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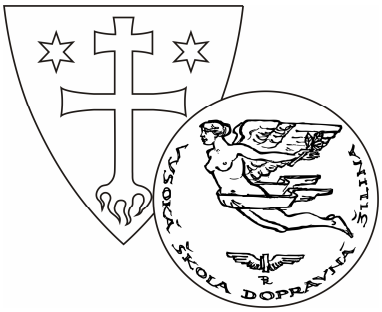

TRANSCOM 2009

8-th EUROPEAN CONFERENCE OF YOUNG RESEARCH AND SCIENTIFIC WORKERS

PROCEEDINGS

SECTION 2

ECONOMICS AND MANAGEMENT

Part 1

ŽILINA June 22 - 24, 2009
SLOVAK REPUBLIC

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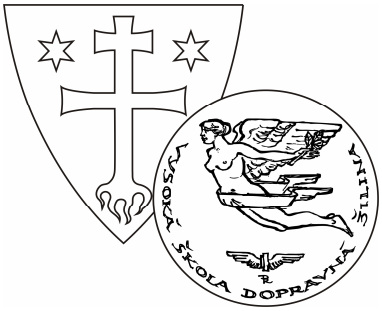

TRANSCOM 2009

8-th EUROPEAN CONFERENCE
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SECTION 2

ECONOMICS AND MANAGEMENT

Part 1 (A - L)

ŽILINA June 22 - 24, 2009
SLOVAK REPUBLIC

Edited by Lucia Tulejová, Monika Kormancová, Michal Varmus, Peter Bríd
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TRANSCOM 2009
8-th European conference of young research and scientific workers

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Marketing Communication in International Environment

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Abstract. The aim of this article is to point out the communication in international environment and it ´s differences. In these days many enterprises are coming in foreign markets. If the companies want to be successful they have to consider communication ´s differences in international environment and modify tools of communication mix following form these differences. Culture (together with verbal and nonverbal communication) is the main factors which have impact on communication.

Key words: communication, international communication, communication mix, culture

1. Introduction

As well as in the life of the human, the communication is very important in the existence of each company. No matter whether it is inner communication, which takes place within the enterprise; or external, when the enterprise interacts with its environment.

Information is vital for existing of every company, whether it's about market, suppliers, customers, competitors and so on. And the information is result of communication.

Through the communication enterprises acquire the information, but on the other hand the information is hand over to other side. And thanks to communication companies are able for example to affect the consumers to buy their product or service. And that's the reason, why we consider communication like one of the most important marketing tools and why it's included in the so-called 4 P. It is a tool of marketing mix, which allows the information path with manner suitable for all concerned party.

2. International communication

The present time is characteristic by connecting of individual economies. Most of the states are trying to export their production and satisfied needs not only of their citizens but also the citizens of the other states. Many Slovak companies are heavily dependent on export of their production or on the other hand they need to import their inputs.

This isn't possible without company´s communication with its environment. And as well as the international trade is developing, the marketing communication must develop, too. Although the international and domestic marketing and communication are based on the same principles, many underlying assumptions must be reevaluated when a firm moves into international operations. It is caused by the fact that each county is different environment, whether we speak about environment demographic, economic, geographic, technological, political, legislative, cultural or social.

So why are the companies ready to enter to the international trades despite of these differences? Although the international marketing has a lot of disadvantages there are still a lot of benefits.

The main reason of firms´ moving into international trades is developing business opportunities; because of their limited domestic trade, home country has higher taxes or their products are more competitive on the international markets.

The company must be very careful in international communication like in the international marketing. What is in the domestic country accomplished like standard, in foreign country can be consider like something inappropriate. Therefore, if the company wants to be successful in international markets, it has to consider these differences. So it ´s very convenient to find out the strangeness of the country, before the company decide to move into its market.

2.1. Promotion mix in international environment

Promotion mix is consisting of some tools and company has to implement them very carefully in international environment, because bad communication can be reason of business's failure in a moment of beginning of the business.

In these days the most used promotion tool is perhaps advertising. It is any paid form of presentation of ideas, products or services and its effect are long-term. When the company is complete advertising, it has to consider:

- what it wants to say and at the same time
- how it wants to say.

In this part the company should be very careful, because there can be used various advertising styles in each country. In some countries the advertising can be asked to be provoking and in another country is this type of advertising sentenced to failure. For example the advertising with models in swimming suit presenting some product – this type of advertising isn't proper in Arabian states, but in our country it ´s very popular way how to attract customer's notice.

Another tool of promotional mix is sales promotion. It ´s target is to increase revenue for a short term. It can be focused on internal dealer, intermediary or customer. There is one possibility of customer ´s orientated sales promotion – it ´s called bonus (or addition). Customer can get the addition as reward for example when he makes some amount of purchase. Also in this case the companies have to be very careful and choose the bonus, which acquirement will motivate the customer to another purchase.

There is another tool – personal selling. It ´s using is quite limited in the international environment.

Lately as the trend of globalization is growing up the importance of public relation is increasing. The aim of public relations is systematic relation making between company and public. In these days there is big problem – protection of environment. It ´s worldwide issue and many companies are engaged in protecting of environment. This step is regard like something good in the eyes of customers and it increases customers' sympathy and positive attitude to the company.

Till lately the sponsorship has been the part of public relations, but his importance had been so big that it ´s become a new tool of promotional mix. It is the good way how the company can draw attention to itself in the international environment. The good ideas are for example sponsorship of the most favorite sport or worldwide famous charitable organization.

As we can see, the particular elements of domestic promotional mix are based on the same principles as international promotional mix, but it ´s necessary to adapt them to specific traditions and differences of each country and its culture.

3. Culture and marketing

One of the most difficult, but also most important aspects of doing business in a foreign country is to understand the differences in cultural values, the differences in needs within a society. In some culture a firm's products and services can be considered as appropriate or offer acceptable solutions only for individuals or social needs. Marketing is based upon satisfying the varied needs or wants of a firm's customers, and these needs and wants are very much linked with culture.

A successful international company has to try to understand the cultural mores of the country to which market it is trying to move into. If a product is no longer acceptable because a value or custom related to its use aren't satisfying because of the cultural values of the society, the firm producing this product must be ready to adjust or revise its product offering. It ´s necessary to solve the potential market from cultural point of view before the firm ´s product is introduced on foreign market or before business deal with another society.

Culture and cross-cultural differences can be seen in a variety of human interactions, including but not limited to language, nonverbal communications, religion, time, space, colour, numbers, materialism, manners and customs, aesthetics and food preferences. Some of these interactions are potential traps. Inappropriate or careless attitude to cultural differences can be the cause of the company ´s failure.

If the company wants to avoid it, it should:

1. Be sensitive to do's and taboos. Develop cultural empathy.
2. Recognize, understand, accept, and respect another's culture and differences.
3. Be culturally neutral, different is not necessarily better or worse.

3.1. 2.1 Culture and Communication

Verbal communication

Although the differences in verbal communication between countries are immediately obvious to global marketers, some of the subtleties may not be. People interpret their words and individual needs of their daily life through the language. The more words are used to describe it, the more shades of meaning are attached to it.

Verbal communication differs from one culture to another. It differs not only in terms of language but also in terms of the relative importance of the variables involved – of who, what, how, where, when and why. A message is less likely to persuade when it does not reflect these variables in a manner appropriate to the culture of the recipient of the message. More specifically:

- Who communicates the message and to whom - there are many cultural differences in terms of the degree in which people can freely communicate with each other. Cultural differences may be result from women and men position, religion, the hierarchy of society of different cultures.
- What message is communicated – what can be sent via messages is also influenced by different cultures. An enterprise should avoid the words that may be taboo in different cultures, even if these words are commonly used in the domestic market. Also in this part of communication religion, but also different sense of humor are very important.
- How the message is communicated - this involved choosing the channel (spoken or written) and the mode (face-to-face or phone). Difference is given by available channels in each culture or by the factors as speed, formality and legality.

- Where the message is communicated – there are differences in the preferences of the media in some countries. Some prefer to advertise in newspapers and magazines, others TV or radio ads.
- When the message is communicated - the selection of the proper time of publication the report is also not uniform across cultures. Acceptability of random versus schedule conveying of messages is different form culture to culture.
- Why is the message communicated - the report may be intended to inform or persuade target customers. However, the relative importance of the same message in different cultures may be different.

Nonverbal Communication

Knowledge of nonverbal communication signals is very important in trade negotiations. Over 70 percent of the object of any message is not contained in the verbal but in the nonverbal part of the message. Nonverbal communication could include facial expressions, eye contract, gestures, body movements, posture, physical appearance, space, touch, and time usage. These non-verbal signals are completed by verbal signals to obtain more accurate picture of reality. They can confirm or emphasize consistency or inconsistency with the verbal communication, so companies should be very careful, when they use them. Between cultures, there are many conflicting signals of nonverbal communication.

