and scales by employees

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Trust in top management
Knowledge sharing	Pearson Correlation	1	,620**	,940**	,228
	Sig. (2-tailed)		,000	,000	,132
	N	45	45	45	45
Intragroup knowledge sharing	Pearson Correlation	,620**	1	,315*	,509**
	Sig. (2-tailed)	,000		,035	,000
	N	45	45	45	45

Intergroup knowledge sharing	Pearson Correlation	,940**	,315*	1	,055
	Sig. (2-tailed)	,000	,035		,722
	N	45	45	45	45
Trust in top management	Pearson Correlation	,228	,509**	,055	1
	Sig. (2-tailed)	,132	,000	,722	
	N	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The supervisor response results (Table 26) showed a moderate negative correlation between trust in top manager and knowledge sharing in the organisation in general ($r=-0.452$, $\alpha=0.01$).

Table 26. The relationship between trust in top manager and knowledge-sharing and scales by supervisors

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Trust in top management
Knowledge sharing	Pearson Correlation	1	,913**	,900**	-,452*
	Sig. (2-tailed)		,000	,000	,039
	N	21	21	21	21
Intragroup knowledge sharing	Pearson Correlation	,913**	1	,644**	-,530*
	Sig. (2-tailed)	,000		,002	,014
	N	21	21	21	21
Intergroup knowledge sharing	Pearson Correlation	,900**	,644**	1	-,282
	Sig. (2-tailed)	,000	,002		,215
	N	21	21	21	21
Trust in top management	Pearson Correlation	-,452*	-,530*	-,282	1
	Sig. (2-tailed)	,039	,014	,215	
	N	21	21	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

A weak negative correlation between trust in top manager and Intergroup knowledge-sharing was found ($r=-0.282$, $\alpha=0.01$), which indicates how often supervisors share knowledge with non-group employees inside division, non-group employees outside division, or the customer during a project. A moderately

strong negative correlation between trust in top manager and Intragroup knowledge-sharing was observed ($r=-0.530$, $\alpha=0.01$).

The hypothetical question H.5 (Does trust in top management support knowledge sharing in the organisation?) was not supported ($0.0 < |r| < 0.2$). However, trust in top manager supports Intragroup knowledge-sharing by employees and is a statistically significant indicator ($r=0.477$, $\alpha=0.01$).

5.2.6. Hypothesis question 6: Is there a relationship between knowledge-sharing and CI?

A very weak correlation was shown between knowledge sharing and CI with regard to the evaluated parameters (Table 27).

Table 27. The relationship between competitive intelligence (CI), the CI process the CI context and knowledge sharing

		Correlations			
		CI Proceses factors	CI Context factors	CI	Knowledge sharing
CI Proceses factors	Pearson Correlation	1	,857**	,969**	,054
	Sig. (2- tailed)		,000	,000	,666
	N	66	66	66	66
CI Context factors	Pearson Correlation	,857**	1	,957**	,225
	Sig. (2- tailed)	,000		,000	,069
	N	66	66	66	66
CI	Pearson Correlation	,969**	,957**	1	,138
	Sig. (2- tailed)	,000	,000		,270
	N	66	66	66	66
Knowledge sharing	Pearson Correlation	,054	,225	,138	1
	Sig. (2- tailed)	,666	,069	,270	
	N	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

Respectively, a very weak correlation between knowledge sharing and CI was observed ($r=0.138$, $\alpha=0.01$). The relationship between knowledge sharing and CI process factors and CI context factors was also statistically insignificant. The correlation between CI and intergroup knowledge was statistically

insignificant with regard to all parameters. There were several weak correlations between the Intragroup knowledge-sharing scale and indicators of CI factors; there was a correlation between Intragroup knowledge-sharing and CI process factors (Table 28).

Table 28. The relationship between Intragroup knowledge-sharing and competitive intelligence factors

		Correlations				
		Collection	Planing and focusing	Communication and analysis	CI Context factors	Intragroup knowledge sharing
Collection	Pearson Correlation	1	,818**	,883**	,937**	,331**
	Sig. (2-tailed)		,000	,000	,000	,007
	N	66	66	66	66	66
Planing and focusing	Pearson Correlation	,818**	1	,875**	,928**	,339**
	Sig. (2-tailed)	,000		,000	,000	,005
	N	66	66	66	66	66
Communication and analysis	Pearson Correlation	,883**	,875**	1	,953**	,302*
	Sig. (2-tailed)	,000	,000		,000	,014
	N	66	66	66	66	66
CI Context factors	Pearson Correlation	,937**	,928**	,953**	1	,398**
	Sig. (2-tailed)	,000	,000	,000		,001
	N	66	66	66	66	66
Intragroup knowledge sharing	Pearson Correlation	,331**	,339**	,302*	,398**	1
	Sig. (2-tailed)	,007	,005	,014	,001	
	N	66	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

A statistically significant, but weak correlation was observed between Intragroup knowledge-sharing and the CI factor 'Communication and Analysis' ($r=0.302$, $\alpha=0.01$), between Intragroup knowledge-sharing and the CI factor 'Collection' ($r=0.331$, $\alpha=0.01$), and between Intragroup knowledge-sharing and the CI factor 'Planning and Focusing' ($r=0.339$, $\alpha=0.01$). There was also a statistically significant, but weak, correlation between the Intragroup knowledge-sharing scale and CI context ($r=0.398$, $\alpha=0.01$). Separately, the context factors did not show statistically significant correlations with the selected parameters.

Analysing employee responses on this issue, the data showed a weak positive correlation between the selected parameters (Table 29). There was a weak positive correlation between knowledge sharing and CI ($r=0.318$, $\alpha=0.01$), and a weak correlation between knowledge sharing and CI context ($r=0.376$,

$\alpha=0.01$). The selected parameters showed a very weak correlation between knowledge sharing and CI process ($r=0.246$, $\alpha=0.01$).

Table 29. The relationship between competitive intelligence (CI), the CI process, the CI context and knowledge-sharing by employees

		Correlations			
		CI Proceses factors	CI Context factors	CI	Knowledge sharing
CI Proceses factors	Pearson Correlation	1	,855**	,968**	,246
	Sig. (2- tailed)		,000	,000	,103
	N	45	45	45	45
CI Context factors	Pearson Correlation	,855**	1	,958**	,376*
	Sig. (2- tailed)	,000		,000	,011
	N	45	45	45	45
CI	Pearson Correlation	,968**	,958**	1	,318*
	Sig. (2- tailed)	,000	,000		,033
	N	45	45	45	45
Knowledge sharing	Pearson Correlation	,246	,376*	,318*	1
	Sig. (2- tailed)	,103	,011	,033	
	N	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Statistically significant positive correlations between knowledge sharing and the CI process factor 'Collection; ($r=0.465$, $\alpha=0.01$) and the CI Context factor 'Internal Information' were observed ($r=0.406$, $\alpha=0.01$). However, there were no statistically significant correlations between intergroup knowledge-sharing and CI, CI process factors and CI context factors.

The employee responses showed strong correlations between intragroup knowledge-sharing and CI, CI process factors and CI factors. The selected parameters showed a strong correlation between CI and intragroup knowledge-sharing ($r=0.759$, $\alpha=0.01$), and a very strong relationship between CI context and intragroup knowledge-sharing was observed ($r=0.848$, $\alpha=0.01$).

There was a very strong correlation between the CI process factor 'Collection' and intragroup knowledge-sharing ($r=0.843$, $\alpha=0.01$) and between the CI process factor 'Planning and Focusing' and Intragroup knowledge-sharing ($r=0.876$, $\alpha=0.01$). There was a strong correlation between the CI process factor 'Communication and Analysis' and intragroup knowledge-sharing ($r=0.703$, $\alpha=0.01$).

With regard to the supervisor response results, statistically significant negative correlations between CI, CI process, CI context and knowledge sharing by supervisors were observed (Table 30).

Table 30. The relationship between competitive intelligence (CI), CI process, CI context and knowledge sharing by supervisors

		Correlations			
		CI Proceses factors	CI Context factors	CI	Knowledge sharing
CI Proceses factors	Pearson Correlation Sig. (2- tailed) N	1 21	,830** 21	,976** 21	-,482* 21
CI Context factors	Pearson Correlation Sig. (2- tailed) N	,830** 21	1 21	,931** 21	-,335 21
CI	Pearson Correlation Sig. (2- tailed) N	,976** 21	,931** 21	1 21	-,445* 21
Knowledge sharing	Pearson Correlation Sig. (2- tailed) N	-,482* 21	-,335 21	-,445* 21	1 21

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

A weak negative correlation between CI and knowledge sharing by supervisor was found ($r=-0.445$, $\alpha=0.01$), and between CI process and CI context factors and knowledge-sharing, respectively, $r=-0.482$, $\alpha=0.01$ and $r=-0.335$, $\alpha=0.01$. A moderately strong negative correlation between knowledge sharing and the CI Process factor 'Planning and focusing' ($r=-0.505$, $\alpha=0.01$) and several CI context factors, namely, knowledge sharing and 'Awareness' ($r=-0.519$, $\alpha=0.01$), knowledge sharing and 'Internal Information' ($r=-0.526$, $\alpha=0.01$) and knowledge-sharing and the CI context factor 'Employee Involvement' ($r=-0.558$, $\alpha=0.01$) was observed.

In general, the data showed a weak negative correlation between CI and Intergroup knowledge-sharing ($r=-0.335$, $\alpha=0.01$) in the supervisor group and a moderately strong negative correlation between Intergroup knowledge-sharing and CI factors. There was a negative correlation between Intergroup knowledge-sharing and the CI process factor 'Planning and Focusing' ($r=-0.583$, $\alpha=0.01$) and a moderately strong negative correlation between knowledge sharing and the CI context factor 'Awareness' ($r=-0.583$, $\alpha=0.01$).

The supervisor responses showed a moderately strong negative correlation between CI and Intragroup knowledge-sharing ($r=-0.468$, $\alpha=0.01$) and between CI process and Intragroup knowledge-sharing ($r=-$

0.577, $\alpha=0.01$). A statistically insignificant correlation between CI context and the intragroup knowledge sharing scale was observed; however, there was a strong negative correlation between the CI context factor 'Internal Information' and Intragroup knowledge-sharing ($r=-0.548$, $\alpha=0.01$) and between the CI context factor 'Employee Involvement' and Intragroup knowledge-sharing ($r=-0.541$, $\alpha=0.01$).

Summarising the results, the hypothetical question H.6 (Is there a significant relationship between knowledge sharing and CI?) was not supported ($0.0 < |r| < 0.2$). However, statistically significant very strong correlations were observed between the selected parameters in the employee group ($0.8 < |r| < 1.0$).

5.2.7. Hypothesis question 7: Is there a relationship between organisational identification and knowledge sharing?

The results of responses relating to the relationship between organisational identification and knowledge sharing showed a statistically significant positive correlation between the selected parameters (Table 31).

Table 31. The relationship between organisational identification and knowledge sharing

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Organisational identification
Knowledge sharing	Pearson Correlation	1	,774**	,907**	,415**
	Sig. (2-tailed)		,000	,000	,001
	N	66	66	66	66
Intragroup knowledge sharing	Pearson Correlation	,774**	1	,436**	,296*
	Sig. (2-tailed)	,000		,000	,016
	N	66	66	66	66
Intergroup knowledge sharing	Pearson Correlation	,907**	,436**	1	,394**
	Sig. (2-tailed)	,000	,000		,001
	N	66	66	66	66
Organisational identification	Pearson Correlation	,415**	,296*	,394**	1
	Sig. (2-tailed)	,001	,016	,001	
	N	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Organisational identification supported knowledge sharing in the organisation ($r=0.415$, $\alpha=0.01$). There was a weak correlation between Organisational Identification and Intergroup knowledge-sharing ($r=0.394$, $\alpha=0.01$) and between Organisational Identification and Intragroup knowledge-sharing ($r=0.296$, $\alpha=0.01$). The employee group responses revealed a statistically significant, but weak, positive correlation between Organisational Identification and knowledge-sharing and knowledge-sharing scales (Table 32).

