

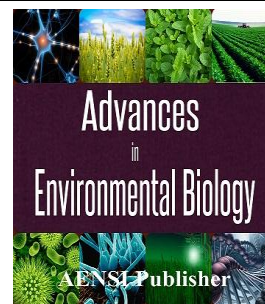


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Survey In Relationsheep Between Information Technologies And Organisational Culture

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ABSTRACT

The paper presents impact of information technologies (IT), information systems (IS) on elements of organisational culture. Since there is no unanimous opinion about what are the elements of organisational culture, authors decided to analyse impact of IT, in the first place on organisation values, organisation climate and manager style. There is also a short presentation of the impact on other elements.

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INTRODUCTION

This paper is a result of a three-year work on a project financed by the Ministry of Science and Technology of the Republic of Iran. Title of the project is «Organisational culture in function of the organisation's effectiveness». In the context of IT's impact on organisational culture, the research investigates IT's impact on elements, functions, forming, maintaining and transformation of organisational culture as well as interrelationship between business strategy, organisational culture and IT.

The main objective of the paper is to show impact of IT on elements of organisational culture. The paper therefore deals with impact of IT on organisational culture, elements of organisational culture and concrete impact of IT on each organisational culture element.

Organisational Culture:

In its narrower sense the term «culture» provides the basis for understanding what organisational culture is. According to zugaj and Cinguli (1992; 207) it is determined by a series of categories and ideas, the most common being:

- Polite and civilized behaviour of an individual (a civilized boy),
- Behaviour of a social group (cultures of students, young liberals, punk movement, football fans),
- The time period of uniform style characteristics (the ancient culture, the renaissance culture, romanticism),
- The way of life and behaviour of specific nations or groups of nations (the culture of the Incas, West European culture, Anglo-Saxon culture),
- Creativity of religious communities (Christian culture, Islamic culture, Jewish culture).

There are many explanations of the organisational culture. Almost every author dealing with this issue has given his/ her own definition of organisation culture:

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- «Organisational culture includes a system of ideas and concepts, customs, tradition, procedures and habits for functioning in a specific macro culture» [4];
- «Organisational culture is a series of values, standards and beliefs» [3];
- «Organisational culture is implicit, invisible, intrinsic and informal awareness of the organisation which directs behaviour of individuals and which results from their behaviour». [7].

Organisational culture can be also treated as a series of distinctive characteristics of a specific organisation. Some modern definitions of organisational culture are dynamic, directed at creativity, innovations and entrepreneurship. Other, traditional definitions, usually change very slowly, they are inflexible and sluggish.

Elements of Organisational Culture:

To understand organisational culture it is very important to know all its elements. Authors are not unanimous about what are the elements of the organisational culture. According to Armstrong [12] there are three important elements of organisational culture. These are: 1) organisation value, 2) organisation climate and 3) manager style.

(1) Organisation values represent everything what is considered to be valuable for the organisation and what would have to and ought to happen. They are expressed as purpose, mission or strategic objectives of the organisation.

(2) Organisation climate is the company culture characterised by experience and understanding of the employees and/or by quality of organisation value. This climate has impact on motivation, productivity, creativity and innovations.

(3) Manager style represents behaviour of managers and the management of the organisation when conducting their affairs. Literature abounds in descriptions of numerous management styles, which in most cases include either narrower or broader scope within two extreme styles: autocratic and democratic.

Meggison, Mosley and Pietri Jr. [5] believe that the organisational culture consist of the following elements: ceremonies, rituals, heroes, narrators, preachers, informers, gossipers, spies, myths and legends.

Ceremonies are a part of organisational culture which are usually planned in advance to express various aspects of cultural impact and contribution to creation of a specific stimulating climate and motivation in the organisation. Success of an individual contributes to the organisation itself and requires recognition. Recognition receiving ceremony significantly points out motivation effects. The way the ceremony is organised is deeply impacted by organisational culture.

Rituals, as an element of organisational culture, are detailed procedures and methods. They are performed consistently, on a periodical or regular basis. They include a very broad scope of activities: work, play, recognition or manager meeting. Rituals represent the way of conducting a specific ceremony.

Heroes are persons whose success brings the mythical and the human together. Their existence is essential for the organisational culture, because improvement of certain standards can be achieved only by them, but still with presence of a much needed boost.

From the viewpoint of organisational culture narrators may have a very positive but also a negative role. Their narrations may have effects on creation of sound company culture.

In distinction from narrators, who more or less spontaneously and systematically deal with an event within the organisation, preachers calculatedly express their premeditated views on events in the organisation. Their role is to understand fully the views of the organisation and to accept them as their own for a longer time period.