4. Conclusion

Enterprises moving into the foreign markets have to be very careful in communication with their environment. It is caused by different condition, even it ´s geographic, demographic, cultural, social or other environment.

The tools of communicational mix can´t be used like in home country. Companies have to consider many factors, which have impact to successful communication in international environment and they have to modify communication tools to this situation.

Culture (and everything that is part of culture as language, religion, nonverbal communication, time, manners, aesthetics etc.) is one of the most important factors which have impact on communication.

As it was mentioned communication (including verbal or nonverbal communication) can be different from country to country. So every company should find out specifics of the country before moving into the market and adapt to them.

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Econometric and Soft Computing Modeling in Terms of High Volatile Markets

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Abstract: The aim of this study is to find out if the neural networks provide the comparable results to standard econometrics methods in terms of high-volatility. The ARMA and GARCH models were estimated as well as the Neural Network model and their accuracies were compared by computing the RMSEs of the predictions.

Keywords: GARCH, neural network, RMSE, volatility, gold, prediction.

1. Introduction

The volatility in financial time series has attracted attention, mainly because of the 2003 Nobel awards to professors Robert Engle and Clive Granger. Especially the Engle's ARCH models, which were later improved by Bollerslev place the volatility (or standard deviation) in the spotlight.

Volatility is an important factor and has many financial applications from calculating value at risk (VaR) through designing the correct portfolio to improving the times series forecasting.

There is no doubt that neural networks (NN) find their place in financial modeling and forecasting but there are still only few applications that are examining the real datasets. We try to compare the predictions of neural networks, ARMA and GARCH models on time series which represent the evolutions of gold price. Data was downloaded from the internet portal Yahoo Finance with the help of R and quantmod package.

2. Theoretical Background

GARCH models are especially designed to capture the certain characteristics as for example volatility clustering, persistence or fat tails that are commonly observed in financial time series. The simplest GARCH(1,1) specification

$$Y_t = X_t'\theta + \varepsilon_t . \tag{1}$$

$$\sigma_t^2 = \omega + \alpha\varepsilon_{t-1}^2 + \beta\sigma_{t-1}^2 . \tag{2}$$

in which the mean equation (1) is written as a function of exogenous variables with an error term, ω is a constant term, ε_{t-1}^2 is the lag of the squared residual from the mean equation and σ_{t-1}^2 is the last period's forecast variance.

If we introduced the conditional variance or standard deviation into the mean equation, we get the GARCH-in-Mean (GARCH-M) model ((Engle, Lilien and Robins,1987))

$$Y_t = X_t'\theta + \lambda\sigma_t^2 + \varepsilon_t . \tag{3}$$

NN used in this study is a feed forward neural network with back-propagation algorithm developed in JAVA programming language (Netbeans 6.1). The topology is illustrated in fig. 1. The network has 2 neurons both in input and hidden layer and 1 neuron in output layer.

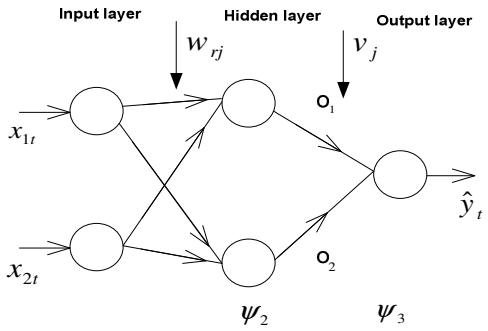

Fig. 1. Topology of neural network

The Root Mean Squared Error (RMSE) is computed as follows:

$$RMSE = \sqrt{\frac{\sum_{t=1}^{N}(y_t - \hat{y}_t)^2}{N}} . \tag{4}$$

where y_t is the actual observation, $\hat{y}_t$ is the predicted value and N is the number of predictions.

3. Application Part

Time series used in this study is the daily gold price. This price is quoted in dollars. The study employs data from 3-th of January 2007 to 6-th of March 2008 (the last 24 observations -February 09 and the beginning of March 09 was left for validation). The volatility of this commodity shows a huge movements or fluctuations especially from the beginning of the year 2008 to March 09.

Fig. 2. The evolution of Gold price in dollars per ounce. Made with quantmod package in R

According partial autocorrelation function (PACF), we have specified the order of AR model; in this case we've got ARMA(2,0) or AR(2) model. Then we have to test the presence of ARCH effects in ARMA residuals. As we can see from table 1, the ARCH effects are present so the GARCH models would be appropriate.

Lag	1	2	10
p-value	0.003804	0.000981	< 2.2e-16

Tab. 1. ARCH LM test for ARMA(2,0) residuals in R environment

After estimating the ARMA(2,0)+GARCH(1,1), the ARCH LM was performed again for standardized residuals of the model to check if the model successfully remove or capture the conditional heteroskedasticity. The results in table 2 show no evidence of ARCH effects.

Lag	1	2	10
p-value	0.4124	0.6959	0.575

Tab. 2. ARCH test for standardized residuals of the model AR(2)+GARCH(1,1) in R environment

Finally the BDS test was performed and according to results in table 3 we can assume, that the joint estimation of the ARMA and GARCH model was correctly specified.

Dimension/ epsilon	0.4926	0.9851	1.4777	1.9702
2	0.2532	0.3307	0.1976	0.1544
3	0.4273	0.3960	0.2425	0.1999

Tab. 3. BDS test for standardized residuals of the model AR(2)+GARCH(1,1) in R environment

In prediction part we have forecasting 24 values of Gold price using the different models (GARCH-M stand for GARCH-in-Mean model, GED means Generalized Error Distribution). The RMSEs are in table 4. The less RMSE, the better the model is.

model	RMSE	model	RMSE
AR(2)	1.901134	AR(2)+GARCH-M_GED	1.896728
AR(2)+GARCH(1,1)	1.899465	Neural Network	1.908
AR(2)+GARCH-M	1.905220		

Tab. 4. Results comparison

4. Conclusion

In this study we have applied the different econometric and soft computing methods in terms of high volatile market. The GARCH models showed the best behavior in prediction

part, which is not a big surprise, because they were created for using in these highly fluctuating conditions. But there is a huge work behind these models; lot of assumptions must be confirmed before predictions are obtained, lot of different models must be estimated before the correct one is choose. On the other side using the neural network model is relative easy even without the solid econometric background. If we find the way how to include the volatility in the process of learning, it would improve significantly the prediction power of the net.

Acknowledgement

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Utility of the Renewable Energy Technologies

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Abstract. Presently the accessibility to energy sources and their price are becoming worldwide up-to-date subject. Predictions speak about fast increase of Europe's dependency on fuel imports from politically instable areas. This all happens in the atmosphere of environmental impulses to lower the greenhouse gases. This situation is significant and determining for the arrangement of the thermal comfort of buildings, which is now both cost demanding according to the market prices of the energy and producing emissions into the atmosphere. Thus new technologies operating on the basis of renewable energy become relevant. These technologies unite the independence from the imported fossil energy sources and the lowering of the environmental stress. But they are connected with markedly higher investment cots and rather low efficiency as well. So there remains a question what is the real utility these technologies generate and how high it is.

Keywords: Renewable energy technologies, demand, utility, operating cots.

1. Introduction

Currently much attention is paid to the development of the society and its potential. Impulse to the society development, how we know it today, gave industrial revolution in the 60[s] of the 18[th] century. The industrial revolution represented transition of the exquisite workmanship and manufactory production to the fabrication. Stepwise but quite fast rapid development of the industry and production, growth of the population and urbanization happened. Growth of all this factors is depended on the supply and accessibility of the energy. Same situation is in the construction industry as well and not only in the phase of building erection but in the phase of its operation.

That is why renewable energy technologies are being boosted up with regard to actual trends in the European or world energy economy, simultaneously with energy resource depletion and growing dependence of their provision from politically instable areas.

2. Renewable Energy Sources

A renewable energy source is the energy source gained primarily from the nuclear conversion of the Sun's core. Other renewable sources are heat of the Earth's core and the persistence of the set Earth-Moon. The mankind extracts these energies mostly in the form of solar radiation, wind energy, water energy, tidal energy, geothermal energy.

The definition of the renewable energy source according to the Czech law about the environment [4] is: "The renewable energy sources have the ability to reproduce themselves partially or completely within their continual depletion and thus by themselves or by the contribution of the human."