Table 32. The relationship between organisational identification and knowledge sharing by employees

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Organisational identification
Knowledge sharing	Pearson Correlation	1	,620**	,940**	,357*
	Sig. (2-tailed)		,000	,000	,016
	N	45	45	45	45
Intragroup knowledge sharing	Pearson Correlation	,620**	1	,315*	,348*
	Sig. (2-tailed)	,000		,035	,019
	N	45	45	45	45
Intergroup knowledge sharing	Pearson Correlation	,940**	,315*	1	,280
	Sig. (2-tailed)	,000	,035		,063
	N	45	45	45	45
Organisational identification	Pearson Correlation	,357*	,348*	,280	1
	Sig. (2-tailed)	,016	,019	,063	
	N	45	45	45	45

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The selected parameters showed a statistically significant positive correlation between Organisational Identification and knowledge sharing ($r=0.357$, $\alpha=0.01$). A weak positive correlation between Organisational Identification and Intragroup knowledge-sharing was found ($r=0.348$, $\alpha=0.01$).

Summarising the responses in the supervisor group, the results showed significant positive relationships between Organisational Identification and knowledge-sharing (Table 33).

Table 33. The relationship between organisational identification and knowledge sharing by supervisors

		Correlations			
		Knowledge sharing	Intragroup knowledge sharing	Intergroup knowledge sharing	Organisational identification
Knowledge sharing	Pearson Correlation	1	,913**	,900**	,484*
	Sig. (2-tailed)		,000	,000	,026
	N	21	21	21	21
Intragroup knowledge sharing	Pearson Correlation	,913**	1	,644**	,264
	Sig. (2-tailed)	,000		,002	,248
	N	21	21	21	21
Intergroup knowledge sharing	Pearson Correlation	,900**	,644**	1	,627**
	Sig. (2-tailed)	,000	,002		,002
	N	21	21	21	21
Organisational identification	Pearson Correlation	,484*	,264	,627**	1
	Sig. (2-tailed)	,026	,248	,002	
	N	21	21	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

There was a moderately strong correlation between Organisational Identification and knowledge sharing by supervisors ($r=0.484$, $\alpha=0.01$), and a strong positive relationship between Organisational Identification and Intergroup knowledge-sharing was observed ($r=0.627$, $\alpha=0.01$). The relationship between Organisational Identification and Intragroup knowledge-sharing by supervisors was weak, but statistically significant ($r=0.264$, $\alpha=0.01$).

Summarising the results, the hypothetical question H.7 (Is there a significant relationship between organisational identification and knowledge-sharing?) is supported, because there were statistically significant correlations between the selected parameters. Statistically significant correlations between Organisational Identification and knowledge sharing by employees and by supervisors was also found.

5.2.8. Hypothesis question 8: Is there the relationship between organisational identification and Competitive Intelligence?

There was a statistically significant correlation between Organisation Identification and CI (Table 34).

Table 34. The relationship between organisational identification and competitive intelligence

Correlations

		CI Proces factors	Communi cation and analysis	Colle ction	Plan ing and focu sing	CI Con text factors	Awar ness	Intern al inform ation	Formal infrastr ucture	Emplo yee involve ment	CI	Organis ational identific ation
CI Proceses factors	Pears on Correl ation Sig. (2- tailed) N	1 66	,909** 66	,804** 66	,838* 66	,857** 66	,820** 66	,936** 66	,913** 66	,930** 66	,969** 66	,492** 66
Communi cation and analysis	Pears on Correl ation Sig. (2- tailed) N	,909** 66	1 66	,883** 66	,875* 66	,953** 66	,757** 66	,839** 66	,814** 66	,865** 66	,964** 66	,456** 66
Colle ction	Pears on Correl ation Sig. (2- tailed) N	,804** 66	,883** 66	1 66	,818* 66	,937** 66	,517** 66	,783** 66	,778** 66	,801** 66	,898** 66	,393** 66
Planing and focusing	Pears on Correl ation Sig. (2- tailed) N	,838** 66	,875** 66	,818** 66	1 66	,928** 66	,752** 66	,824** 66	,751** 66	,871** 66	,912** 66	,346** 66
CI Context factors	Pears on Correl ation Sig. (2- tailed) N	,857** 66	,953** 66	,937** 66	,928* 66	1 66	,721** 66	,857** 66	,775** 66	,856** 66	,957** 66	,443** 66
Awarne s	Pears on Correl ation Sig. (2- tailed) N	,820** 66	,757** 66	,517** 66	,752* 66	,721** 66	1 66	,805** 66	,619** 66	,765** 66	,804** 66	,455** 66

Internal information	Pears on Correlation Sig. (2-tailed) N	,936** ,000 66	,839** ,000 66	,783** ,000 66	,824* ,000 66	,857** ,000 66	,805** ,000 66	1 ,000 66	,854** ,000 66	,868** ,000 66	,934** ,000 66	,587** ,000 66
Formal infrastructure	Pears on Correlation Sig. (2-tailed) N	,913** ,000 66	,814** ,000 66	,778** ,000 66	,751* ,000 66	,775** ,000 66	,619** ,000 66	,854** ,000 66	1 ,000 66	,834** ,000 66	,882** ,000 66	,515** ,000 66
Employee involvement	Pears on Correlation Sig. (2-tailed) N	,930** ,000 66	,865** ,000 66	,801** ,000 66	,871* ,000 66	,856** ,000 66	,765** ,000 66	,868** ,000 66	,834** ,000 66	1 ,000 66	,929** ,000 66	,380** ,002 66
CI	Pears on Correlation Sig. (2-tailed) N	,969** ,000 66	,964** ,000 66	,898** ,000 66	,912* ,000 66	,957** ,000 66	,804** ,000 66	,934** ,000 66	,882** ,000 66	,929** ,000 66	1 ,000 66	,487** ,000 66
Organisational identification	Pears on Correlation Sig. (2-tailed) N	,492** ,000 66	,456** ,000 66	,393** ,001 66	,346* ,004 66	,443** ,000 66	,455** ,000 66	,587** ,000 66	,515** ,000 66	,380** ,002 66	,487** ,000 66	1 ,000 66

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The relationship between Organisational Identification and CI was moderately strong ($r=0.487$, $\alpha=0.01$). A statistically significant moderately strong correlation between Organisational Identification and CI process ($r=0.492$, $\alpha=0.01$) and process context ($r=0.443$, $\alpha=0.01$) was also observed.

Statistically significant high moderately strong correlations were observed between Organisational Identification and such CI Context factors as 'Internal information' ($r=0.587$, $\alpha=0.01$) and 'Formal Infrastructure' ($r=0.515$, $\alpha=0.01$). A statistically significant, but weak, correlation existed between Organisational Identification and the CI context factor 'Employee Involvement' ($r=0.380$, $\alpha=0.01$). There was also a weak correlation between Organisational Identification and the CI process factor 'Planning and Focusing' ($r=0.346$, $\alpha=0.01$) and between Organisational Identification and the CI process factor

'Collection' ($r=0.346$, $\alpha=0.01$). Analysing the employee responses, statistically significant correlations between Organisational Identification and CI were observed (Table 35).

Table 35. The relationship between organisational identification and competitive intelligence by employees

		Correlations										
		CI Proc eses facto rs	Commu nication and analysis	Colle ction	Plan ing and focu sing	CI Con text facto rs	Awar ness	Intern al inform ation	Formal infrastr ucture	Emple ee involv ement	CI	Organis ational identific ation
CI Proc eses factors	Pears on Correl ation Sig. (2- tailed) N	1 45	,919** 45	,804** 45	,857** 45	,855** 45	,817** 45	,930** 45	,904** 45	,951** 45	,968** 45	,487** 45
Commu nication and analysis	Pears on Correl ation Sig. (2- tailed) N	,919* 45	1 45	,891** 45	,891** 45	,948** 45	,722** 45	,852** 45	,839** 45	,914** 45	,968** 45	,465** 45
Collectio n	Pears on Correl ation Sig. (2- tailed) N	,804* 45	,891** 45	1 45	,898** 45	,968** 45	,489** 45	,831** 45	,816** 45	,831** 45	,914** 45	,439** 45
Planing and focusing	Pears on Correl ation Sig. (2- tailed) N	,857* 45	,891** 45	,898** 45	1 45	,937** 45	,686** 45	,796** 45	,781** 45	,918** 45	,928** 45	,378* 45
CI Con text factors	Pears on Correl ation Sig. (2- tailed) N	,855* 45	,948** 45	,968** 45	,937** 45	1 45	,656** 45	,862** 45	,800** 45	,888** 45	,958** 45	,468** 45

Awar ness	Pears on Correl ation Sig. (2- tailed) N	,817* ,000 45	,722** ,000 45	,489** ,001 45	,686** ,000 45	,656** ,000 45	1 ,000 45	,769** ,000 45	,603** ,000 45	,774** ,000 45	,770** ,000 45	,507** ,000 45
Internal informati on	Pears on Correl ation Sig. (2- tailed) N	,930* ,000 45	,852** ,000 45	,831** ,000 45	,796** ,000 45	,862** ,000 45	,769** ,000 45	1 ,000 45	,840** ,000 45	,869** ,000 45	,933** ,000 45	,650** ,000 45
Formal infrastru cture	Pears on Correl ation Sig. (2- tailed) N	,904* ,000 45	,839** ,000 45	,816** ,000 45	,781** ,000 45	,800** ,000 45	,603** ,000 45	,840** ,000 45	1 ,000 45	,828** ,000 45	,888** ,000 45	,425** ,004 45
Employe e involvem ent	Pears on Correl ation Sig. (2- tailed) N	,951* ,000 45	,914** ,000 45	,831** ,000 45	,918** ,000 45	,888** ,000 45	,774** ,000 45	,869** ,000 45	,828** ,000 45	1 ,000 45	,957** ,000 45	,368* ,013 45
CI	Pears on Correl ation Sig. (2- tailed) N	,968* ,000 45	,968** ,000 45	,914** ,000 45	,928** ,000 45	,958** ,000 45	,770** ,000 45	,933** ,000 45	,888** ,000 45	,957** ,000 45	1 ,000 45	,496** ,001 45
Organis ational identifica tion	Pears on Correl ation Sig. (2- tailed) N	,487* ,001 45	,465** ,001 45	,439** ,003 45	,378* ,010 45	,468** ,001 45	,507** ,000 45	,650** ,000 45	,425** ,004 45	,368* ,013 45	,496** ,001 45	1 ,000 45

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

In general, the data showed a statistically significant moderately strong correlation between CI and Organisational Identification ($r=0.496$, $\alpha=0.01$) in the employee group, and a moderately strong positive correlation between Organisational Identification and CI process ($r=0.487$, $\alpha=0.01$). The employee responses showed a strong correlation between Organisational Identification and the CI context factor 'Internal Information' ($r=0.650$, $\alpha=0.01$). A statistically significant correlation between Organisational Identification and the CI context factor 'Awareness' ($r=0.507$, $\alpha=0.01$) was also found in the employee group.

The supervisor responses showed that statistically significant correlations existed between the selected parameters (Table 36).