Informers are persons who inform of the fulfilled level of certain assignments performed by some employees in the organisation. In this way it is possible to exercise control over the employees' work..

Gossipers are persons which spread superficial, unverified and slanderous information about persons and events in the organisation. They can be very detrimental to the internal homogenisation of the organisation.

Spies are person who may work in or against the interest of the organisation. Some spies have dual and/or multiple role. They are useful for the organisation if they collect for it important economy-related and other information.

Myths and legends are significant elements of the organisational culture. They express social awareness through stories about the past and present events in the organisation, about its heroes and achieved success. They provide the basis for creation of legends, i.e. stories with real base which lost their objective accuracy by narrating [10].

In addition to the indicated classification of elements of organisational culture, there is also a classification according to: values, standards, attitudes and beliefs, habits and rituals, language and communications, and symbols [1].

Values represent strategy operationalization, and are related to the priorities which are significant for existence and development of the organisation.

Standards may or may not be written, they are related to the procedure by which something should be achieved. They show what kind of behaviour is expected and appreciated, and what kind of behaviour requires punishment in the organisation.

The most elusive part of the organisation culture are attitudes and beliefs. This element represents basic ideals and principles of organisation behaviour.

For customs and rituals, as elements of organisational culture, one might say that these are operational and established forms of behaviour. They are used to stimulate and intensify the identification of employees with their organisation, and to create the way of behaviour and interrelations.

A specific form of organisational culture are language and communication. Language is a sign of a certain social status of employees in an organisation. It is a close friend and reflects everything what is going on in the organisation. Language is used to persuade, to order and express emotional relief. A person or an organisation expresses its identity by communication. By its verbal or non-verbal communication, an organisation or an individual may show its or his/her level of culture.

Symbols, as a constituent part of any organisational culture, convey basic ideas about priority values of the organisation. They represent external visual signs of the organisation. The floor where a manager office is located, the way the office is decorated, is his/her office furnished with paintings or not, which car does he/she drive, the sign on the door, the place where he/she has lunch, tea or coffee, place where he/she parks a car, etc., represent very important status symbols, symbols of social differentiation, and of culture as a whole. Changes in organisational culture, as recorded recently, show tendency towards removal of such external symbols and towards equality, following the example of Japanese firms [1].

The indicated classification of elements of organisational culture suggest that there are two levels of organisational culture: the visible and the invisible one. The visible signs of culture are: ceremonies, slogans, symbols, stories, the way of dressing, behaviour, and alike. The invisible signs of the organisational culture are: common values, hypotheses, beliefs, attitudes and emotions [8].

Knowledge of the elements of organisational culture provides the basis for forming and use of the organisational culture to achieve the objectives of the organisation. In this case, the concept of entrepreneurship which is used to give an impetus to development of small and medium-sized companies, could not have free use of one important creativity development instrument. In fact, there are some young companies which may have a well-developed business philosophy, attitudes towards creativity and other important elements of organisation culture, although these elements have never been formalised [12].

Impact of Information Technologies on Elements of Organisational Culture:

As mentioned before, there is no unanimous opinion among authors about a number and type of the elements of the organisational culture. That is why this section will deal with the elements stated below. The first part describes effect of information technology (IT) on: 1. organisation values: 1.1 mission or purpose and 1.2 strategic objectives of an organisation; 2. organisation climate (company culture) with effects on: 2.1. motivation, 2.2. productivity, 2.3 creativity and 2.4. innovations, and finally on 3. manager style. The second part summarises the impact of IT on other mentioned elements of the organisation culture: ceremonies, rituals, heroes, narrators, preachers, informers, gossipers, spies, myths, legends, standards, attitudes and beliefs, language and communication, as well as symbols.

In the context of the aforesaid, IT – through the information system (IS), should provide a decision-maker with timely information, detailed enough to evaluate strength and possibilities, and/or threats and weakness of the organisation. Quality of such decisions effects every element of the organisational culture.

Organisation values:

Mission or purpose:

Mission or purpose of the organisation identifies the basic function and/or task of the organisation. Mission is a system of messages which refer to the characteristics of customers in respect of their wishes and specific needs, as well as of devices and technologies used for to manufacture of products to satisfy such needs. This definition puts emphasis on possible growth of the company by determination of guidelines which identify advantages in the light of consumer needs, competition's activities, available sources and changes of environmental factors.

Definition of the organisation's mission is a dynamic business activity which induces business tension in the organisation on account of constant business improvement, putting continually its strength and weakness to the test, simultaneously making critical assessment of produced effects.

Objectives of the organisation:

Objectives of an organisation are final points the activities of the organisation are focused on. They are not only the final points in planning, they also final target of management. Objectives represent a basic plan of the whole organisation. Strategic objectives imply basic long-term objectives of an organisation, adoption of activities orientation and allocation of resources necessary for their realisation. The purpose of strategies is to determine and give clear notice of an envisaged picture of the organisation through main objectives and policies.