3. Renewable Energy Technologies

The energy demand during the phase of operation can be divided into two parts – the need of the heat energy and the need of the electrical energy as you can see in the Fig. 1. The renewable energy technologies usable for covering one of the two parts are in the Fig. 1 as well. They are namely:

- Heat pumps
- Solar collectors
- Photovoltaic
- Micro wind power plants
- Micro water power plants

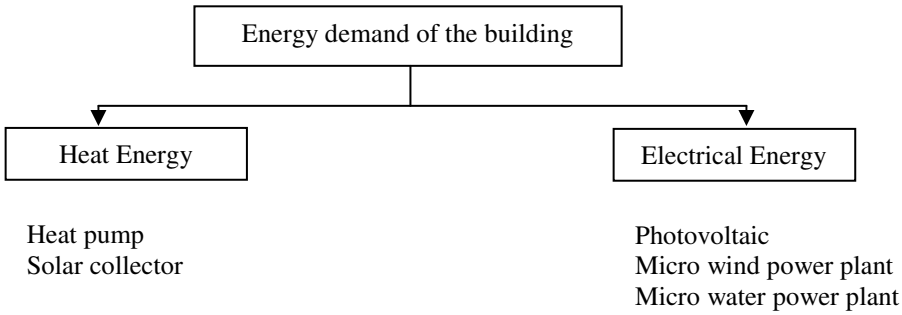

Fig. 1. The renewable energy sources and energy demand of the building.

3.1. Heat pump

Heat pump is an appliance which enables capturing heat from so called low-potential sources. Low-potential sources are for example water in the river, soil or surrounding air. All this sources usually have lower temperature than we need however the heat pump can capture the heat about 55°C using the cycles of gas compression and expansion.

Types of heat pumps are following whereas the first medium represents the source of the heat and the second medium represents the distributor of the heat:

- Heat pump soil-water
- Heat pump soil-air
- Heat pump air-water
- Heat pump air-air
- Heat pump waste air-water
- Heat pump water-water

3.2. Solar collector

Solar collectors warm up directly or indirectly liquid or air medium. The captured heat is further transferred to the solar accumulator. The heat condenser transmits the heat to the service water which is by the help of circulating pump distributed in the building.

Types of solar collectors are following:

- Plane tabular
- Plane tabular – vacual
- Tubulous vacual
- Tubulous vacual – condensing

3.3. Photovoltaic

Direct conversion of the solar radiation into electrical energy is possible on the basis of photovoltaic effect. Within this effect light elements (photons) strike upon solar photovoltaic cells and so move out electrons. Semiconductor structure of the cell orders the movement of electrons into usable direct current.

3.4. Micro wind power

Micro wind powers are machineries for producing direct current. Operation of the wind power depends on the velocity of the wind. The direct current is accumulated in the batteries from which is used mostly for operation of small appliances.

3.5. Micro water power

Micro water powers are machineries for producing direct current. Operation of the water power depends on the type of turbine and the natural conditions such as downgrade and flow. It is possible to use the produced energy immediately.

4. Utility of the Renewable Energy Technologies

Generally utility of any product means rate of satisfaction of the consumer needs. To be able to analyze the utility of the renewable energy technologies we have to know the consumer need. The consumer need is the energy demand of the building (see Fig.1) which can be covered by heating systems based on either fossil fuel sources or combination of the renewable energy technologies. All this heating systems are from the technical point of view indifferent, this mean that they all can cover the energy demand. The difference between these heating systems results from the different operating costs on energy based on using the renewable energy sources. Therefore we can understand the utility of the renewable energy technologies as difference between the operating costs of heating system based on the fossil fuels (Reference Variant) and the heating system with combination of renewable energy technologies (Variant i).

$$\text{Utility}_{Vari}(t) = \text{Operating costs on energy}_{Ref.Var.}(t) - \text{Operating costs on energy}_{Var\,i}(t) \quad (1)$$

Where
$i = 1, 2,\ldots n$ (variants of building heating systems with renewable energy technologies),
$t = 1, 2,\ldots T$ (years of building heating), T is the limit of analysis period.

Within the utility analysis it is further important to include investment costs of the alternative variant and the development of fuel and energy prices to able verify if the generated utility is large enough to cover the initial investment costs. The best evaluation of variants is then using economic criteria such as NPV (net present value), IRR (internal rate of return), PP (payback period) and DPP (discounted payback period),

$$NPV_i = \Delta I_i + \sum_{t=1}^{T} \frac{Utility_i(t)}{(1+d)^t} \quad (2)$$

$$\Delta I_i = \sum_{t=1}^{T} \frac{Utility_i(t)}{(1+IRR_i)^t} \tag{3}$$

$$PP_i = \frac{\Delta I_i}{\sum_{t=1}^{PP} Utility_i(t)} \tag{4}$$

$$DPP_i = \frac{\Delta I_i}{\sum_{t=1}^{DPP} \frac{Utility_i(t)}{(1+d)^t}} \tag{5}$$

Where

$Utility_i(t)$	Utility of Variant *i* in year *t*,
ΔI_i	Difference of investment costs of Reference Var. and Variant *i*,
NPV_i	net present value of investment costs and operating costs on energy of Variant *i*,
IRR_i	Internal rate of return of Variant *i*,
PP_i	Payback period of Variant *i*,
DPP_i	Discounted payback period of Variant *i*,
d	Discount rate.

5. Conclusion

The renewable energy technologies bring the consumers the independence from the exhaustible fossil fuels and lower the individual contribution to the negative environmental impacts. But analyzing the utility renewable energy technologies bring to the consumer it is important to define all technically possible combinations of the renewable technologies and compare their difference in the operating costs and further made an analysis of the utility rate taking into account the investment cots.

Acknowledgement

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Assessment of the CNC Machine Modernity Basing on the ABC Technology Method

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Abstract. Computerized numerical control machine is the one of the most popular kind of machine bought and used in contemporary enterprises in Poland. The modernity level of the machine determines a product quality and also the costs structure. An analysis of the CNC machine modernity was carried out in the biggest producer of plastics and mining explosives in Poland. Technology resources concerned examined machine tools numerically controlled, constituting standard machine in the current precise production are the main object of analysis.

Keywords: the ABC method, Computer Numerical Control (CNC), machine tool CNC, plastics.

1. Introduction

Computerized Numerical Control is usually used with reference to material processing with the help by a computer controlled machines so as: milling machines, lathes, being able to read the standard steering code G-code. CNC processing allows for fast, precise and highly repeatable workmanship often of very compound shapes. The typical process of computer producing the object consists of phases: the computer aided design (CAD), computer project processing for the plan of machine steering (CAM) and CNC (real workmanship). **Numerically controlled machine** (CNC) is automated, equipped with numerical arrangement of program steering, which is manipulating every movement in processing, parameters of processing and support activities in order to get required object shape, dimensions and the surface coarseness, in the program way [2].

This kind of milling machines is used by one of the biggest producer of plastics and mining explosives in Poland. The described company consists of two main production plants: the Explosives Production Plant (production of explosives, initiating means, blends of nitroglycerin, Nitrocet 50) and the Plastics Production Plant (plastics and plastic form). There is also two support workshops (the Workshop of the Transport and the Workshop of Technical Services). The Plastics Production Plant's activity is connected with and an activity of the Workshop of Technical Services, which conducts activities mostly in the scope of the machining, plastic processing, the welding, the technique of sealing. This workshop is a supplier of specialist services with providing correct action of machines and devices.

Milling machine CNC FNE50N and lathe CNC AVIA turn35, which constitute the most modern part of technological park of this company, are the research object. The universal milling machine FNE 40NC is ideal for processing of spatial shapes e.g. injection moulds. It can be successfully applied for processing of objects produced on a large scale. The computerizing control system enables the linear and wheeled interpolation. Processing

according to the program prepared in the CAM system can be led on this kind of milling machine.

2. The characteristics of the ABC technology method

It is possible to classify the modernity of the machine part using the ABC technology for machine part value and usefulness to the enterprise assessment in the considered period. A competitive majority, expressed in the expensive leadership or the selected variety of products, can be used as the criterion of the assessment. The selected variety of products is achieved owing to the elasticity of devices, which let frequent changes of the kind and quality of products. An analysis of the ABC technology is based on the Pareto principle showing that, it is possible to distinguish a few of its elements, conventionally indicated with A letter, which are deciding about the main findings in every statistical group. Many elements of the group are at the second ending of the schedule, meant with C letter, about the small contribution to results of its activity. The rest is indirect members of the group, marked with B letter [1]. Analysis of the ABC technology concerns individual applied sub-assemblies in the machine used for the production and the assessment of its modernity using the scale of Parker (1-5) [1, 3]. This scale consists of the following levels:

- level 1- straight parts, there is a possibility of producing its with the help of techniques craft e.g. foundation of the machine,
- level 2 - parts, where not changed and known for many years technologies were applied, e.g. standard system of the engine cooling,
- level 3 - parts produced with applying of taken technology requiring the suitable technical wisdom e.g. standard electric motor,
- level 4 – parts, which were produced with modern market technologies applying e.g. showing the diagnosis on the control panel computer,
- level 5 – parts being a production result of total applying of the most modern, patented and technologies appearing only in the machine of the specific enterprise.