Table 36. The relationship between organisational identification and competitive intelligence by supervisors

		Correlations										
		CI Processes factors	Communication and analysis	Collection	Planning and focusing	CI Context factors	Awareness	Internal information	Formal infrastructure	Employee involvement	CI	Organisational identification
CI Processes factors	Pearson Correlation Sig. (2-tailed)	1	,865**	,786**	,698**	,830**	,807**	,934**	,955**	,864**	,976**	,475*
			,000	,000	,000	,000	,000	,000	,000	,000	,000	,030
	N	21	21	21	21	21	21	21	21	21	21	21
Communication and analysis	Pearson Correlation Sig. (2-tailed)	,865*	1	,961**	,625**	,922**	,609**	,688**	,824**	,755**	,923**	,436*
		,000		,000	,002	,000	,003	,001	,000	,000	,000	,048
	N	21	21	21	21	21	21	21	21	21	21	21
Collection	Pearson Correlation Sig. (2-tailed)	,786*	,961**	1	,527*	,876**	,547*	,585**	,674**	,660**	,854**	,216
		,000	,000		,014	,000	,010	,005	,001	,001	,000	,347
	N	21	21	21	21	21	21	21	21	21	21	21

Planning and focusing	Pearson Correlation Sig. (2-tailed)	,698*	,625**	,527*	1	,824**	,839**	,808**	,675**	,808**	,777**	,174
		,000	,002	,014		,000	,000	,000	,001	,000	,000	,451
	N	21	21	21	21	21	21	21	21	21	21	21
CI Context factors	Pearson Correlation Sig. (2-tailed)	,830*	,922**	,876**	,824**	1	,807**	,779**	,766**	,812**	,931**	,355
		,000	,000	,000	,000		,000	,000	,000	,000	,000	,115
	N	21	21	21	21	21	21	21	21	21	21	21
Awareness	Pearson Correlation Sig. (2-tailed)	,807*	,609**	,547*	,839**	,807**	1	,936**	,714**	,845**	,841**	,275
		,000	,003	,010	,000	,000		,000	,000	,000	,000	,228
	N	21	21	21	21	21	21	21	21	21	21	21
Internal information	Pearson Correlation Sig. (2-tailed)	,934*	,688**	,585**	,808**	,779**	,936**	1	,889**	,879**	,913**	,421
		,000	,001	,005	,000	,000	,000		,000	,000	,000	,058
	N	21	21	21	21	21	21	21	21	21	21	21
Formal infrastructure	Pearson Correlation Sig. (2-tailed)	,955*	,824**	,674**	,675**	,766**	,714**	,889**	1	,838**	,922**	,666**
		,000	,000	,001	,001	,000	,000	,000		,000	,000	,001
	N	21	21	21	21	21	21	21	21	21	21	21
Employee involvement	Pearson Correlation Sig. (2-tailed)	,864*	,755**	,660**	,808**	,812**	,845**	,879**	,838**	1	,881**	,364
		,000	,000	,001	,000	,000	,000	,000	,000		,000	,105
	N	21	21	21	21	21	21	21	21	21	21	21

CI	Pearson Correlation	,976*	,923**	,854**	,777**	,931**	,841**	,913**	,922**	,881**	1	,448*
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,000	,000	,000		,042
	N	21	21	21	21	21	21	21	21	21	21	21
Organisational identification	Pearson Correlation	,475*	,436*	,216	,174	,355	,275	,421	,666**	,364	,448*	1
	Sig. (2-tailed)	,030	,048	,347	,451	,115	,228	,058	,001	,105	,042	
	N	21	21	21	21	21	21	21	21	21	21	21

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The supervisor responses showed a moderately strong correlation between Organisational Identification and the CI process factor 'Communication and Analysis' ($r=0.465$, $\alpha=0.01$). A statistically significant, but weak, correlation was found between Organisational Identification and the CI process factors 'Employee Involvement' ($r=0.368$, $\alpha=0.01$) and Organisational Identification and the CI context factor 'Planning and Focusing' ($r=0.378$, $\alpha=0.01$).

In the supervisor group, a moderately strong correlation exists between CI and Organisational Identification ($r=0.448$, $\alpha=0.01$) and between CI process and Organisational Identification ($r=0.475$, $\alpha=0.01$). A statistically significant, but weak, correlation ($r=0.355$, $\alpha=0.01$) was found between CI context and Organisational Identification. A strong correlation was found between Organisational Identification and the CI context factor 'Internal Information' ($r=0.666$, $\alpha=0.01$), and a very weak correlation between Organisational Identification and the CI process factors 'Collection' and 'Planning and Focusing' ($0.0 < |r| < 0.2$).

Summarising the results, the hypothetical question H.8 (Is there a significant relationship between Organisational Identification and CI) was supported, because there was a statistically significant correlation between the selected parameters ($0.4 < |r| < 0.6$). With regard to the employee and supervisor responses, statistically significant strong correlations were observed between the selected parameters ($0.6 < |r| < 0.8$).

5.2.9. Evaluation of the results from the employee and the supervisor perspectives

The quantitative research showed that employee satisfaction with the amount of information, with the upwards, downwards and horizontal communication has a positive impact upon the CI process. Similarly, the study performed in Latvia in 2011 found a positive correlation between knowledge sharing and CI. In turn, the knowledge-sharing culture in managing CI in Latvian enterprises is affected by several factors.

The study confirmed that employees are willing to share knowledge with people whom they trust. However, the study also revealed contradictions in the views of employees and supervisors around the role of organisational trust for knowledge sharing with regard to competitive intelligence; from the supervisor perspective, trust does not increase knowledge sharing. It is significant that the study performed in Latvia in 2011 found no significant correlation between Interpersonal trust and knowledge sharing in Latvian enterprises overall; however, the results showed that Interpersonal trust has a positive impact on knowledge sharing habits among employees, but has no impact on supervisors' knowledge sharing habits. Attitudes and values are determined by one's position in the social space, which in turn is dependent on the amounts of different types of capital one has (Bourdieu, 1986).

Evaluating the results from the employee and the supervisor perspectives, it was observed that opinions on the role of communication in the CI process and factors by which it is affected can be dimensionally different (Table 37). Table 37 depicts summarized points of view of employees and supervisors about factors influencing CI based on the results of the survey in the quantitative research. The results show that the views of supervisors and employees about CI processes within an organisation often differ.

Table 37. A summary of the employee and supervisor responses in the quantitative research

Employees	Supervisors
Employee satisfaction with the amount of information, with the upwards, downwards and horizontal communication has a positive impact on the process of competitive intelligence (CI). (+)	Satisfaction with the amount of information, with the upwards, downwards and horizontal communication does not promote the process of CI. (-)
Employee communication satisfaction has a positive impact on the process of CI in the stages of CI process: communication and analysis, collection and planning and processing. (+)	Supervisor communication satisfaction does not motivate the CI process in the stages of CI Context: Awareness, Internal information, Formal infrastructure, Employee involvement. (-)
Employee Communication satisfaction has a positive impact on the CI process in the stages of CI Context: awareness, internal information, formal infrastructure and employee involvement. (+)	Personal feedback has a negative impact on the CI process factor 'communication and analysis'. (-)
Employee satisfaction with general knowledge on the organisation and awareness of the organisation's objectives and policy has a positive impact on the CI process. (+)	Interpersonal trust has a negative impact on the process of CI communication stage. (-)
Involvement of employees in the CI process is determined by employee' satisfaction with their communication climate. (+)	The communication climate does not motivate the CI data collection process. (-)
Common organisational awareness of developments in the company has a positive impact on employees'	Interpersonal trust does not motivate the process of the CI collection stage. (-)

awareness of the objectives of competitive intelligence, and also motivates employee involvement in delivery of the CI process. (+)	
Expedience of communication plays an important role in delivery of the CI process. (+)	Supervisor satisfaction with communication climate does not improve the CI process in the stages of CI Context: Awareness, Internal Information, Formal Infrastructure and Employee Involvement. (-)
Satisfaction with the arrangement of meetings, written orders and scope of information has a positive role. (+)	Interpersonal trust can have a negative impact upon the process of CI Awareness stage. (-)
Organisational communication motivates achievement of the goals of the organisation. (+)	Trust has a positive impact on the CI process. (+)
It is important for employees to be aware of the extent to which supervisors know and understand the problems faced by their subordinates. (+)	Supervisors believe that trust does not motivate communication satisfaction in CI. (-)
Trust has a positive impact on the CI process. (+)	Awareness does not promote the Communication Climate. (-)
Trust has a positive impact on the communication climate and CI in the variable of process. (+)	Awareness does not promote Personal Feedback. (-)
Organisational Trust has a positive impact on Communication Satisfaction in the organisational context. These are such variables as Communication Climate and Organisational Information. (+)	Communication Satisfaction does not promote the CI process stage 'Collection'. (-)
Organisational Information generally has a positive impact on the CI process. (+)	Mutual satisfaction with communication, including such dimensions as 'Personal Feedback', 'Supervisory communication' and 'Organisational integration' does not promote the CI process stage 'Communication and Analysis'. (-)
Organisational Trust is a significant factor in the stage of planning and focusing of competitive intelligence. (+)	From the supervisor perspective, trust does not increase knowledge sharing. (-)
Organisational Trust is a significant factor stimulating knowledge sharing in the organisation. (+)	Organisational trust can have a negative impact on Intergroup knowledge-sharing. (-)
There is a positive correlation between organisational trust as a feeling of integrity and a	Organisational Trust does not stimulate

desire to share information. (+)	Intragroup knowledge-sharing. (-)
Organisational Trust affects employees' desire to be involved in achieving the organisation's objectives. (+)	Organisational Trust does not motivate the feeling of integrity in the organisation. (-)
Organisational Trust does not encourage employees to share information outside the organisation. (-)	Supervisor Trust in the organisation has a positive impact on the desire to share information outside the organisation. (+)
Organisational Trust affects the desire to share information outside the organisation. (+)	Organisational Trust as a feeling of integration does not motivate Intragroup knowledge-sharing. (-)
Organisational Trust has a positive impact on employees' desire to share information within the organisation. (+)	There is no correlation between Interpersonal Trust and knowledge-sharing. (-)
Interpersonal Trust has a positive impact on knowledge sharing in intergroup. (+)	Trust in top manager does not encourage knowledge sharing in the organisation. (-)
Interpersonal trust has a positive impact on knowledge sharing in intragroup. (+)	During a project, supervisors do not share knowledge with nongroup employees inside division, nongroup employees outside division or the customer. (-)
Trust in top manager has a positive impact on knowledge sharing in the organisation. (+)	Trust in top manager does not encourage knowledge-sharing in the organisation. (-)
Trust in top manager does not encourage knowledge sharing outside the organisation. (-)	Knowledge sharing has a negative impact on the CI process. (-)
Trust in top manager has a positive impact on intragroup knowledge sharing. During the project, employees are willing to share knowledge with group members. (+)	Knowledge sharing has a negative impact on the course of the CI process stage 'planning and focusing', as well as the course of the stage 'Awareness'. (-)
Knowledge sharing affects the CI process. (+)	Intragroup knowledge sharing can have a negative impact on the CI process. (-)
Knowledge sharing has a positive impact on the course of the CI process stages 'Collection' and 'Internal Information'. (+)	Organisation Identification has a positive impact on knowledge sharing. (+)
There is no correlation between intergroup knowledge-sharing and the CI process. (+)	Organisation Identification has a positive impact on Intragroup knowledge-sharing. (+)

Intragroup knowledge-sharing has a positive impact on the CI process. (+)	Organisational Identification has a positive impact on intergroup knowledge-sharing. (+)
Intragroup knowledge-sharing has a positive impact on the course of the CI process stage 'collection'. (+)	Organisational Identification has a positive impact on employee involvement in the CI process. (+)
Intragroup knowledge-sharing has a positive impact on the course of the CI process stage 'planning and focusing'. (+)	Organisation Identification has a positive impact on CI. (+)
There is a positive correlation between intergroup knowledge-sharing and the course of the CI process stage 'Communication and Analysis'. (+)	Organisational Identification has a positive impact on the course of the CI process stage 'Planning and Focusing'. (+)
Organisational Identification has a positive impact on knowledge sharing. (+)	
Organisation identification has a positive impact on Intragroup knowledge-sharing. (+)	
Organisational Identification has a positive impact on intergroup knowledge-sharing. (+)	
Organisational Identification has a positive impact on CI. (+)	

The study performed in Latvia showed dimensionally opposite opinions regarding knowledge-sharing culture and the variables by which it is affected in managing CI in Latvian enterprises, as viewed by employees and supervisors. Overall, the results showed that organisational trust acts as a significant mediator between CI and communication satisfaction in the organisation. Organisational trust is a significant factor, having a positive impact on such CI factors as 'Awareness', 'Internal Information', 'Formal Infrastructure' and 'Employee Involvement'.

6. Discussion

Employees create their own system of values and roles in the social background, and with this created role, interacts with organisational culture. It is as a result of social identity that differences between different groups of individuals are observed. For example, if trust is a social background value, differences between employee' and supervisor' values would not be so dimensional, as revealed in the study performed in Latvia. Another perspective relates to the conclusions of identity theory, which addresses identity in the context of human roles, for example, with regard to job position, profession and work; individuals undertake numerous different roles. In particular, hidden roles are considered, for example, an employee and a parent, and how these roles 'get on' and influence each other. The more important the relationships are, the more important is the identity of the role. Organisational Identification is understood as a process, as an interaction between individuals and the organisation (Ashforth et al., 2008). Individuals inherit the collective features by interpreting and enacting the identities. The organisation encourages enactment of this role and provides feedback. Therefore, organisations should consider the impact of a variety of factors on communication satisfaction and knowledge-sharing culture in managing CI in Latvian enterprises that are already established within the social background (Figure 25).