The strategy creates a framework which directs considerations and activities [9]. To determine objectives means to select the future situation, to avoid wandering in space and time, reasonable use of available sources [2].

Table 1: Impact of IT/IS on organisation values

ORGANISATION VALUES	IMPACT OF IT/IS
<p><i>MISSIONS AND PURPOSES</i></p> <ul style="list-style-type: none"> • System of messages to a customer • Competition's activities • Available potentials • Change of environment • Dynamic test of strength and weakness • Critical analysis of achieved effects 	<ul style="list-style-type: none"> • Constant inflow of information from internal and external sources about customers and their needs • Provision of information about factors effecting future supply and demand, according to which future wishes and requirements of customers will be projected and new products launched. • Monitoring and projections of what the competition does and will do. • Determination of essential factors a decision about response will be based on. Advantage can be gained by early observation of changes and prompt response to these changes. • The organisation's supply should be better and different than that of the competition's. A customer should be induced to choose its products/services and not the competition's. • Application of strategic tools to follow the growth and development of the organisation. • Positioning of the organisation according to scientific achievements, and/or positioning of aggregate scientific, technological, human and other qualities which make the organisation different to others. • Ensured access to the generic technologies, because projected future changes in the organisation environment may be reliable only if based on scientific researches. • Dynamic analysis of the organisation's strategic position relative to other organisations, to competition and changes in the environment that all market players have to conform to. • Quality IS may at any time position organisation in respect of effects. • Effective IS and useful application of IT may be critical to the organisation's existence. • IT/IS have effects on business result.
<p><i>STRATEGIC OBJECTIVES</i></p> <ul style="list-style-type: none"> • Set-up of objectives • Achievement of objectives 	<ul style="list-style-type: none"> • Provision of information, bottom-up and top-down, for the purpose of setting up the organisation's objectives. • With aspiration of organization towards network organization, communication is direct • Support to run the organisation by means of objectives. • The objectives of the whole unit are achieved by building up a network of objectives. • The organisation's progressing to the set objective is regulated by feedback.

Company climate:

Motivation:

The term «motivation» refers to the whole group of impulses, requirements, needs, wishes and similar forces which should result in satisfaction. Human motives are based on needs. The secondary motives are manifested in the organisation. These are, in the first place, the need for a status, then for connection with the others, one's own initiative, achievements, self-assertion and alike. IT are an effective device to motivate the employees.

Productivity:

Productivity is input-output ratio in a certain time period conforming to the quality standards. Productivity implies measurement, which is an indispensable part of any control. Its improvement can be achieved by formulating the improvement objectives, measurement of results, effective system of communication and recognition of good work. IT successfully keep track of productivity, solve the issues in the production with no difficulties and support productivity measurements relating to clerical workers.

Creativity:

Creativity is the ability and qualities to form new ideas. A creative process is rarely simple and linear. It is composed of four phases which are in mutual interaction: 1.) automatic search, 2) intuition, 3.) penetrating and 4.) logic formulation.

Innovativeness:

Innovation usually means and refers to the use of creative ideas.

Organisations usually introduce rules or guidelines as a stimulus to innovation, e.g.: development of tolerance for mistakes, awarding employees with good ideas of new products who are in position to form an efficient and active team responsible for the product promotion, establishment of a close connection with customers, sharing technology with others within the organisation, making the project viable by means of time allocation or financial support.