The of the applying of this categorization is a possibility of putting the modernity in terms of the development appropriateness and pointing elements of the machine, which would be modernized or exchange. However the analysis of ABC technology lets for pointing essential technological possibilities of the enterprise [2,3]:

- **Basic technologies** – technologies of A category, fundamental for enterprise activity. Its also being named driving technologies, because its help enterprise with granting special attributes the product.
- **Aided technologies** – technologies with general character, mostly linking with basic technologies e.g. plumbing system installed in grinders [3].
- **Marginal technologies** – are connected with enterprise own machines and devices. These are mainly technologies C category and it isn't a subject of innovative activity.

3. The range of the mechanical technology in research object

Technology resources concerned examined machine tools numerically controlled, constituting standard machine in the current precise production are the main object of analysis. In these machine tools basic sub-assemblies of the A category, are directed to competitive majority through accomplishment of the following tasks: steering, implementing tools, programming and service of the desktop. Its grant main functional features the machine and at remaining unchanging factors, decide on its sales value. Aiding sub - assembly, of B category,

is essential in individual cases: the power transmission system, the worked part manipulating system. Technologies subordinated the C category are connected with: machine construction, machine fundaments, feeding with the energy and instrumentation.

The lathe CNC AVIA turn35 and the milling machine CNC FNE50N and are research object. The modernity level assessment of the individual part machine of analysed lathe CNC AVIA turn35 is being presented in the table 1.

SUB-ASSEMBLY	SYMBOL	PART/ELEMENT OF THE MACHINE	THE MODERNITY LEVEL
A	A1	control system	4
	A2	control panel	4
	A3	programming system	5
	A4	meter circuit	5
B	B1	spindle drive	4
	B2	axle drive	4
	B3	plumbing system	4
	B4	fixed headstock	5
	B5	suport	4
	B6	tailstock	3
	B7	work area	4
	B8	break	4
C	C1	machine construction (housing)	4
	C2	cradle	4
	C3	fundament	3
	C4	system of the engine water cooling	4
	C5	lubrication system	4
	C6	Turnings truck	4
	C7	cover of the cradle	3
	C8	covers	4
	C9	console	4

Tab. 1. The assessment of modernity level of the lathe CNC AVIA turn35.

Source: own study.

Sub - assemblies being in A category can be classify as the high level of the modernity, taking out the average level above 4. Sub-assemblies belonging to B and C subgroups were classified on 4 level, according to the scale of Parker. Graphical presentation of received modernity level of examined lathe is being shown on fig. 1.

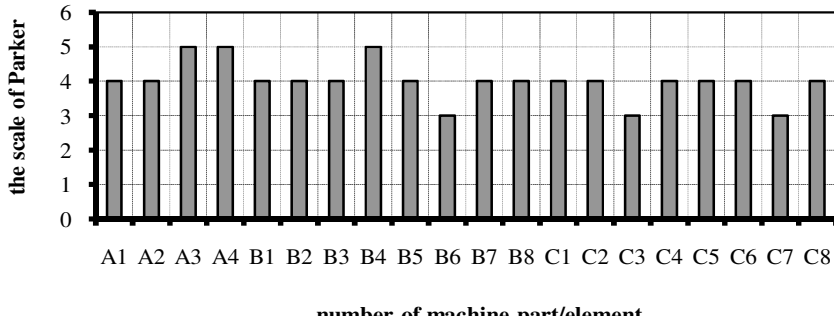

Fig. 1. The modernisty level of the lathe CNC AVIA turn35.

Source: own study.

Parts belonging to individual subgroups, how it results from tab.1 and fig. 1, can be classified according to the scale of Parker, as follows:

- parts of A category are on the level 4 (50%) and on the level 5 (50%),

- parts of B category are on the level 3 (12.5%), on the level 4 (75%) and on the level 5 (12.5%),
- parts of C category are on the level 3 (22.2%) and on the level 4 (77.8%).

The research findings presented on fig. 2 are connected with modernity level estimation of milling machine CNC FNE50N.

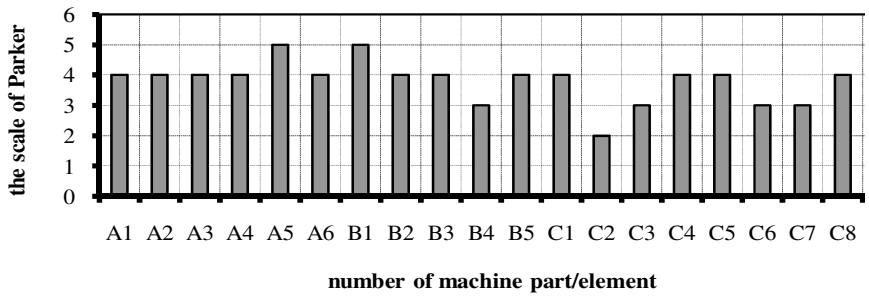

Fig. 2. The modernisty level of the milling machine CNC FNE50N.

Source: own study.

Parts belonging to individual subgroups, how it results from figure 2, can be classified according to the scale of Parker, as follows:

- parts of A category are on the level 3 (33.4%), on the level 4 (50%) and on the level 5 (16.6%),
- parts of B category are on the level 3 (20%), on the level 4 (60%) and on the level 5 (20%),
- parts of C category are on the level 2 (10%), on the level 3 (40%) and on the level 4 (50%).

4. Conclusion

As a result of analysis, carried by the ABC technology method using, it was stated that, 3 elements of the analyzed lathe are estimated on the level 3, 15 elements – on the level 4 and 3 elements are on the level 5. It was stated, on the base of made research, that all parts of lathe are located between 3 and 5 with level of the modernity in the scale of Parker. Elements, which are located on the level 3, have no influence on quality of processed elements. Analyzed lathe can be classified on rather high level of modernity (4), what means getting products of good quality.

As a result of analysis, it was also stated that, 13 elements of the analyzed milling machine are estimated on the level 4, 5 elements – the level 3 and 2 elements - the level 5. Analyzed milling machine, as analyzed lathe, can be classified on rather high level of the modernity.

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E-Administration as the Instrument for Facilitating the Task Implementation of the Local Government

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Abstract. Several recent years have brought a breakthrough in two important spheres: Poland has become an information society and Polish public administration has undergone the process of informatization. The information resources have gained a considerable importance and the ability to manage these resources properly has become a vital factor in creating competitive advantages. E-Administration in Poland still does not meet the expectations of Polish citizens as regards the possibility to handle their queries and deal with red tape requirements of municipalities, offices of the marshal, governors' offices and ministries by means of the Internet. The present article deals with the issues of NetReadiness for public administration and presents the actual state as well as future prospects for implementing e-administration solutions. Such implementations have become possible thanks to the absorption of EU funds acquired through government strategies and projects.

Keywords. e-government, NetReadiness, Information Society

1. Information Society

At the beginning of the 80s of the 20th century profound transformations caused mainly by the Information Technology and Communication Technology development took place. Those transformations created electronically communicated market. This market development facilitated appearance of specific groups of demands for particular Telecommunication and Information and Communication Technology services which contributed to strengthening those transformations. The industrial civilization age started giving up its place to post-industrial information civilization whose main element is global information society. In highly developed countries a Knowledge Driven Economy development can be noticed, where the knowledge factor plays the main role [1]. Its main determinants are: treating information as an economic good (property) and capital, Information Technology universality, creating different distribution channels, free information circulation in a society achieved by the science of education of a peculiar status and high contribution of information sector to the creation of Gross Domestic Product, Fig. 1.

[1] LUBACZ, J. *W drodze do społeczeństwa informacyjnego*, Ośrodek Zagadnień Społeczeństwa Informacyjnego Instytutu Problemów Współczesnej Cywilizacji, Warszawa, 1999

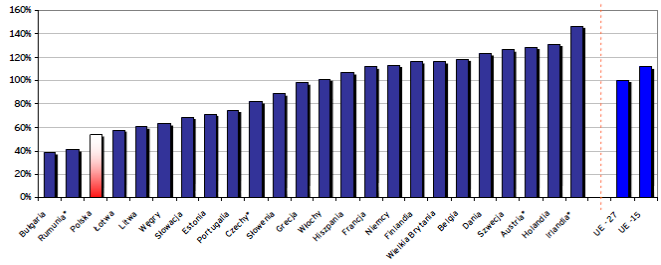

Fig. 1 Gross Domestic Product per capita as a percentage of the European Union average (2007)

Source: Eurostat 2007

Newly emerging information society is characterized by developed means of information transformation and means of communication which are the basis of domestic product and the source of income of the majority of society. In such a society we can observe the increase of efficiency of the information resources management, thanks to the processes of compatibilization of the Information and Communication Technology (telematics) infrastructure [2] Information Society therefore, depends on the majority of information goods and services making up the crucial part of value added and it also depends on the condition of the most widely spread means of its transmission - electronic communication network.