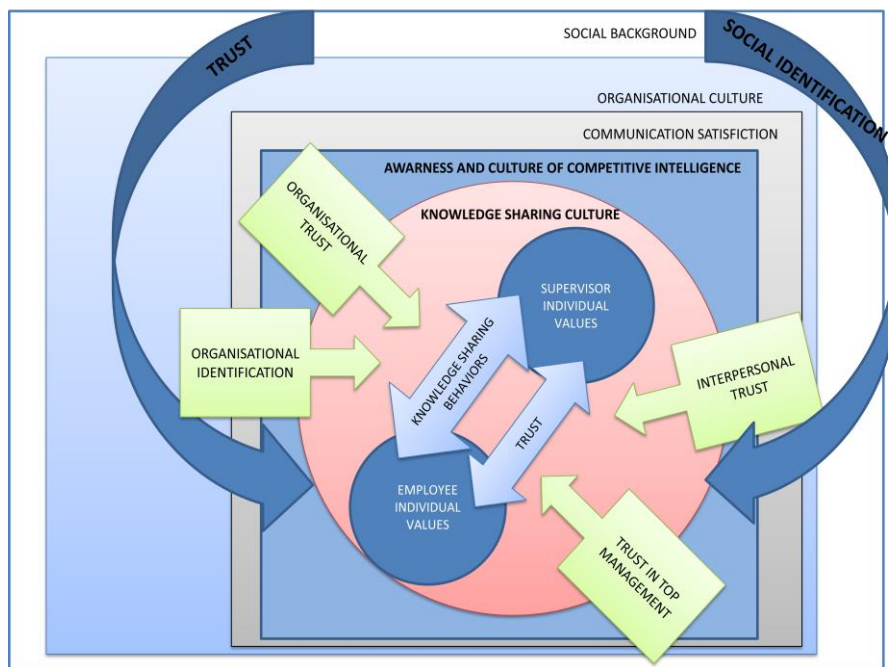


Figure 25. The influence of various factors on organisational culture of knowledge sharing in managing competitive intelligence in Latvian enterprises

The role of organisational identification is also shown in the promotion of knowledge sharing in Figure 25. Indeed, this study showed that there is a statistically significant positive correlation between these parameters.

Similarly, the results showed a relationship between Organisation Identification and CI in Latvian enterprises. A strong relationship was observed between Organisation Identification and such stages of the CI process as 'Internal Information' and 'Formal Infrastructure'. In the social context, identity consists of the individual's desire to feel adherent to a certain group of people who appear to him/her to be valuable and emotionally attractive. Identification occurs to meet the need for security and adherence (Ashforth et al., 2008). It is as a result of social identity that differences are observed between different groups of individuals; personal identity provides differences between people.

Organisational culture is another major factor to be considered when creating the habits of knowledge-sharing in an organisation, in which culture should stimulate integration of knowledge. When carrying out a transformation of organisational culture, care should be taken to ensure that the developed knowledge-sharing procedure and methods align with generally accepted organisational values and ensure simplicity in transforming culture. Davenport and Prusak (1998) believed that the more complex and detailed these are, the fewer are the number of opportunities to alter the knowledge-sharing habits of the organisation.

When the previous step is completed and changes in the habits of organisational culture have been performed, the knowledge-sharing culture should be strengthened. The task of present day leaders is to develop a knowledge-sharing culture that actively promotes and facilitates knowledge sharing, supports interpersonal trust and strengthens loyalty to the organisation. Evaluating the correlation between organisational trust and knowledge sharing in Latvian organisations, the selected parameters showed a statistically weak correlation between these two factors in general. This could be explained by differences between employees' and supervisors' values regarding a knowledge-sharing culture. However, the responses showed a positive correlation between organisational trust and Intragroup knowledge-sharing. In addition, there was a correlation between the factors describing employee awareness that organisation should act in accordance with its words, and Intragroup knowledge-sharing. The results of this study indicate a correlation between the factors describing the awareness that organisation will be capable of implementing its promises, and Intragroup knowledge-sharing. Moreover, there was also a correlation between Intragroup knowledge-sharing and the factors indicating that organisation believes in organisational honesty.

There is little available knowledge of how to efficiently change organisational culture in the organisation and even less relating to how to create a knowledge-sharing culture (Connelly & Kelloway, 2003; Kotter, 2012). It is only clear that cultural transformation requires investment. Kotter (1996) believed that changes in an organisation '*can come undone, even after years of effort, because the new approaches haven't been anchored firmly in group norms and values.*'

In addition to employee communication satisfaction, communication plays an important role in order to transform culture in the organisation. If the organisational values differ from the employees' values, if the value of a change to an organisation is not clearly explained, then the changes will not produce the expected results. Smith, Heather and McKeen (2011) stated that '*this is especially important when promoting a knowledge sharing culture since it may on the surface appear to have fewer tangible benefits.*'

The majority of knowledge is shared through social contact. Previous studies have shown that people are five times more likely to ask their friends and colleagues, and not seek information from other sources (Cross & Baird, 2000). However, the CI process is more often associated with such concepts as information systems access to information systems and data storage facilities, electronic knowledge-sharing, etc. However, personal contact is an essential and integral part of the CI process. It is therefore essential to develop such cultural values as trust and confidence, which are already in the social milieu, when creating a social background. The results of the present study showed that employees share their knowledge with those whom they trust and whose reputation has been evaluated. In addition, supervisors believe that trust has a positive impact on the CI process; however, it was also shown that in the supervisors' view, interpersonal trust may have a negative impact on the course of the CI process stage 'awareness'. Supervisors often use technical means of communication, considering that trust does not affect, or may have a negative impact, on achievement of the result. The reason could also be the lack of belief in employee competencies, hence the preference for technical knowledge-sharing. Supervisors believe that trust does not motivate communication satisfaction in the aspect CI. This could indicate that supervisors evaluate the CI processes as activities carried out strictly following regulations and instructions, and excluding the presence of subjective factors. It is significant that supervisors believe that satisfaction with the amount of information, and with upwards, downwards and horizontal communication, does not promote the CI process.

Employees in the organisation feel that knowledge-sharing is one-sided, and that supervisors do not believe in employees' competencies. Therefore, knowledge-sharing is artificial and does not provide the expected results. It also promotes impairment of the value of the CI process in the company. Unmotivated employees will not be interested in sharing information. Supervisors have a particularly important role in the promotion of knowledge sharing habits. The study in Latvia showed that employees emphasise the importance of interpersonal communication and the importance of being aware that supervisors see and evaluate the progress made. In this area, the study showed large contradictions, which may be considered as disruption to both knowledge-sharing and delivering the CI process.

The present study showed that both employees and supervisors believe that organisational identification has a positive impact on knowledge sharing. In addition, organisational identification has a positive impact on Interpersonal trust, as viewed by both supervisors and employees. One more aspect that should be considered when introducing changes into an organisation is the aspect of *organisational identity*, which addresses social identity particularly in the context of the organisation. It is important for individuals to understand who they are as an organisation.

Working environment could also affect knowledge-sharing habits. Davenport (1998) stated that if a person mostly does his job alone or does not support a verbal knowledge-sharing, it is unlikely that he will be able to find the time to share information. It is therefore necessary to develop teamwork, emphasising such organisational values as cooperation, trust and knowledge-sharing.

In Latvian enterprises, it appears that supervisors believe that neither satisfaction with the amount of information, nor satisfaction with the upwards, downwards and horizontal communication promotes the

CI process. It could be assumed that supervisors are overloaded with information, and that they therefore do not want to share information; however, such habits would disrupt the CI process in its focusing stage. Knowledge-sharing is of great importance if it is used for achieving the goal – making a decision. Therefore, any knowledge-sharing should be focused on achieving the goal.

7. Conclusions

7.1. Contribution for theory

This research makes a contribution to the existent CI theory in two areas: knowledge-sharing culture for CI implementation and the factors affecting the CI process. Firstly, this study showed a positive correlation between CI and communication satisfaction. Kreps (1990) stated that, *'communication in an organisation serves to establish managerial control, provide workers with job instruction, and enable managers (librarians) gather information for planning.'* The present study has shown that communication satisfaction plays an important role in provision of the CI process with regard to planning and focusing. Therefore, it is widely held that cultures that inhibit knowledge sharing are significant barriers to creating and leveraging knowledge assets (Smith and McKeen, 2002). In turn, *'the development of a well-defined focus and the standardization of some competitive intelligence processes constitute the groundwork for cultivating a competitive intelligence culture'* (Prescott & Miller, 2001).

Multiple studies have shown that communication and corporate culture are two closely linked factors in any business organisation (Claver et al., 1998). Organisations are communities of individuals, and each enterprise has a distinct culture, which describes how people relate to each other (Goffee & Jones, 1996). The present study analysed the CI process, accounting for the elements of organisational culture. Smith and McKeen believed that *'culture is an overarching mechanism in an organisation which constrains all other aspects of organisational life and limits what is considered desirable, possible and practical to do'*, while Prescott and Miller emphasised that viable and effective CI functions develop a variety of ways to cultivate a culture receptive to the acceptance and use of intelligence (Prescott & Miller, 2001). The present study showed the relationship between such organisational culture behaviours and values as trust, loyalty and knowledge-sharing and CI management. Prescott and Miller discussed *'the new world'* vs. *'the old world'* in the context of CI and emphasised the habit of *'the new world'* *'need to share'* as opposed to *'need to know'* (Prescott & Miller, 2001). In turn, Hofstede (2003) suggested the need for changing *'mental programs'* with changing behaviour first, which will lead to value change.

The present study has shown that provision of the CI process is determined by a number of theoretically approved communication functions. In theory, communication satisfaction has often been described as *'the satisfaction with various aspects of communication in an organisation'* (Crino & White, 1981). Champoux (2010) observed that the functions of organisational communication include: (1) Information sharing; (2) Feedback; (3) Integration of coordinated diverse functions; (4) Persuasion; (5) Emotion; (6) Innovation. The research carried out in Latvian enterprises confirmed the relevance of these functions in the CI process, revealing the existence of a significant relationship between communication satisfaction dimensions, emphasising the role of personal feedback, subordinate communication and awareness.

A significant negative relationship between communication satisfaction and CI as viewed by supervisors was observed in the present study. Since a preliminary study of CI in Latvia showed that weak communicative links are inherent in decision-making in Latvia, but retrieval of information is characterised by spontaneity, the results of the current study confirm that the information required for decision-making is received through a spontaneously obtained source of information that satisfies the information request. Therefore, a negative correlation appears between communication satisfaction and the CI process. Considering the dimensionally different responses of employees and supervisors regarding the role of the communication climate and trust in knowledge exchange, the theoretical approaches should emphasise that *supervisors should focus knowledge management initiatives on the issues most important for employees, adapting them to employees' needs* (Hickins, 1999).

The study performed in Latvian enterprises showed a correlation between organisational identification and knowledge-sharing. In an analysis of various studies, Downs and Adrian (2004) found that researchers relate trust with acceptance of organisational values presented and explained by management. Employees who are more satisfied with the communication of management may feel adherent to the organisation to a greater extent. Similarly, employees satisfied with 1) staff feedback (Downs & Adrian, 2004), 2) communication of management (Downs & Adrian, 2004) or 3) information within the organisation (Downs & Adrian, 2004) more identify themselves with the organisation. Through internal communication, employees participate in the formal and informal life of the enterprise and ideally identify themselves with its activity. The more an employee has identified him/herself with the organisation, the more satisfied he/she will be with communication within it.

In the present study, trust was analysed as an element of organisational culture in the aspect of CI management. Commitment and trust are clearly linked to organisational culture and play a significant role in whether or not people decide to cooperate, and whether people share or conceal knowledge within and across work groups (Renzl et al., 2005). The study confirmed the assumption that trust acts as a significant mediator between communication satisfaction and CI. Shaw (1997) believed that those who must depend on the work of others to meet their business objectives require significant trust. For provision of the CI process, the present study showed that trust plays an important role in such stages of the process as awareness and employee involvement. Fleisher and Bensoussan (2001) emphasised the fact that delivery of the findings to the decision-makers, gauging their understanding of the analyst's recommendations, making sure that no critical intelligence is lost in the exchange of ideas, and understanding how the analysis product will be used are among the analyst's key communication task responsibilities (Fleisher & Bensoussan, 2007).

The present study revealed contradictions in the views of employees and supervisors regarding the role of organisational trust for knowledge sharing in the aspect of CI. It has previously been found that trust is related to assessment of the accuracy of information received by employees from their direct supervisors (O'Reilly, 1977). The study performed in Latvia showed that, from the supervisor perspective, trust does not increase knowledge-sharing. Improvements in interpersonal relationships between supervisors and employees does not affect process of the CI collection stage from the supervisor perspective. In turn, from the employee perspective, a very strong positive correlation exists between the CI Process factor 'Collection' and Intragroup knowledge-sharing. Employees appreciate the

fact that communication satisfaction and trust leave a positive impact on the process of communicative intelligence. This shows the controversy of values in the organisation. In addition, it has been shown that that a low level of trust correlates with low accuracy of message and information (Byrne & LeMay, 2006), which, in the aspect of CI, could hamper attainment of its objectives.