Table 2: Effect of IT on organisation climate

ELEMENTS OF ORGANISATION CLIMATE	EFFECT OF IT/IS
<p><i>MOTIVATION</i></p> <ul style="list-style-type: none"> • Employee's status • Communications • One's own initiative • Achievements and self-assertion 	<ul style="list-style-type: none"> • Work with people who respect his/her capabilities. • Possibility of further improvement. • Being informed of all important events in the organisation. • Electronic mail • Cooperation, interdependence instead of competition. • Internal and external discussion groups. • Chatting • A possibility to realise his/her own idea instead of taking orders. • Self-management. • Interesting business activity. • Recognition for work well-done. Work as satisfaction and release. • Integration of life and occupation. • Work fulfils personal and social tasks.
<p><i>PRODUCTIVITY</i></p> <ul style="list-style-type: none"> • Determination of improvement objectives • Performance measurement against improvement objectives • Effective reporting systems • Recognition for good work 	<ul style="list-style-type: none"> • Ensurance of information to define objectives conforming to short-term and long-term plans of the organisation. • Simulation of actual production functions and their effects on financial and other factors contribute to their improvement • It is possible to instigate interaction of any measurable piece of information with another one by using IT, analysing so «what-if» questions, which guides the organisation to improvement objectives. • IT/IS enable immediate comparison of results with the plans. • Identification of differences and establishment of a regular reporting system. • Every employee expects to be recognised for his/her work if well-done. IT/IS may show contribution of every employee. • If the recognition system is formalized, every employee can see his/her position in this context.
<p><i>CREATIVITY</i></p> <ul style="list-style-type: none"> • Automatic search • Intuition • Penetrating 	<ul style="list-style-type: none"> • IT/IS may help in solving unclear situations. There are more and more sophisticated IT and advanced IS which are available in case of badly defined problems. • Intuition links the aware with the unaware. Combination of seemingly contradictory factors is quite common. Since this requires from people to find new combinations and to integrate different ideas, the most effective solution is to use modern IT/IS. • The act of penetrating is usually a result of hard work. Many ideas are necessary to find out a solution. Penetrating can also occur when thoughts are not directed on problems, and new ideas can last for only a few minutes. The situations are successfully solved by IT. • New creations should be tested by use of logic or experiments. They are executed by IT/IS. IT/IS are especially

<ul style="list-style-type: none"> • Logic formulation (verification) <p>INNOVATIVENESS</p> <ul style="list-style-type: none"> • Development of tolerance for mistakes • Awarding the employees who have a good idea of a new product and are able to form an effective team to conduct promotion of the product. • Close connections with customers • Sharing technology with the others within the organisation • Making the project viable by time allocation or financial support 	<p>effective when creativity is exercised by brainstorming.</p> <ul style="list-style-type: none"> • Innovativeness hampers intolerance for mistakes. IT/IS eliminate this deviation in the organisation, as at any time they may provide information about concrete attitude towards the issue, i.e. display a degree of tolerance for mistakes for each idea. • In case of a formalized award scheme, every employee can immediately obtain the information on awards. • IT/IS, by use of internal and external computer networks, enable simple and fast contacts with customers. There are many possibilities of realising various ideas and maintaining contacts with customers. • Every employee of the organisation may use developed IT/IS. • IT/IS extend the project owing to its successful maintenance applying new knowledge. IT/IS support the project reengineering effectively.
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Manager style:

Managers' specific and self-confident way of performing their major tasks is described in literature as the manager style. There are significant differences in a way of managing, control, mutual relations, application of management methods, communication and other management components, between efficient an inefficient managers. Manager style is a cause, and not a consequence of the achieved performance of an organisation. Various style designs and concepts are developed for the purpose of analysis and empiric verification of their behaviour [11].

The expected changes in managing the organisation, produced as a result of IT/IS effect, induce changes in organisational culture. They are reflected in:

- Development of cooperative relationship.
- Disappearance of the traditional chief-employee relationship.
- The manager is: inspirer, stimulator, teacher and adviser.
- Disappearance of traditional control, development of self-control.
- Management prefers to stimulate rather than to manage the capabilities of people (Pulic, 1990; 146-147).

TS/IS's effect on other mentioned elements of the organisational culture such as ceremonies, rituals, heroes, narrators, preachers, informers, gossipers, spies, myths, legends, standards, attitudes and beliefs, language and communication, and symbols, are shown in Table 3. These effects are becoming more and more pronounced especially in case of a network organisation or an organisation having tendency to become one of them.

Table 3: IT/IS' effects on other elements of organisation culture

ELEMENTS OF ORGANISATIONAL CULTURE	EFFECTS OF IT/IS
<ul style="list-style-type: none"> • Ceremonies, rituals • Narrators, preachers, informers, gossipers, spies 	<ul style="list-style-type: none"> • Updating of procedures, upgrading • Accurate planning and pursuance of realisation • Multi-media implementation. • Engagement of a large number of participants. • Filing. • Heightened positive and negative effects. • Direct communication with target groups and individuals. • Improved performance. • Development of sophisticated activity systems.
<ul style="list-style-type: none"> • Heroes, myths, legends • Standards, attitudes and beliefs • Language, communication, symbols 	<ul style="list-style-type: none"> • Efficient development and presentation. • Up-grading. • Filing • Formalization • Close observation of implementation. • Accurate measurements and reporting. • Sustenance of trends. • Efficient realisation. • Bringing up to date. • Simple distribution.

Conclusion:

IT/IS's impact on elements of organisational culture is becoming more and more pronounced. It is reflected in faster or slower change of these elements. Such impact causes changes in organisational culture. The organisation receives information using information technology achievements which leads to faster development of globalisation and consequently of organisation culture. The final objective is, hopefully, higher quality of life, including more personal liberty. IT/IS enable to store every step of such changes.

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