2. The Development Condition of E-Administration in Poland

Information Society uses the information resources and Information and Communication Technology solutions in a particular way for the benefits of managing them in an effective way. In the case of public administration such solutions are form of the interface between the citizen and public administration in order to make an office-citizen distance smaller, citizen-oriented actions, improving the qualities of services provided and social awareness [3], making the procedures easier, improving efficiency of the number of applications considered. The solutions mentioned above make up only a part of the wide spectrum of benefits from the process of implementation and application of the Information and Communication Technology solutions in e-Administration. The report worked out by the Organisation of Economic Co-operation and Development: "The e-Government Imperative" concentrates on:

- improving efficiency of state administration function ,
- improving the quality o services provided,
- increasing the efficiency of state social police and support in the reforms execution,
- economizing on administrative apparatus,
- stimulation of society transformation into information society and building the mutual trust between the administration and the citizen.

Although the benefits from implementing electronic public services are visible, the level of development advancement of those services in Poland against the background of EU -25 countries reached 53% in 2006 (at 75 % in 25 EU countries). Despite apparent backwardness of the e-Administration in Poland (as regards the expenditure on offices' informatization and the number of e-services available) however, there is a progression of almost 36% compared to 2004.

[2] GOBAN-KLAS, T*: Media i komunikowanie masowe. Teorie i analizy prasy, radia, telewizji i Internetu,* Warszawa-Kraków, 1999

[3] http://ec.europa.eu/

Due to the lack of possibility to create a homogenous e-Administration solution for EU member countries and comparing the degree of their implementation, the European Commission recommended 12 the most needed, in their opinion, services for citizens and 8 for business. The CapGemini level of service development research conducted (according to 5 - degree CapGemini assessment scale) showed that before the year 2004, the degree of e-service popularization in Poland oscillated at the information level [4]. Although the prevailing majority of public administration offices achieved the information level, the development of transactional services remains still at a low level. This is mainly caused by the necessity of internal procedures implementations, modification or change of legal regulations, the necessity of new standards implementations, state register and data base integration, low level of investments in information technologies, which in 2005 amounted to merely 113 EUR compared to average value of 648 EUR for 25 EU countries [5].

The crucial quality change of the quantity of ICT solutions implemented in public administration took place in Poland at the end of 2006 thanks to the State Informatization Plan worked out for this year in August 2006. The fact that State Informatization task was carried out resulted from previously binding strategic documents, among the others: the Republic of Poland Informatization Strategy - e-Poland for the following years: 2004-2006, the Plan of actions for the benefit of electronic administration: e-Goverment for 2005-2006 and the period of structural funds programming for 2004-2006 [6]. As a result of works aimed at building information infrastructure of public administration, the coherent sector and trans-sector information on-line systems were created in state as well as European scale, among the others: e-PUAP (Electronic Platform of Public Administration Services), CEPiK (Central Record of Vehicles and Drivers), e-PORTAL, PESEL-2, e-Tax or TREZOR.

The turning point in e-Administration services development in Poland, was the year 2007 when on March 28th the Council of Ministers passed a Decree concerning Informatization Plan for the forthcoming years: 2007-2010 [7]. Reduction of Poland backwardness against the background of the other EU countries requires a strong financial support. Implementing of the State Informatization Plan for the following period: 2007-2010 assumes the budget of information Project amounting to: 2.5 billion Polish zlotys, and for the period 2007-2013 a budget of over 3.5 billion Polish zlotys. Apart from the above mentioned expenditures on information systems implementations and information society development the European Union grants are the crucial element, because they enable us to absorb the sum of approximately 4 billion EUR during 2007-2013.

On the grounds of CapGemini research results and the data from Eurostat company report, it can be found, that against the background of the remaining EU countries, Poland is characterized by weak development of e-Services. The obtained 25% level of their availability (the average availability level in EU countries is 59%) places Poland on a distant position, Fig. 2.

[4] Strategia rozwoju społeczeństwa informacyjnego w Polsce do roku 2013, MSWiA, str. 50, 10.2008
[5] Rozporządzenie Rady Ministrów z dnia 1.08.2006 w sprawie planu informatyzacji państwa na rok 2006 (Dz.U. z dnia 18.08.2006)
[6] Ibid
[7] Rozporządzenie Rady Ministrów z dnia 28.03.2007 w sprawie Planu Informatyzacji Państwa na lata 2007-2010 (Dz. U. nr. 61, poz. 415)

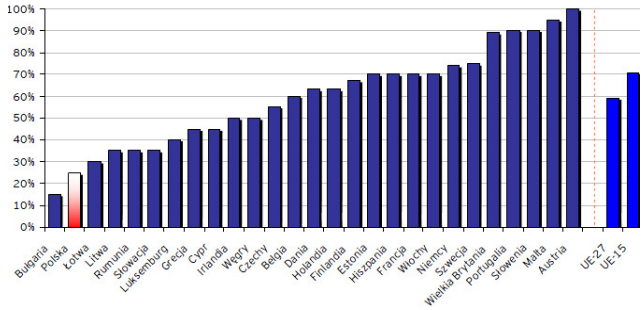

Fig. 2 E-Services: availability of 20 basic public services (2007)

Source: Eurostat 2007

After the analysis of the obtained results we come to the conclusion concerning a low degree of the Polish society's preparation to use e-Services. We can propose a thesis, that technical culture of the Polish society aspiring to be called e-Society, is still very low.

The citizens' awareness as regards the degree of e-Services availability, is also very low. According to Eurostat, the degree to which Polish citizens use e-Services is only 15 % (in the most developed countries such as Denmark, Holland, Sweden, this degree exceeds 50 %), which places Poland on one of the last positions, Fig. 3.

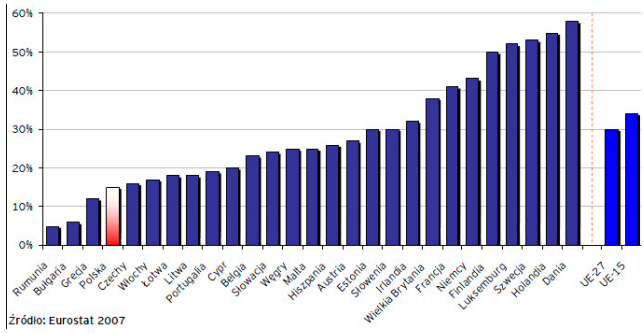

Fig. 3 Percentage of citizens using z e-Services (2007)

Source: Eurostat 2007

3. Conclusion

Information plays a key role in the emerging e-Society. Its significance for the development and improvement of public administration functioning cannot be questioned. For many years now Poland has been trying to minimise the backwardness with regards to e-Services development in other EU member states. Some activities have already been started to prepare the e-Services development strategy (e.g. State Informatization Plan for the years 2007-2013) and to increase the level of their concentration. However, there still remains a great number of issues to deal with such as social awareness, technological culture or legislation conforming to the new ways of functioning of public sector units.

The present article does not give a full picture of the situation because of the dynamics of changes occurring in this field. Thanks to the State Informatization Plan we should expect further improvements on the market of e-Services in Poland and the change of the image of our country as compared to other EU member states.

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Analysis of the Opportunities of Building a Private Highway Infrastructure, SR

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Abstract. The article is about fundamental aspects of proposed study opportunity for private highways project in Slovakia. The analysis map where the contents are describing five main pillars which push the investment project to the next stage (pre-feasibility study) of the investment decision process. The decision in the opportunity study is mainly based on definition of project mission, definition of the legal aspects and related institutions, overview of economics indexes, definition of target groups and decision for transport way in country. All the points are described and explained how they impact on the decision in the next stages.

Keywords: Long-term investment decision, highways, private highways, opportunity study, investment decision.

1. Introduction

The purpose of this analysis should be a fuller explanation of the basic ideas and to define certain conditions that are necessary for making the next model variant assessment of investment projects of building a private highway infrastructure linking to the preliminary techno-economic study of the project. Analysis of the primary and says whether the project a chance to realize, this is the reason why this study should be inexpensive and relatively brief.

2. Model of analysis

The following text is devoted to more detailed characteristics of each of five points, which is to be managed for the transmission project in the preliminary technical and economic studies and techno-economic study.

a) It is first necessary to define the investment project:
This point is crucial, because it derives from answers to other points in the structure, depend on the particular institutional, legislative framework, the definition of groups of potential customers, etc..

Intent and mission is to build a highway or expressway infrastructure from private sources, the availability of which to the extent required, is an essential precondition for investment decisions. The motorway communications should be provided to all road users, which is allowed for ordinary highways, expressways and roads. Infrastructure should be charged tall from the individual user depending on the number of kilometers of motorway corridor used by the participant and the type of car, up to 3.5 tones, exceeding 3.5 tones of car, etc..

Length of life of the project is not yet known, it is heavily dependent on the period of reimbursement paid to a particular section of the motorway network, the estimated rate and set tolls.