The present study concluded that a statistically significant correlation exists between trust in top manager and knowledge-sharing by employees. This means that by trusting in management, employees share knowledge with group members during the project. Fleisher and Bensoussan (2007) stated that analysts must pay considerable attention to delivering their findings to, and gaining the attention, understanding, confidence, and ultimately trust, of their decision-makers. In turn, Postmes et al. (2001) believed that ‘. . . people’s sense of belonging to the organisation does not primarily depend on the quality of their informal and social-emotional interactions with peers and proximate colleagues, but it is related more strongly to their appreciation of the management’s communication.’

Theoretically, interpersonal trust is particularly significant in successful in general relationships (Kouzes, 2012). The study carried out in Latvia did not confirm the abovementioned relationship as a whole in the aspect of CI; however, such a relationship is found when evaluating employees' responses. Postmes et al. stated that ‘... employees were strongly committed if they obtained adequate information to perform their task, and this information was presented to them via formal bureaucratic channels rather than informal channels. Interpersonal communication with peers, and direct superiors supported commitment less than communication with more senior management did, and communication with a socio-emotional content was less predictive of commitment than formal communication was’ (Postmes et al., 2001).

While it is recognised that certain advantages are also obtained as a result of knowledge-sharing, people are unwilling to share. Various reasons for this have been suggested, and scientists have consistently identified organisational culture as being key (Al-Alawi et al., 2007; Davenport and Prusak, 1998; McDermott and O’Dell, 2001). People identifying themselves with the organisation are more likely to remain in that particular organisation and share their achievements with it (Dutton et al., 1994). The study carried out in Latvia showed that there is a significant strong relationship between organisational identification and CI. Prescott (1987) defined CI as a social process. The researcher believes that CI functions need a promotional plan; CI providers must inform others as to what intelligence is all about and how employees can assist the organisation in the development of an intelligence capability.

The study in Latvia showed a correlation between organisational identification and knowledge-sharing. Analysing a variety of studies, Ashforth et al. (2008) found that organisational identification is correlated with several other parameters of the organisation: decision-making (Knippenberg et al., 2004), information sharing (Tyler, 1999), job satisfaction (e.g. Carmeli et al., 2007) and organisational culture (e.g. Dukerich et al., 2002). A variety of factors may facilitate organisational identification, among them the provision of horizontal and vertical communication, the provision of feedback regarding the results of work etc.

7.2. Implications for practice

The present study showed dimensionally different views in the opinions of employees and supervisors with regard to the role of communication satisfaction in the aspect of CI. It was found (HQ 1) that employees' satisfaction with the amount of information, and the upwards, downwards and horizontal communication has a positive impact on the CI process. However, inconsistencies in this statement were found from the employee and supervisor perspectives. In order to balance the needs of stakeholders, enterprise management would need to transform the communication system, both on horizontal and vertical levels of management, with the aim of increasing the speed and quality of information circulation by creating such a communication circulation system in which communication objectives and users are precisely defined. This would have a positive impact on the present study finding that common organisational awareness of developments in the company affects employees' awareness of the objectives of CI, as well as motivates employee involvement in provision of the CI process. From the employee perspective, expedience of communication in an organisation plays an important role in provision of the CI process.

Evaluating the responses given by employees and supervisors in the Latvian enterprise, major contradictions of opinions were found, which could significantly affect the CI process. The present study showed (HQ 2) a relationship between communication satisfaction and the CI process. However, such a correlation does not exist from the supervisor perspective. Supervisors believe that trust does not motivate communication satisfaction in the aspect of CI. If cultural elements contradict other elements, this may lead to ambiguous situations and conflicts. Such phenomena may have a different origin - it may be caused by insufficient stability of the structure of specialists, minor experience of the team or the existence of numerous subgroups with different experience. In order to avoid contradictions in the organisation's value system, management should explain the organisation's cultural values or carry out a cultural transformation process in order to minimise the dimensionally different views on the role of values between employees and supervisors. One of the facilitating measures is the building of trustful relationships between the CI staff and the information recipients or supervisors.

Organisational trust is a significant factor in the stimulation of knowledge sharing in the organisation (HQ 3). Trust has a positive impact on the CI process, and employees believe that there is a positive correlation between organisational trust as a feeling of integrity and a desire to share information. Organisational trust is a significant factor in the CI stage of planning and focusing. Organisation supervisors should create an emotional environment in which employees feel that supervisors know and understand the problems faced by their subordinates. The present study showed that in order to share knowledge, it is important for employees to be aware that their supervisors trust them and assess their competencies.

The present study did not confirm a correlation between interpersonal trust and knowledge sharing (HQ 4). Latvian organisations should develop specific strategies to increase knowledge sharing between individuals of an organisation and to reduce dimensional differences between the opinions of employees and supervisors with regard to knowledge-sharing culture. It should also be considered that the study confirmed a correlation between organisational trust as a feeling of integrity and a desire to share

information in the employee group. Analysing the results (Table 37), the following proposals could be advanced:

1. The hiring of new supervisors who promote the habits of new cultural values and a knowledge-sharing culture;
2. The creation of an atmosphere that makes employees feel comfortable and stimulates the feeling of identity;
3. The conducting of individual discussions with employees in order to raise the value scale of sensitive information;
4. The development of teamwork that emphasises such organisational values as sense of community, trust and knowledge sharing;
5. The establishment of forms of cooperation that facilitate interactive collaboration between employees and supervisors, stimulating mutual trust and increasing the level of competence;
6. The formulation of distinct informative landmarks. The present study showed that organisational trust is a significant factor in the CI stage of planning and focusing.

The present study did not confirm a correlation between trust in top manager and knowledge sharing (HQ 5). However, the employees' responses showed that trust in top manager has a positive impact on intragroup knowledge-sharing. Employees are willing to share knowledge with group members during a project. The main difficulties emerging in the process of implementing transformation of knowledge-sharing culture are associated with changes in the behaviour of the steering group and senior managers. Managers are responsible for the current culture, and they are the ones who must establish the new culture. The management of the organisation should promote an environment where there is mutual trust and demand, free expression of opinions and feelings in discussing issues, understanding and co-operation among different structures in the organisation and relationships are built on the principles of assistance and favour. People are inspired when they are appreciated and recognised. When analysing coherence between organisational culture and knowledge-sharing culture, serious attention should be paid to the analysis of the employee values that affect employee engagement level. There are several ways for an organisation to provide transformation of cultural values with a view to promoting knowledge sharing:

1. Adaptation to a new situation occurs in the process of correcting the errors encountered;
2. Modification of a situation occurs by changing the response scenarios of action or by optimising the basic conditions of action;
3. The building of an appropriate organisational infrastructure;
4. Explanation of the common relationships of the organisational changes and values of the enterprise.
5. Openness to change and the flow of information. Information systems are open, so that employees have access to the necessary information.

The aim of a knowledge-sharing culture is to make CI integrated and inseparable, with a large contribution in decision-making. The present study did not show a correlation between knowledge sharing and CI (HQ 6). However, it revealed a high positive correlation in the group of employees. Therefore, analysis of the existing knowledge-sharing culture is necessary and, if needed, its

transformation to achieve the organisation's objectives without affecting the CI process. Knowledge-sharing culture should not be ignored in CI management, because CI is a social process.

The present study showed a correlation between organisational identification and knowledge sharing (HQ 7). In a social context, identity consists of the individual's desire to feel adherent to a certain group of people who appear to him/her to be valuable and emotionally attractive; therefore, the top management of the enterprise should explain organisational values to employees. Similarly, the study in Latvian enterprises showed a positive correlation between organisational identification and CI (HQ 8). Supervisors should strive to establish values of organisational culture that stimulate an individual's willingness and desire to endeavour in favour of the organisation. The interests of individuals and organisations should become 'identical' through personal relationships between the organisation and the employee. The explanation of organisational identification more or less partially overlaps with trust in the organisation, loyalty to the organisation, mutual compatibility and affiliation of the individual and the organisation. One of the key factors in the process of introducing innovations is compliance with the main standards and values of organisational culture, so that the changes themselves become the cultural values of the enterprise. Superiors should emphasise the role of culture as an objectively necessary factor associated with provision of the CI process in the organisation.

7.3. Evaluation of the study

Today, studies of the concept 'knowledge' have reached the point when knowledge has become a compendium and a resource explored by organisations, and assessed, accumulated and shared. Progress of information and communication technologies contribute to the growth of knowledge, and the role of knowledge in management of any organisational process is growing, accordingly. In other words, the more knowledge, the more the need for knowledge sharing. As this study has showed, the reality is a little more complicated than that. By increasing of the amount of knowledge, the volume and speed of knowledge sharing will not necessarily grow. If an employee's knowledge is a valuable resource, why should he/she share it? If an employee has knowledge, why should he/she run a risk and apply other employees' knowledge instead of his/her own? It is not easy to share one's own knowledge and to obtain knowledge from others; therefore, an organisation should create a very good motivation for their personnel to do so, and should be capable of rewarding employees for knowledge sharing. The study revealed that this provision is very much related to the organisation's cultural values and will depend both on the individual factor and on the organisational factor. Firstly, an individual's knowledge cannot be strictly separated from an employee's knowledge, because, in favour of the organisation, the employee uses not only the knowledge acquired through the professional development process, but also the knowledge acquired over the life course. Secondly, knowledge-sharing in the organisation will also be affected by the internal organisational environment. People, processes and technologies are the success blocks that help the organisation to successfully survive in the overcrowded information market.

In this study, knowledge-sharing culture for the implementation of CI was researched and analysed both from the employee and supervisor perspectives. Has this study answered all the important questions that haunt CI and knowledge sharing in organisations? Some, but by no means all. This study raised a series of new questions that should be addressed in future studies. On the basis of this research, we now

know approximately which factors affect knowledge sharing in the organisation with regard to CI . Organisations need finely designed and efficient business processes to create a good working environment. They must implement processes and technologies to facilitate the distribution and use of knowledge. Organisations must speed up the flow of information from one employee to another, and from individual persons to the entire organisation. It is clear that the new information and communication technologies play an important role in knowledge distribution and sharing processes. This is because much exists in the form of texts and electronic documents. New systems, for example, Internet, document management systems and databases, significantly contribute to knowledge sharing.

The initial question of this study was open and served for clarification of initial associations: why does the CI process in Latvian enterprises have inherently weak informative and reversible links? The question cannot be answered by formulating zero hypotheses and testing them via respective analytical statistics. The purpose of the question was not to analyse the past, thus remaining within the frames of a previously known alternative, but to find out the opinion of the representatives of organisations with regard to the possible current reasons. Did the qualitative study achieve maximum results and reveal the essence of the phenomenon? The qualitative study revealed the research subject in a more detailed manner and allowed evaluation of the research problem both from the employee and supervisor perspectives. In today's competitive environment, many employees do not feel safe in their position and often do not disclose their knowledge, which could be used for enhancing effectiveness of the enterprise, or they are afraid to lose their advantages due to sharing knowledge with others. This affects informative and reversible links and hinders the desirable efficiency of communication. Is this possibly the biggest obstacle as to why the CI process in Latvian enterprises has inherently weak informative and reversible links? Knowledge is joint, and it should be shared for it to be of higher value. When knowledge is shared and used, the people who use it modify it. This subsequently promotes the creation of new knowledge.

The qualitative study discovered a new dimension for evolution of this research stream. One of the issues for further studies is an identification of the factors that stimulate transformation of knowledge: How to transform the tacit knowledge into explicit form? This study showed that organisations understand that the knowledge possessed by their employees comprises the organisation's most valuable stock; however, only some organisations begin to seriously accumulate their knowledge. The tacit knowledge and their explicit knowledge dominate in the organisation. People have knowledge derived from experience. The overall human work adds to the knowledge that the organisation can accumulate. It affects the efficiency of organisational activities. Distribution and use of tacit knowledge occurs when employees provide free exchange of knowledge in the course of work. A relevant question: What processes can occur with the knowledge within the organisation? Initially, knowledge occurs, for example, from employee experience, from the information stored in databases and from other sources. Once an organisation understands that it has some knowledge, it tries to retain it, as it is a valuable capital for organisational activity. In turn, when knowledge is stored, the organisation's main task is to ensure its efficient use, so that one person's knowledge becomes known to others and employees share the knowledge; in such a way, knowledge is distributed from the place of accumulation to all employees of the organisation.