However, at present the life of projects ranging between about 30 to 60 years. But life is more communication varies depending on the technology used from 100 to 200 years. It is necessary to deliver that insight to this point is significantly different from traditional infrastructure projects, building highways, where they are based on public interests, whether the structure of the Helsinki corridors and the like. States in building highways and expressways road sets significantly different mission and therefore defines the whole idea of strategy other than commercial projects.

b) The competent authorities and legislation

This should serve to map the offices and institutions, which have competence in the decision on implementation or rejection of the implementation of an investment project. It is important to note that this structure would not be particularly detailed, but it is useful to focus on the peak corresponding to actual decision-making bodies. In this case, in particular:

- Government,
- Ministry of Transport, Posts and Telecommunications,
- National Highway Company, a.s.

The same hierarchy is appropriate to take in the mapping of the legal framework should be to act again on the gross structure, which addresses issues of fundamental nature, in particular in connection with the mission and vision of the whole project of building a private highway infrastructure to serve the following purposes:

- Commercial Code,
- Legislation relating to the environment,
- Building Act,
- Legislation relating to the expropriation of land under the communication
- Statement by the Government on the structure of highways and fast roads in Slovakia
- Conditions of competition...

c) Analysis of basic macroeconomic indicators, the country where the project.

In this reflective stage venture investing in building a private road infrastructure should focus on the analysis of time series of individual macroeconomic indicators and their trends, they may be:

- overall rating country,
- Gross Domestic Product,
- unemployment,
- the value of exports and imports,
- Foreign direct investment (FDI),
- political climate.

Currently, the world struggles with the problems arising from global financial crisis; it is very difficult and highly risky to invest in new projects. Some of these macroeconomic indicators are also analyzed in the next stage of the investment decision-making process.

d) Initial routing private highway infrastructure.

The basis for the initial selection of routes is the Government's Policy Statement on the proposed structure of the building toll roads and expressways in the Czech Republic, which are available from the information provided by National Highway, as. This provides information on projects and sectors, which are prioritized and addressed in the medium or long term. No, despite remaining divisions, which will not be implemented even in the long term (approximately the next 30 years), but was postponed indefinitely. Country only roughly outlining some routes that should arise on the basis of supporting the technical-economic analysis. And in this moment the space for the anticipated profitability and efficient allocation of private sources of funding through the "filling gaps" in the market, in the form of satisfying the demand for fast, safe moving, the toll roads for quality and cost competitive, as the State cannot ensure that the construction of its resources. Selection of "serious" route should be set so as to provide security to reach (to attract interest) providing services to the widest possible group of road users and in number, but also positioning. The idea should be focus on the customers from abroad, which would thus provide a rapid, safe and cost-competitive transit through our territory, or to a place in Slovakia.

Another fundamental assumption is satisfactory connection to the international network of expressways and toll roads.

In connection with the "thick traces" associated issues sufficient capital resources to finance the project, its construction, but also service, it is necessary to know in advance, with which financial resources can be envisaged in the implementation of the project alternatives.

e) Definition of road users, "Customers" private highway, or highway:

Motorway communication should be geared for all road users, which allowed entrance to the road of this nature under the Act 315/1996 Coll Traffic on the roads. From this perspective, it is possible to divide the road users to communicate by considering the following categories:

- A vehicle with a height up to 2 m total weight to 3.5 t, with or without a caravan or trailer.
- Vehicles with a height in excess of 2 m, not exceeding 3 m, and total weight not exceeding 3.5 tone vehicles in the first category carried caravan or trailer with a height between 2 and 3 m
- A vehicle with 2 axles and a height of 3 m and more, or with a total weight of 3.5 t
- A vehicle or combination of vehicles with 3 or more axles, with a height of 3 m or more with a total weight of 3.5 t.
- Motorcycles.

3. Conclusion

It is essential to know the location and outline of these various groups of road users, which should be designed to use a highway or speed communications, as this knowledge will be playing in the estimation of revenue from tolls over the choice of communication service. Reasons of the foundations of the project up from the basic commercial principles - making the company's value through the investor to meet the needs of customers (competitive with highways already built a functioning public infrastructure), the rate of return on embedded capital resources, it is necessary to focus on areas with the largest population, connecting economic centers, which is caused by the need for relocation of people to work and so on. It is essential to reach the needs of potential customers on an international scale.

Support for the development of analysis can be particularly work with a number of Macroeconomics, trade and sectoral trends, data on the living standards of the Czech Republic, GDP growth, investment analysis prepared on the site where it is intended to build such communications. However, these figures are dependent on the results of the previous step, "gross routing 'infrastructure.

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Prediction of Cash Flow in Pre-feasibility Study of Projects Build Private Highways 2009

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Abstract. This article is trying to find good solution for the most difficult problem of the maybe all projects which is under investment decision making process; it is to estimate positive cash flow of the project. In this case it is else more difficult because of the long-term feature of the project. The proposed methodology of simulation is orientated on the project which built private highway, motorway infrastructure. The all process is based on the pre-feasibility study of the investment decision process of the private companies consider to build highway communication without any participation of state.

Keywords: highway, investment decision, PPP, public private partnership, pre-feasibility study, simulation, revenues from toll collection, long-term investment.

1. Introduction

One of the most important input values that are needed for the calculations of indicators of economic analysis or economic return on the project of building a private highway infrastructure is in calculating the expenditure statement of income from toll collections, renting of commercial areas around communication and the like. Revenue from the choice of the toll may be calculated only if the information is available about the estimated exploitable communications. This need arises from the fact that the calculation of various indicators of economic analysis is necessary to know the project cash flow in each period, the estimated life of the project. To calculate the cash flows it is necessary to know the estimated revenue and expenditure for each project implementation period and operation of the project. This article is based primarily on the issue of expression the basic parameters, which are an expression of the applicability of the projected private highway infrastructure, in other words, estimate the number and structure of cars that will use the infrastructure built highway of which can be deduced from the income of tolling.

2. Required information for simulation model

For the proposed model of estimation of positive cash flow in advance, it is necessary to know how many cars will use the communication according to a pre-defined groups of road users. Because each group is otherwise charged, for example, a passenger car pays less than the bus. This information is of great importance for the subsequent economic analysis projected motorway communications.

Not less important information, the number of miles that the car passes after the communication, it is clear that if a user enters only 10 km will be much smaller toll than

another, which has passed through the entire section of highway built in the communication length 100 km.

To estimate the structure of road users and the number of kilometers traveled for each car for the road. It is not possible to precisely express the example, neither the statistical observation that, how many kilometers the car passes the partial path, it is necessary to bring the simulation algorithm of randomization factor. This simulation will provide accurate information, indicative only. Of course, the generated pseudorandom numbers must be obtained under the influence of the statistics, for example, the structure of road users in the region, the number of kilometers traveled in a partial route or exit numbers built. Another fact that the subsequent economic analysis will be necessary to estimate the revenue from the choice of a toll for longer period of time ahead. It is talking about tens of years. Pseudorandom numbers are adjusted for the simulation of the estimated trends and statistics of the previous steps of the algorithm, estimates of revenue highway infrastructure projects.

3. Simulation

Simulation needs to be done for each of the years, semesters or quarters. Specifically it would be the use of this simulation for the individual month; it is possible to calculate with greater seasonal fluctuations in the speed of the journey between the months of the year. It is assumed that in December will probably be less revenue than in July or August, when is the summer holiday season. This entire procedure is needed for 30 to 40 years ahead.

In today's turbulent economic environment, the random effects act relative to the conduct of the majority occurring in models of real processes.

From a technical analysis is to identify the number of cars per 24 hour indicator of traffic for each sub-sections of the route variants.

From the statistics of organizations dealing with this topic is impossible to ascertain how the structure of cars recorded in the previous statistical findings on the territory, which includes the site where the decisions on the design of a particular sub section of the route variants highway infrastructure.

Another important parameter is the period for which the simulation is done. It is necessary to determine how many years in ahead will be a simulation of the economic analysis of return on the project since it depends interval "milestones" simulation. As the analysis will focus, which is in such projects significantly likely, for several decades ahead, then it is appropriate to establish such a simulation for the annual interval. Only for instance: Motorway communication is being built with a planned useful life of 100 to 200 years depending on the technological design and materials used.

It is necessary to analyze all the information and create intervals, which are classified into different randomly generated numbers. These intervals relate in particular to the types of cars and the number of miles that the vehicle is spent on considering the speed communications. Information is essential for the calculation for the performance of the revenue from tolls and subsequent selection of the evaluation of economic return path test variants.

When it is appropriate intervals based on the statistical examination of competent authorities, or even its own statistics of simultaneous communications. However, statistics fail to address the situation, for example, when considering the construction of the motorway section, which is geologically diverse and challenging, it is unlikely that such communications pass through the same structure of road users, as would have been in road communication, which relaxed the initial geological diversity of the surrounding environment, highway infrastructure. Therefore, it is preferable to resort to use the aggregate statistics on the

structure of road users. It is therefore necessary to calculate the coefficient of the percentage representation of individual groups, which are defined in the previous analysis of opportunities and then calculate the cumulative percentage frequency of each factor group and the individual cars of the simulation can be classified in different ranges for each period of simulation.

Thus, it is needed for each partial path separately. Consequently, the information found by integrating the representation of different users groups specific variants of routes, as indicated in the table below the text.

4. Conclusion

In conclusion, it would be appropriate to summarize the final data will be important for the expression of the cash flows that can be expected in the years of operation, set up a private communication and highways such data will have a decisive influence on decisions on acceptance or rejection of the whole investment project and the calculation of indicators financial analysis considering projects. Just details of the revenue will be key in the economic analysis of the project.

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Selection of Variant Routes

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Abstract. This article is aspirate to find a solution how to evaluate the variant routes in the long-term investment decision process in project build private highways and motorways. There is trying to add to the decision making process a commercial point of view, which is the most important for the private investor. That is what differ investor attitude of state and private company. In the article is proposal to base the decision on the two different indexes. First index compose from the information about mainly technical information about rout, which reflect on the potential create operation costs. Second index is composes from information about economic and demographic information reflected a potential to use the communication and gain revenues from tolls during operation period.

Keywords: Highway, investment decision, PPP, public private partnership, pre-feasibility study, revenues from toll collection, long-term investment selection of variant routes, variant routes.

1. Introduction

The whole process of selection of variants of routes is designed to entail the following three areas:

- Analysis of variants routes
- Preparation of data base
- Evaluation of variants of routes followed by selecting

2. Analysis of Variants Routes

In this step, it is necessary to build in particular made the technical part of the phase pre-feasibility study. This technical is usually done before the economic study, whose task is to review the various technical solutions for the roofing project, presented the strategy depending on the economic return and efficiency of the variants of the project.

To analyze the solution of the individual routes, so that it is possible to define all the routes that are assigned to account for their implementation and that could be shifted to other decision-making "round," is offering graphical model. This problem is meaningful and easier to solve other than by this method, since it would be necessary to modify some complicated solution to the basic model assumptions. The only information that should be the result of this analysis is the number that says how many there are potential routes and the exact specification of where these paths lead from which alternative sub-sections are composed. Therefore, it is the easiest method and the most obvious "decision tree", which very quickly and easily able to resolve the task of analyzing potential routes.

- It is also necessary to add that in most cases it is not too many options for linking the two key points of highway infrastructure.

3. Preparation of an Information Base

For delivery of the investment decision-making process is necessary to prepare and high quality and relevant information with the relevant data base with high explanatory capability. The structure designed with regard to the possibility of congestion duplicated or irrelevant information. Data for this part of the analysis is appropriate to divide into two basic groups. The first group is based on data on the route and the second group based on the environment path.

A. Details of the route

This data should come mainly from the analysis of technical assistance, which was involved in considering the various technical solutions and creating alternatives. Of course it is not possible to talk about the route as a whole, but divided on the individual sections of the route variants are built. And then for each field should be known for certain technical and techno-economic data. These include: first it is necessary to know the period (month and year), which is drawn up the study for review over the estimated price indices of consumer prices in the sector, the length of the section in kilometers to the nearest meter, the number of bridges located directly on the field, length of these bridges in the area, the number of bridges over a motorway, the length of bridges over a motorway, the number of bridges for crossing branches of the field to speed infrastructure for the length of the bridges crossing branches in this area, the number of tunnels, length of tunnels located on the highway system, the estimated price the whole field, induced investment project of building the expressway, especially the various transhipment has built infrastructure in network industries, and the rest of their price, number of crossings, ie the inputs on the speed of communication and speed of exit routes, the number of toll booths designed, this may not coincide with the number of crossings, it is possible that legislation will be made available in urban highway without toll charge for all road users, the number of pumping stations, the environment, for which conservation is necessary to carry out certain actions involving the applicable legislation. This might require investment from noise, dust, the installation of various technologies needed to measure the values pursued etc..

B. Data on the environment the route

The second group of data about the environment the route comes from several sources, not only of the other technical analysis, but also of public statistics or scientific studies and the like. For this purpose, are made available to the European statistical databases, national statistical database, whether to regional and urban and municipal statistical database. In particular, the data: a geographic surface, the number of inhabitants in the territory, which leads the segment of highway routes, population density per square kilometer, the intensity of traffic, number of seats, which are located in various districts through which the projected results and considering the speedway, number of municipalities, the unemployment rate index economic activity for considering the route of highway is the number of existing and operating businesses in the district. Is it possible to analyze these statistics and according to legal forms of business, size or turnover, etc..

This would be able to summarize the relevant data structure, since the individual data will create indices and weights are determined by means of the explanatory ability of the index.

4. Evaluation of Variant Routes

Evaluation of variant routes is a synthesis of previous preliminary technical-economic study. It is therefore to link the analysis of variants of routes and relevant data. For individual routes, it is necessary to divide these data into the same group. It is further desirable to count the variables for the whole route considered separately and this analysis separately. For example, the number of crossings on the entire route must be counted variations for all sections and the same procedure for the individual variables for which data are available.

If they are already assigned to individual sections within each variant, and the numbered routes, it is possible to start with the calculation of various indices and create a summary table where each variant path totals, whether simple or weighted average of individual indicators. And then it is possible to calculate the indices of these totals indicators such algorithms:

$$i_i = \frac{u_i - u_m}{u_m} \tag{1}$$

Where the index is the indicator for the optional route is the sum of parameters for the optional route is a minimum of Board totals of all indicators variants routes for the pointer. It is clear that the dimensions of such projects will be the very large numbers; it would be useful for the simplification and clarification to create a system of indices. Each sub-index calculated from the sum of the characteristics of the data path across variants. If you already have calculated indices for individual indicators totals variant route, followed by balancing of the various sub-indices, indicators species. The weights are allocated on the basis of experience and knowledge and consensus of expert team working on the project. In developing the weights, which speaks about the magnitude of the data and thus the criteria for deciding on the most promising route variants, it is necessary to consider the views of all departments that are involved and will participate in the design, implementation or operational phase of the project. Individual sub-index weights are allocated. Consequently, it is possible to count the indices I for the variant route, as well as for the race. Finally is possible to calculate the overall index of individual variants of routes as

$$I_c = I_t + I_{pt} \tag{2}$$

while

$$I_t = \sum_{i=1}^{n} v_i . i_{ti} \tag{3}$$

$$I_{pt} = \sum_{i=1}^{n} v_i . i_{pti} \tag{4}$$

i = 1,2 ... n

where I_c is the overall index of the path, I_{pt} is the index of the environmental variations path, I_t is the path index, v_i is the weight for the sub-index, i_{ti} is the sub-index of the path variable for the optional route, i_{pti} is part of the index path environment variable for the optional route, and **i** is an actual member of the sequence, **n** is the last member of the Council considering a sequence of variables.

Final step, the evaluation of variants is the selection of routes to one or fewer routes. This is dependent on how many variants to analyze the routes and what are the differences between the indices in the final order.

5. Conclusion

The whole methodology of the proposed selection of variants of routes provides commercial insight to deal with this specific part of the investment decision-making process. The methodological solutions to highlight in particular the criteria for potential income generation during the operation of private highway infrastructure project in view of the economic, geological and demographic characteristics of the environment, which is led by the variant route. On the other hand, the methodology deals with the potential for formation expenses during the operation of the project, various variants of routes.

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One of the most Important Core Functions of University Management: Establishing Complex Qualification Profiles

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Abstract. This article discusses the various functions instructors. The spectrum of the different roles ranges from the classical responsibility to impart knowledge to a position in which the instructor becomes the instructed. In this constellation, interaction and the instructor's presentation methodology are important. Because of these dynamic processes, there is an "automatic" tendency for conflicts to arise between the various functions instructors have. While treating students as equal partners implies a loss of power, students learn to reflect critically on pedagogical processes on the one hand and to take on responsibility on the other hand. Exactly this feedback harmonizes instructors' multifunctionality.

Keywords. university teaching, knowledge transfer, university instructor, qualification profile.

1. Moderation didactics in university teaching

There will be discussed work forms and concepts in this section that are in respect of presentation methodology and pedagogically relevant but little used that, however, could be easily integrated into present teaching arrangements.