In addition, in further studies, it is important to ascertain how the flow of knowledge in the organisation takes place. This study analysed the factors influencing knowledge sharing in CI, focusing on the organisation's cultural values and their impact on provision of organisational processes. Further studies could evaluate the knowledge phenomenon from the point of view of process, for example, how do gaps in knowledge emerge? Relevant questions could be, for example, how do the staff see the flow of knowledge in the enterprise? How do the employees of organisations obtain knowledge when needed? With whom do people collaborate and share information and knowledge?

Evaluating critically, certain shortcomings could be defined for the qualitative research performed within the framework of this study, for example, the discussion participants provided answers of different degrees of detailed elaboration; the responses were sometimes insignificant, 'fuzzy' or too detailed, and coding of answers was also complicated, while some participants spoke relatively more and frequently. If shortcomings are identified in the process of study, the qualitative research process occurs in accordance with the research objectives. The qualitative research resulted in identifying hypotheses. With regard to the study methodology, it is concluded that the basic principle - objectivity - was adhered to, as the results obtained from the qualitative and quantitative research methods used were impartial. In contrast with the qualitative research, the quantitative research began with existing knowledge that already contained generalisations and explanations, that is, theories on the relationships between certain events. In this study phase, the hypothesis proved true or untrue. The reason why two research approaches may sound contradictory, is that quantitative designs often do not realise the results of the previous qualitative phase.

Did the quantitative phase of this study confirm the proposed hypotheses and reveal the essence of the phenomenon? Aggregation of the research results allowed identification of effective tools that would facilitate knowledge-sharing for ensuring the process of CI. Overall, the quantitative research was inconclusive about the relationships between investigated phenomena. This study analysed different perspectives, namely, employee communication culture and knowledge sharing as values rooted in the dyadic relationships between the employee and the supervisor, and in their assessment of satisfaction with communication in the organisation in the CI process. This study generally showed positive correlations between CI and communication satisfaction; however, significant inconsistencies were found in the results from the employee and supervisor perspectives. This means that the results of revealed significant themes, exploration of which would require in-depth data collection and analysis. For example, what transformations should the communication system of the organisation undergo in order to facilitate reduction of these contradictions between employees and supervisors? What causes such contradictions in the organisation? Initially, knowledge is created, and the organisation's mission is to take possession of it. Here, an essential role is played by the cultural values and habits that were analysed in this study. Organisations obtain knowledge from their employees and operable systems, and from the external environment. On this basis, organisations can create new knowledge, synthesise it and adjust it to the organisation's requirements. However, this study revealed that supervisors often ignore the information obtained by employees. In further studies, it would be pertinent to ascertain the reasons why the information circulation process is obstructed in organisational structure. Yes, the role of trust is a significant factor in facilitating and ensuring the sharing of knowledge, which was proved by the

studies performed in Latvia; however, the concepts 'trust' and 'organisational identification' have revealed serious contradictions with regard to the perspectives of employees and supervisors in CI.

In further studies, clarification of the knowledge codification process, which includes aggregation of knowledge from various sources, its accumulation in one place, for example, placement of knowledge in databases, as well as mapping of knowledge, is required, so that the picture of the organisational stock of knowledge is clearly visible to the employees of the organisation. Clarification of what type of knowledge is possessed by the organisation is also necessary. This could facilitate trust in the organisation and increase employee loyalty and motivation to share the knowledge. As this study showed, it is very important that people are loyal and sufficiently reliable and shared their knowledge with other colleagues. The main task of knowledge codification is to make individual knowledge also available to other employees who need this knowledge. The knowledge already expressed should be available at the right time and place. The knowledge arrived at in the organisational memory, should be easily available, for example, correctly indexed in the organisational database. The capacity of the organisation to create new knowledge from that which already exists depends on how well knowledge is mapped and accumulated. As a result of research evolution, the process of how knowledge is mapped and accumulated should be studied, so that the organisation's cultural values, the significance of which was shown in this study, would stimulate and create the added value of organisational processes.

Another current problem revealed by this study is transfer of knowledge. Knowledge should be actively passed on to those to whom it can be useful. It is a very important moment in organisational development. In order to secure this process, it should be first established whom to inform with new knowledge, that is, to whom or to where to transfer the knowledge and how to provide better receipt and use of the transferred knowledge. The field of study could be directly associated with transformation of the communication system, both on the horizontal and the vertical levels of management. The top management of an enterprise should provide active support of each activity aimed at improvement of the business activity. In turn, the board of the enterprise is responsible for creating an adequate cultural environment, where knowledge-sharing is facilitated and each employee's contribution to organisational capital of knowledge is appreciated.

7.4. Generalisability

Can the results from this study be generalised to the entire Latvian business environment with regard to providing CI? Overall, the reliability of the results of this study is good; however, the number of actors and organisations involved was small, meaning that the study revealed significant trends that could be characteristic of the nature of the phenomenon under study (Cronholm and Hjalmarsson, 2011). The qualitative and quantitative research methods were both consistent with the purpose of the research: to identify knowledge-sharing culture factors for providing CI and to find answers to the question: why does the CI process in Latvian enterprises have inherently weak informative and reversible links? The results of this study revealed and explained regularity of phenomena. The size of the study sample selection was determined by the limitations described in Section 1.3.

The purpose of the qualitative research, conducted through focus group discussions, was to obtain in-depth information on the factors affecting knowledge sharing with regard to CI and to ascertain why the CI process in Latvian enterprises has inherently weak informative and reversible links. The focus groups enabled the revealing of the views of separate individuals on the nature of the problem. A subjective impact on results was avoided as far as possible; however, in qualitative research, it cannot be totally excluded. In the qualitative research stage, analysis directed at disclosure of the sense of the problem was conducted. The data type was descriptive and required for creation of new hypotheses. The data obtained in this stage of the study should be deemed reasonable and sufficient for creation of hypotheses. In Table 38, the reliability and validity of this research is evaluated by dimensions.

Table 38. A risk assessment of the qualitative research

Dimension	This study	Reliability	Internal validity	External validity
Design				
Non-experimental	Was performed outside the organisation, in a free atmosphere, without organisational subordination	Highly favourable	Risk (e.g., inappropriate atmosphere, lack of confidentiality, theme confidentiality, impact of an undiscovered factor)	Highly favourable
Environment				
Real environment	Verbal material collection was carried out describing a construction of the respondents' situation in response to the research question	Highly favourable	Risk (e.g., environmental unsuitability to the contents of the study)	Highly favourable
Data gathering				
Story-gathering	Description of focus group discussions	Highly favourable	Risk (e.g., identification of the distorted facts)	Highly favourable
Data types				
Describing	Analysis focused on disclosure of the meaning or the sense was performed	Highly favourable	Risk (e.g., generalisation, insufficient awareness of the researcher's own stereotypes, unawareness of the generalisation borders)	Highly favourable
Analysis				
Analysis focused on disclosure of meaning or sense	The result was the creation of hypotheses	Highly favourable	Risk (e.g., drawing conclusions in a piecemeal fashion, the	Highly favourable

			difference between well-founded conclusions and tenuous hypotheses was not clearly noticed, preferred thinking)	
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Thus, when performing qualitative research, there was a risk that observation was free, perhaps even unconscious. If we assume that a knowledge-sharing culture (independent variable) affects CI (dependent variable), in the course of discussion, there is always a possibility of an impact by other undisclosed factor or factors. In order to minimise such an impact in this study, the respondents initially expressed their reflections on the problem of the research issue in writing; then opinions were summarised applying frequency of quotability. This narrowed the topic boundaries and focused on the problem.

In order to carry out the focus discussions, there were descriptive procedures, which led to conclusions and drew attention to those aspects of work that could be subject to risk. In this manner, the most important aspects characterising the researched phenomena were identified. Storage of discussion materials included a written version, allowing an increase in internal validity and a reduction in potential risks. The external validity in the qualitative research carried out in this study was sufficiently high, because these results could be transferred to other environments that differ from the study conditions, for example, to an organisation.

The quantitative part of the study consisted of a questionnaire on the issues of the topic, which was given to people from enterprises registered in Latvia. That is, the general population of the quantitative survey sample selection comprised individuals from enterprises registered in Latvia; the planned size of sample selection had been 70 enterprises, and the actual size of the sample selection was 66 enterprises.

Since there are principally no separate CI departments or units in Latvian enterprises, a focused study sample selection was generally burdened. However, the previous research carried out in Latvia with regard to CI management indicated that CI acts as a process in Latvian enterprises, and the functions are mainly performed by the marketing department. Therefore, from the perspective of participants included in the study, a sampled population was involved– a section of the general population was genuinely studied and built according to certain principles. The size of the study sample selection was determined by limitations of the study (see Section 1.3). In Table 39, possible risks of the quantitative research are assessed.

Table 39. A risk assessment of quantitative research

Dimension	This study	Reliability	Internal validity	External validity
Design				
Experimental	Deliberate, systematic, targeted gathering of numerical data	Highly favourable	Highly favourable	Risk (e.g., generalisation)
Environment				
Laboratory	Data were gathered in enterprises	Highly favourable	Highly favourable	Risk (e.g., transferring results to another environment, different from research conditions)
Data gathering				
Tests	Specific tools (questionnaires) were used to conduct the study	Highly favourable	Highly favourable	Risk (e.g., tests may not be appropriate for other respondents)
Data types				
Numerical	Data were quantified; statistics were descriptive and conclusive. Highly reliable results gave a high probability of recurrence	Highly favourable	Highly favourable	Risk (e.g., reliability of the respondents' data, readability of the questionnaire)
Analysis				
Statistical examination of hypotheses	Examination of hypotheses was carried out	Highly favourable	Highly favourable	Risk (e.g., transferring results to another environment, different from research conditions)

The reliability of the quantitative research was highly favourable. A uniform approach was provided for this study in case a repeated research was required. This research methodology was developed in consideration of different basic study principles: (1) testing of research instruments was carried out, as well as quality control and adaptation to local conditions. The author conducted the initial test of the questionnaires used in the quantitative research in three organisations, to ensure that they were understood by respondents. The respondents' comments were considered and changes in the questionnaires were introduced in accordance with these comments. In two organisations, in which very high ratings were received, respondents were interviewed again to ensure that the questions had been correctly interpreted. Following the interviews, changes were carried out, since it appeared that a number of questions had been interpreted by respondents in a different way;(2) the methodology that

was used to conduct the studies can be used in future studies and for comparing the obtained data. Therefore, the methodology is characterised by repeatability, which is an important condition for data generalisation. (3) The results of the study are verifiable and ensure reliability. Accurate data processing was used for the analysis process, applying the correct methods of statistical analysis and excluding from the study results the cases that were outside the normal distribution of answers. In relation to the construct reliability, Cronbach's alpha for all the questionnaires indicated good measurement properties (see Section 4). The SPSS test 'evaluate if the question is crossed out' indicated that alpha did not change significantly if any of the questions were excluded, which indicates that the questionnaire has good process metrics and structure construct;(4) the results are objective.

Summarising the information in Tables 38 & 39, it can be concluded that neither the pure quantitative approach nor the pure qualitative approach offers highly favourable conditions for reliability and validity; however, application of a mixed approach and a combination of the aspects of both approaches, increases the possibility of high reliability, as well as high internal and external validity.

7.5. Implications and avenues for future research

Given that one of the long-term priorities of Latvian economics is to create a favourable environment for business and investment, the role of CI will rapidly grow in Latvia. The level of development of information and communication technologies enables the interconnection of economic agents in any sphere of activity, on a global scale. Fundamentally new operation and development rules originate on the basis of all economic entities' capacities to access and adapt. This study focused on finding out why the CI process in Latvian enterprises has inherently weak informative and reversible links. Further studies in this direction could relate to in-depth research into the factors that determine the procedure of information and knowledge circulation. Further studies in Latvia could focus on searching for the combination of several determinants.

It could be that both research into the existing technological processes at enterprises and studies in the sphere of human resources management are required to provide an efficient CI process. Although a 2011 study assessed the role of organisational culture in ensuring CI, the present study of the factors affecting knowledge-sharing with regard to ensuring the CI process was the first to be conducted in Latvia. The long-term economic strategy of Latvia states that the economic reform measures taken so far have helped to stabilise the economic situation, but have not provided a sufficiently rapid development of the economy as a whole (extract of the Minutes of the Meeting of the Cabinet of Ministers of the Republic of Latvia No. 34, Riga, 17 July 2001). Therefore, the insufficient pace of economic development is one of Latvia's main problems, and calls for an adequate strategic approach. Since the role of CI in ensuring the business is of strategic importance, it is essential to study Latvian enterprises' internal environment conditions, which would directly facilitate development of CI in the organisation, in the future.

It is relevant that the long-term economic strategy of Latvia announces: *'Knowledge becomes the decisive factor of economic growth in the world. The new knowledge-based economy leads to higher incomes, guarantees higher standards of living, but it also requires long-term investments both in the*

human capital, in education and in scientific research. As a result, changes take place in the production cost structure, where the majority is associated with intangible long-term investments. The growing proportion of these investments and rapid technological changes, in their turn, increase the business risk. Progress towards the information society as a new, better organised, knowledge-based type of society it is a direct result of these processes' (extract of the Minutes of the Meeting of the Cabinet of Ministers of the Republic of Latvia No. 34, Riga, 17 July 2001). This means that the role of knowledge-sharing is a relevant topic of research in the role of CI in business management.

The issue of the ethical aspects of knowledge circulation in a knowledge-based society is also very relevant and could be studied from the perspective of improving and facilitating the development of ethical standards in the CI field. In the future, different methodologies and methods could be used to determine whether similar results can be obtained, which would enable the attribution of the present study results to the entire research area.

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APPENDICES

Appendix 1: Questionnaire (Saayman et al., 2008)

COMPETITIVE INTELLIGENCE QUESTIONNAIRE

WHAT IS COMPETITIVE INTELLIGENCE (CI)?

CI is the process through which information from multiple sources is collected according to expressed information needs; then evaluated, analysed, interpreted, communicated and applied in strategic decision-making. The questions relate to the way your company conducts these activities.

COMPANY DETAILS

Please mark the appropriate answer or complete where necessary.

Q1 Sector in which you are active

- | | |
|--------------------------|------------------------|
| <input type="checkbox"/> | Agriculture |
| <input type="checkbox"/> | Financial services |
| <input type="checkbox"/> | Manufacturing of goods |
| <input type="checkbox"/> | Mining |
| <input type="checkbox"/> | Trading agents |
| <input type="checkbox"/> | Transport |
| <input type="checkbox"/> | Other services |

If Other, please specify

Q2 Number of employees: less than 50, 51-200, more than 200

- | | |
|--------------------------|---------------|
| <input type="checkbox"/> | Less than 50 |
| <input type="checkbox"/> | 51-200 |
| <input type="checkbox"/> | More than 200 |

Q3a What percentage of sales is exported?

- | | |
|--------------------------|---------|
| <input type="checkbox"/> | 0-24% |
| <input type="checkbox"/> | 25-49% |
| <input type="checkbox"/> | 50-74% |
| <input type="checkbox"/> | 75-100% |

Q3b What percentage of total exports is exported to the following regions?

Europe	<input type="text"/>	%
North-America	<input type="text"/>	%

South-America %
 Asia %
 Africa %
 Australia and New Zealand %

Q4 Your position in the company

COMPETITIVE INTELLIGENCE QUESTIONS

Please indicate to what extent you agree with the following statements regarding your company's export activities on a scale from 1 to 5, where 1 equals strongly disagree and 5 equals strongly agree.

1 2 3 4 5

Strongly disagree

Strongly agree

1. Intelligence practices currently in place in your company

Q5	Our company recognises CI as a necessary activity for business.	1	2	3	4	5
Q6	Our management understands what competitive intelligence is.	1	2	3	4	5
Q7	Most employees understand what competitive intelligence is.	1	2	3	4	5
Q8	Senior management supports intelligence activities.	1	2	3	4	5
Q9	Competitive intelligence can be used to create a competitive advantage.	1	2	3	4	5
Q10	Our company has incentives to encourage employees to report their competitive observations and information.	1	2	3	4	5
Q11	We have convenient ways for employees to report observations and information.	1	2	3	4	5
Q12	Our company has a variety of methods for collecting information (e.g. trade shows, websites, industry reports, etc).	1	2	3	4	5
Q13	Our intelligence findings are widely distributed within the company.	1	2	3	4	5
Q14	We maintain a comprehensive map or inventory of internal information and knowledge.	1	2	3	4	5
Q15	There is a central co-ordination point for receiving competitive intelligence information.	1	2	3	4	5
Q16	We make competitive intelligence training (e.g. collection and analysis techniques) available to our employees.	1	2	3	4	5
Q17	We have a variety of ways to present intelligence findings (e.g. briefings, newsletters, competitor profiles, industry reports, etc).	1	2	3	4	5
Q18	We have formal knowledge/information management systems.	1	2	3	4	5
Q19	Our corporate culture encourages information sharing.	1	2	3	4	5
Q20	Our company maintains a central record of reliable sources of	1	2	3	4	5

	and market advantages.					
Q34	We use information management tools (e.g. data mining, data warehousing, OLAP or 'business intelligence' software) to understand our customers.	1	2	3	4	5
Q35	Key decision-makers are surveyed/interviewed to verify that the intelligence products produced for them, satisfy their needs.	1	2	3	4	5
Q36	All information is checked for accuracy and validated by at least one other source.	1	2	3	4	5
Q37	We train/prepare our employees before they go to trade shows, exhibitions, conventions etc. about what information they should look for.	1	2	3	4	5
Q38	Results from exit interviews/job interviews are used in our intelligence system.	1	2	3	4	5
Q39	We evaluate our competitive intelligence findings.	1	2	3	4	5
Q40	Our employees attend intelligence seminars/training programmes.	1	2	3	4	5
Q41	We evaluate the reliability of our sources of information (e.g. persons, publications, Internet, etc).	1	2	3	4	5
Q42	We conduct an internal knowledge audit (e.g. identify and catalogue what people know, what reports they have, publications, etc).	1	2	3	4	5

Appendix 2: Communication Satisfaction Questionnaire (Downs and Hazen, 1977)

A. Please indicate how satisfied you are with following:

1=Very dissatisfied; 2=Dissatisfied; 3=Somewhat dissatisfied; 4=Indifferent; 5=Somewhat satisfied; 6=Satisfied; 7=Very satisfied

1. Information about my progress in my job.
2. Personnel news.
3. Information about company policies and goals.
4. Information about how my job compares with others.
5. Information about how I am being judged.
6. Recognition of my efforts.
7. Information about departmental policies and goals.
8. Information about the requirements of my job.
9. Information about government regulatory action affecting organisation.
10. Information about changes in the company.
11. Reports on how problems in my job are being handled.
12. Information about employee benefits and pay.
13. Information about profits and/or financial standing.
14. Information about achievements and/or failures of the organisation.
15. Extent to which my managers/supervisors understand the problems faced by staff.
16. Extent to which company`s communication motivates me to meet its goals.
17. Extent to which my supervisor listens and pays attention to me.
18. Extent to which the people in the company have great ability as communicators.
19. Extent to which my supervisor offers guidance for solving job-related problems.
20. Extent to which communication in the company makes me identify with it and feel vital
21. Extent to which company communications are interested and helpful.
22. Extent to which my supervisor trusts me.
23. Extent to which I receive in a timely the information needed to do my job.
24. Extent to which conflicts are handled appropriately through proper communication channels.
25. Extent to which the grapevine is active in the company.
26. Extent to which my supervisor is open to ideas.
27. Extent to which communication with other employees at my level is accurate and free - flowing.
28. Extent to which communication practices are adaptable to emergencies.
29. Extent to which my work group is compatible.
30. Extent to which our meetings are well organised.
31. Extent to which the amount of supervision given me is about right.
32. Extent to which written directives and reports are clear and concise.
33. Extent to which the attitudes towards communication in the company are basically healthy.
34. Extent to which informal communication is active and accurate.
35. Extent to which the amount of communication in the company is about right.

B. Indicate your satisfaction with the following only if you are responsible for staff as a manager or supervisor.

1=Very dissatisfied; 2=Dissatisfied; 3=Somewhat dissatisfied; 4=Indifferent; 5=Somewhat satisfied; 6=Satisfied; 7=Very satisfied

36. Extent to which my staff are responsive to downward-directive
37. Extent to which my staff anticipate my needs for information.
38. Extent to which I can avoid having communication overload.
39. Extent to which my staff are receptive to evaluations, suggestions, and criticisms.
40. Extent to which my staff feel responsible for initiating accurate upward communication.

Appendix 3: Organisational Trust (Hon and Grunig Scale, 1999)

- This organisation treats people like me fairly and justly. (Integrity)
- Whenever this organisation makes an important decision, I know it will be considerate of people like me. (Integrity; original dimension: faith).
- This organisation can be relied on to keep its promises. (Dependability)
- I believe that this organisation considers the opinions of people like me when making decisions. (Dependability)
- I feel very confident about this organisation's skills. (Competence)
- This organisation has the ability to accomplish what it says it will do. (Competence)
- Sound principles seem to guide this organisation's behaviour. (Integrity)
- This organisation does not mislead people like me. (Integrity)
- I am very willing to let this organisation make decisions for people like me. (Dependability)
- I think it is important to watch this organisation closely so that it does not take advantage of people like me. (Dependability) (Reversed)
- This organisation is known to be successful at the things it tries to do. (Competence)

Appendix 4: Organisational Trust Inventory (Nyhan & Marlowe, 1997)

Interpersonal trust

1=Strongly disagree; 2=Disagree; 3=Somewhat disagree; 4=Neither agree or disagree; 5=Somewhat agree; 6=Agree; 7=Strongly agree

- I have confidence that my supervisor is technically competent at the critical elements of his/her job.
- When my supervisor tells me something, I can rely on what s/he tells me.
- My supervisor will back me up in a pinch.
- I feel that I can tell my supervisor anything about my job.

Appendix 5: Intragroup and External Knowledge Sharing in Work Groups (Cummings J.N.,2004)

1. On average, how often do you share each type of knowledge with group members during a project?

1=never; 2=rarely; 3=sometimes; 4=regularly; 5=a lot

- General overviews (e.g., project goals, milestone estimates or member responsibilities)
- Specific requirements (e.g., numerical projections, market forecasts, or order requests)
- Analytical techniques (e.g., statistical tools, detailed methods, or testing procedures)
- Progress reports (e.g., status updates, resource problems, or personnel evaluations)
- Project results (e.g., preliminary findings, unexpected outcomes, or clear recommendations)

2. **On average, how often do you share each type of knowledge with nongroup employees inside your division, nongroup employees outside your division, or the customer during a project?**

1=never; 2=rarely; 3=sometimes; 4=regularly; 5=a lot

- General overviews (e.g., project goals, milestone estimates or member responsibilities)
- Specific requirements (e.g., numerical projections, market forecasts, or order requests)
- Analytical techniques (e.g., statistical tools, detailed methods, or testing procedures)
- Progress reports (e.g., status updates, resource problems, or personnel evaluations)
- Project results (e.g., preliminary findings, unexpected outcomes, or clear recommendations)

Appendix 6: Organisational identification scale (Mael & Ashforth, 1992)

1=strongly disagree, 2= disagree, 3= neither agree nor disagree, 4=agree, 5=strongly agree

- When someone criticises (name of organisation), it feel like a personal insult.
- I am very interested in what others think about (name of organisation).
- When I talk about this organisation, I usually say 'we ' rather than 'they '.
- This organisation`s successes are my successes.
- When someone praises this organisation, it feels like a personal compliment.
- If a story in the media criticised the organisation, I would feel embarrassed.

Appendix 7: Informative description of the focus group

1. Informative description of the focus group of employees (specialists)

Member nr.	Age	Gender M/F	Department	Work experience	Industry
Interview nr. (1) R.	33	M	IT	10	Communication and IT
Interview nr. (2)U.	28	M	R&D	3	Communication and IT
Interview nr.(3)A.	29	M	R&D	6	Communication and IT
Interview nr.(4)A.	43	M	Service	21	Communication and IT
Interview nr.(5)R.	42	M	IT	17	Communication and IT
Interview nr.(6)E.	36	M	Customer support	12	Communication and IT
Interview nr.(7)K.	47	F	N/A	14	Education
Interview nr.(8)N.	40	F	N/A	15	Education
Interview nr.(9)P.	34	F	Sales	12	Finance and Insurance
Interview nr.(10)A.	29	F	Financial	6	Finance and Insurance
Interview nr.(11)G.	39	F	Customer support	16	Food Services
Interview nr.(12)S.	41	F	Sales	18	Food Services
Interview nr.(13)L.	48	F	Marketing	16	Healthcare
Interview nr.(14)I.	48	M	IT	24	Logistics
Interview nr.(15)A.	33	M	Logistics	11	Logistics
Interview nr.(16)L.	28	M	IT	5	Retail
Interview nr.(17)A.	55	F	Marketing	30	Retail
Interview nr.(18)D	29	M	Logistics	7	Retail
Interview nr.(19)A.	41	M	Sales	20	Transportation
Interview nr.(20)K.	35	M	Financial	11	Transportation
Interview nr.(21)L.	43	M	Sales	22	Wholesale

2. Informative description of the focus group of supervisors (managers)

Member Nr.	Age	Gender M/F	Department	Work experience	Industry
Interview nr.(1)D.	32	F	IT	10	Communication and IT
Interview nr.(2)R.	33	F	Marketing	11	Communication and IT
Interview nr.(3)G.	46	M	Sales	21	Communication and IT
Interview nr.(4)N.	26	M	IT	3	Communication and IT
Interview nr.(5)S.	36	M	Logistics	9	Communication and IT
Interview nr.(6)E.	35	F	Customer support	12	Communication and IT
Interview nr.(7)A.	55	M	N/A	31	Education
Interview nr.(8)A.	47	F	Marketing	14	Education
Interview nr.(9)R.	41	M	Bookkeeping	19	Finance and Insurance
Interview nr.(10)G.	45	M	Financial	20	Finance and Insurance
Interview nr.(11)I.	29	M	Bookkeeping	4	Finance and Insurance
Interview nr.(12)P.	48	M	Marketing	22	Food Services
Interview nr.(13)S.	35	M	Marketing	8	Healthcare
Interview nr.(14)A.	37	M	Sales	15	Logistics
Interview nr.(15)A.	51	F	Sales	25	Logistics
Interview nr.(16)R.	41	M	Sales	16	Logistics
Interview nr.(17)K.	36	F	IT	10	Retail
Interview nr.(18)A.	39	M	Logistics	16	Retail
Interview nr.(19)A.	27	M	Customer support	5	Retail
Interview nr.(20)R.	42	M	Sales	18	Wholesale

Appendix 8: CI description of factors

1. Description of factors in the competitive intelligence process

(Saayman et al.,2008)

Factor	Items
Factor 1 Communication and analysis	<p>Our company has a variety of methods for collecting information (e.g. trade shows, web sites, industry reports, etc.).</p> <p>Our intelligence findings are widely distributed within the company.</p> <p>We have a variety of ways of presenting intelligence findings (e.g. briefings, newsletters, competitor profiles, industry reports, etc.).</p> <p>Our company produces intelligence reports and assessments on the emerging technologies that we believe are most important.</p> <p>Our company analyses our competitors' plans and strategies to predict and anticipate their actions.</p> <p>Our company uses a basic competitor analytical models (e.g. SWOT and gap analysis).</p> <p>Our company develops profiles on emerging technologies to better understand their characteristics, potential applications and market advantages.</p>
Factor 2 Collection	<p>Key decision-makers are surveyed/interviewed to verify that the intelligence products produced for them satisfy their needs.</p> <p>All information is checked for accuracy and validity by at least one other source.</p> <p>Our employees attend intelligence seminars/training programmes.</p> <p>We evaluate the reliability of our sources of information (e.g. persons, publications, internet, etc.).</p> <p>We conduct an internal knowledge audit (e.g. identify and catalogue what people know, what reports they have, publications, etc.).</p>
Factor 3 Planning and focus	<p>We are concerned with the plans and intentions of our key competitors, alliances, suppliers, distributors and other stakeholders.</p> <p>Our employees report information about our competitors on foreign markets to the right manager for decision-making.</p> <p>In our company, we meet with executives daily to identify their intelligence needs.</p> <p>We train/prepare our employees before they go to trade shows, exhibitions, conventions etc. with regard to the information they should look for.</p> <p>Results from exit interviews/job interviews are used in our intelligence system.</p>

Source: Saayman et al. (2008)

2. Description of factors in the competitive intelligence context

(Saayman et al., 2008)

Factor	Items
Factor 1 Awareness	Our company recognises CI as a necessary activity for business. Our management understand what CI is. Senior management supports intelligence activities. CI can be used to create a competitive advantage.
Factor 2 Internal information	We maintain a comprehensive map or inventory of internal information and knowledge. Our corporate culture encourages information sharing. We report intelligence findings to the CEO or senior manager. In our company, the company's intelligence needs are communicated to employees. Senior management use CI results in their strategic planning and decision-making. We evaluate our competitive intelligence findings.
Factor 3 Formal infrastructure	There is a central co-ordination point for receiving CI information. We have a formal knowledge management system. Our company maintains a central record of reliable sources of information. We have a long-term CI plan. CI is a formal activity in our company.
Factor 4 Employee involvement	Most employees understand what CI is. Our company has incentives to encourage employees to report their competitive observations and information. We make CI training (e.g. collection and analysis techniques) available to all our employees.

Source: Saayman et al. (2008)

Appendix 9: Descriptive Statistics (Empoolyees)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CI Proseses factors	45	33,00	98,00	62,2000	17,21865	,324	,354	-,470	,695
Communication and analysis	45	8,00	32,00	19,3333	7,14779	,267	,354	-1,074	,695
Collection	45	7,00	25,00	15,0667	5,13632	,273	,354	-1,019	,695
Planing and focusing	45	8,00	20,00	13,5333	3,92312	,076	,354	-1,397	,695
CI Context factors	45	26,00	77,00	48,2000	14,99636	,325	,354	-,936	,695
Awarness	45	8,00	20,00	14,9333	3,22913	-,497	,354	-,394	,695
Internal information	45	12,00	30,00	17,6667	5,09902	,707	,354	,150	,695
Formal infrastructure	45	10,00	24,00	14,7333	4,11980	,885	,354	-,244	,695
Employee involvement	45	3,00	15,00	8,5333	3,04213	,179	,354	-,361	,695
CI	45	63,00	175,00	110,4000	31,03400	,390	,354	-,777	,695
Interpersonal trust	45	8,00	20,00	15,5333	4,38282	-,484	,354	-1,289	,695
Organisational trust, Integrity	45	7,00	15,00	10,8000	2,59019	,452	,354	-1,203	,695
Organisational trust, Competence	45	6,00	15,00	11,0667	2,62332	-,218	,354	-,653	,695
Organisational trust, Dependability	45	8,00	20,00	14,6667	3,53553	-,137	,354	-,625	,695
Organisational trust	45	22,00	50,00	36,5333	8,50027	,090	,354	-,952	,695
Trust in top management	45	8,00	12,00	9,3333	1,26131	,608	,354	-,670	,695
Organisational identification	45	12,00	28,00	21,9333	4,66320	-,370	,354	-,645	,695

Intragroup knowledge sharing	45	16,00	23,00	18,8667	2,30217	,591	,354	-,802	,695
Intergroup knowledge sharing	45	5,00	21,00	14,1333	5,28549	-,296	,354	-1,021	,695
Knowledge sharing	45	21,00	43,00	33,0000	6,39602	-,257	,354	-1,054	,695
Communication Climate	45	20,00	33,00	26,8444	4,66591	-,202	,354	-1,350	,695
Supervisory Communication	45	20,00	35,00	28,4222	4,35101	-,028	,354	-,812	,695
Organisational Integration	45	10,00	35,00	26,0444	6,86213	-,980	,354	,490	,695
Media Quality	45	18,00	35,00	26,9556	4,84747	,021	,354	-,431	,695
Horizontal and Informal Communication	45	12,00	34,00	26,2000	5,92989	-1,075	,354	,883	,695
Organisational Perspective	45	17,00	32,00	25,5556	4,45460	-,337	,354	-,673	,695
Relationship with Subordinates	45	,00	23,00	1,7111	5,87608	3,398	,354	10,290	,695
The Personal Feedback	45	15,00	34,00	24,7556	5,04595	,078	,354	-,187	,695
Interpersonal context	45	43,00	68,00	54,8889	8,68704	,328	,354	-1,403	,695
Group context	45	22,00	69,00	52,2444	11,93763	-1,175	,354	1,668	,695
Organisational context	45	55,00	100,00	79,3556	12,92664	-,222	,354	-,673	,695
Satisfaction with communication	45	240,00	474,00	372,9778	60,51840	-,326	,354	,199	,695
Valid N (listwise)	45								

Appendix 10: Descriptive Statistics (Supervisors)

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CI Proceses factors	21	59,00	99,00	72,4286	2,80779	12,86690	165,557	1,241	,501	,513	,972
Communication and analysis	21	21,00	31,00	25,1429	,84031	3,85079	14,829	,402	,501	-1,688	,972
Collection	21	13,00	21,00	16,8571	,69105	3,16679	10,029	,207	,501	-1,894	,972
Planing and focusing	21	14,00	22,00	17,2857	,59419	2,72292	7,414	,308	,501	-,785	,972
CI Context factors	21	50,00	71,00	59,7143	1,67210	7,66252	58,714	,240	,501	-1,255	,972
Awareness	21	16,00	20,00	17,5714	,31298	1,43427	2,057	,516	,501	-1,048	,972
Internal information	21	18,00	30,00	21,4286	,90914	4,16619	17,357	1,233	,501	,384	,972
Formal infrastructure	21	12,00	25,00	16,7143	,90011	4,12484	17,014	,991	,501	,295	,972
Employee involvement	21	8,00	15,00	9,7143	,54398	2,49285	6,214	1,388	,501	,783	,972
CI	21	115,00	170,00	132,1429	4,29855	19,69844	388,029	1,017	,501	-,326	,972
Interpersonal trust	21	15,00	20,00	17,7143	,39123	1,79284	3,214	-,042	,501	-1,199	,972
Organisational trust, Integrity	21	8,00	15,00	11,7143	,56964	2,61042	6,814	,010	,501	-1,410	,972
Organisational trust, Competence	21	12,00	15,00	14,0000	,23905	1,09545	1,200	-,757	,501	-,694	,972
Organisational trust, Dependability	21	13,00	20,00	15,7143	,58204	2,66726	7,114	,601	,501	-1,221	,972
Organisational trust	21	35,00	50,00	41,4286	1,24130	5,68833	32,357	,536	,501	-1,302	,972
Trust in top management	21	7,00	15,00	10,2857	,51706	2,36945	5,614	,819	,501	,454	,972
Organisational identification	21	16,00	30,00	23,2857	1,06713	4,89022	23,914	,090	,501	-1,333	,972
Intragroup knowledge sharing	21	10,00	25,00	19,7143	1,10657	5,07093	25,714	-1,006	,501	-,309	,972

Intergroup knowledge sharing	21	10,00	25,00	15,5714	1,03411	4,73890	22,457	,960	,501	,155	,972
Knowledge sharing	21	20,00	48,00	35,2857	1,94097	8,89462	79,114	-,382	,501	-,628	,972
Communication Climate	21	12,00	29,00	20,5714	1,21611	5,57289	31,057	-,245	,501	-1,353	,972
Supervisory Communication	21	14,00	34,00	23,5238	1,60152	7,33907	53,862	-,137	,501	-1,385	,972
Organisational Integration	21	15,00	30,00	25,8571	1,20374	5,51621	30,429	- 1,029	,501	-,181	,972
Media Quality	21	14,00	31,00	21,5238	1,12677	5,16352	26,662	-,160	,501	-1,366	,972
Horizontal and Informal Communication	21	11,00	29,00	20,9524	1,59385	7,30395	53,348	-,228	,501	-1,907	,972
Organisational Perspective	21	16,00	34,00	23,0000	1,29284	5,92453	35,100	-,021	,501	-1,537	,972
Relationship with Subordinates	21	,00	29,00	22,5714	2,11972	9,71376	94,357	- 1,960	,501	2,483	,972
The Personal Feedback	21	15,00	34,00	25,9048	1,16067	5,31888	28,290	- 1,092	,501	,575	,972
Interpersonal context	21	35,00	97,00	72,0000	4,27395	19,58571	383,600	-,809	,501	-,448	,972
Group context	21	26,00	59,00	46,8095	2,74089	12,56033	157,762	-,525	,501	-1,416	,972
Organisational context	21	44,00	90,00	65,0952	3,53075	16,17994	261,790	-,188	,501	-1,815	,972
Satisfaction with communication	21	210,00	492,00	367,8095	20,73869	95,03663	9031,962	-,515	,501	-1,354	,972

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