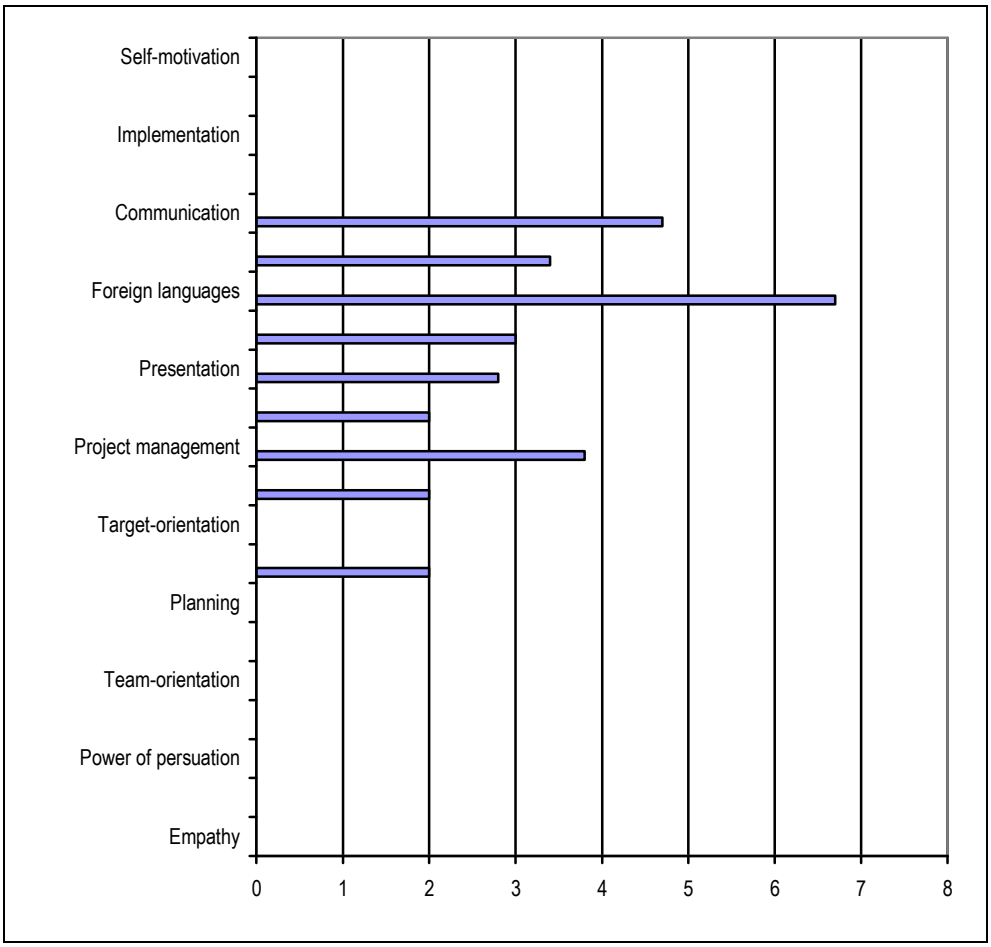
Both techniques result from experience in counseling, in which the integrative, two-sided communication model is natural. Less authoritarian, participative and process-oriented models for knowledge transfer should belong to instructors' meta-program. Active learning phases mobilize the complete perceptive and experiential abilities, especially visualization and thinking in scripts. Through active learning processes, creativity and sensitivity are fostered and social assimilation initiated. Participatory teaching methods transfer knowledge and competencies considerably more efficiently because individual participation decreases the distance to what is otherwise "abstract material". Fundamental here is the learning experience for practical, complex problem situations: intuition will be developed, experience brought in and results gradually generated. Integrative techniques also demonstrate to the student body that perfect results are realistically atypical.

Through "moderation" instruments, the common standard for culture and the individual standard for conflicts and feedback are open. Only dialogue forms can prepare for varying perspectives. Enabled through moderated structured experiential and learning phases, these processes develop key competencies, essential requirements for modern qualifications (this transfer technology, though, is also seen as material that is "uncomfortable, imperious and which must be actively coped with").

This departure from hierarchical knowledge models to complex and interactive problem and conflict solutions is only judged as alleged cause for university instructors' loss of authority. Knowledge transfer of presentation methodology will lead to a new paradigm for learning cultures – and thus strengthen the position of academic instructors.

Students but also future business, academic and social elite must learn to react to tensions, conflicts and differing norms, to train their emotional intelligence in social tensions and to qualify their own competence.

On the strategic level of educational aims and educational ideas, special import is given – in addition to professional and methodological competences – to training the will to succeed as well as tolerance, flexibility and creativity. One of the central responsibilities is, as elaborated, to qualify the student body through imparting and training key competencies in such a way that non-routine situations can be managed and controlled with learned capabilities and their own dispositions. Work and qualification demands can thus be adapted better and faster to technical-organizational changes, and the signs of change can be correctly decoded. The following empirical analysis clearly illustrates that the analyzed German universities are explicitly incapable of coping with the required expansion of students' key qualifications.



Tab.1. Average curriculum values on imparting key qualifications in business departments based on 69 tested (German) universities – data in course hours per semester week [1]

The endeavors to impart key competencies are obviously concentrated almost singly on the dimensions foreign languages, communication and project management.

Learning designs contain so to speak the "instructor's key competencies". All forms of presentation methodology have in common that they integrate visuality (holistic perception) and interactivity (active participation). Interactivity in teaching methods is so important because it is in a position to disperse the student body's "consumer behavior".

Teaching methods are collaborative if they can lead to teamwork: a small, social "micro cosmos of students" emerges in which self-awareness and a feeling for one's own limitations and potentials must be trained.

These learning designs continue from students' experience, in which the imparted know-how must be anchored.

2. Functions of university instructors

In both following sections, instructors' roles as well as functions will be discussed. These include, although partially implicit, the controlled abandonment of authority in independent learning, the development of maturity and the ability to cooperate as the most important teaching objectives as well as instructors' "programmed role conflicts".

An instructor is always a role model – a positive or a negative; consequently, student behavior reflects the lecturer. Reproduction and accumulation of a degree is no longer a teaching or a learning objective in the dynamic phase of postmodernism.

A methodology is to be applied through which common solutions can be developed. This requires a new model for professional knowledge experts that uses innovative pedagogical patterns and concepts of presentation methodology: these train dealing with conflicts, insecurities and challenges in a complex reality so that strengths and competencies can emerge [4].

Instructors must face these conflicts, which are typical for organizations in the post-industrial phase in which decision competencies and structures quickly changed themselves and partially dissolved. In pedagogically relevant situations, though, instructors' role conflicts offer the student body an opportunity to recognize that modern reality is potentially explosive. Instructors who treat the student body "differently" – that is, as fundamentally equal – thus demonstrate a renunciation of authoritarian positions. Consequently, the student body takes over responsibility within their learning processes. This adequate behavior and the feedback caused lead to students' perception of the problems [5].

Apart from that, the "image of the perfect teacher" would be virtually unrealistic and therefore less plausible for the student body. University instructors adopt rather passive roles when they function as work organizers: they observe processes and present in order to form students' own initiatives; the most important duty is thus to create a positive, experimental learning arrangement for the student body. A more powerful embodiment in the role of the "discussion manager" is to acknowledge the variety of presented blueprints and to present the most important arguments and especially counterarguments and controversies. The didactic objective is to demonstrate to the student body their own abilities related to problem-solving capabilities and to sharpen their comprehension that differing ideas can exist. Student expectations are – still – concentrated on the academic instructor's role to impart knowledge and expertise in the form of lectures, without the participation of the auditorium and without interaction. This "dogmatic speech" allows no arguments.

Against a backdrop of a "scientific community," it is an instructor's duty to evaluate students' solutions and which differences and similarities exist. An instructor's transfer is to

take over a mediation role so that learners have the opportunity to generate their own reference systems and to overcome language and cultural barriers. A new and personal comprehension of knowledge should be constructed through collective search processes. An individual access to material, information and tools should be inaugurated: no classic seminar can accomplish this. Pedagogically, the university instructor can directly and deliberately intervene because s/he can go on from the "feedback".

Academic instructors are active as "mirrors" when they create a reflexive learning culture in which conflicts are sensitively identified and touched upon, game rules are formulated and behavior is developed. Specific interaction processes (between instructor and student body) are effectively developed.

The role of the university instructor as "development aid worker" means that the student body's experience, contradictions and previous knowledge will be collected and tapped through brief, concrete and open questions. The instructor mutates as it were from a talking knower to a questioner. When students independently work on topics after central questions and theses have been given, then their instructors act as "coaches" because they only intervene selectively to give fresh impetus: competence and responsibility and thus the qualities of the result are in the student group.

It has been widely foreign for "university instructors to out themselves as learners". Admitting open points and insecurities is the opposite of incompetence; it is a behavior in a complex world that is comprehensible to the student body and proof of a scholarly curiosity. In the final analysis, learners are shown that there is neither an ideal world of formal models nor an instructor who has knowledge completely at their disposal.

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Management Introductions on Steering Project-Orientated Marketing Cooperations

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Abstract. Marketing cooperation processes on a project orientated base must be supervised intensively. In particular, as a result of different targets, deficient behavior and a lock of communication the success of cooperations are endangered. In this case the projects are divided in different phases to ensure through defined management steering directions the success of a cooperation.

Keywords: Cooperation phases, communication, management directions, Project management

1. Introduction

Cooperative solution strategies compensate for deficits in the value chain by grouping company resources such as technical know-how, personnel and finances. Under certain conditions, companies can acquire complementary expertise by cooperating and thus increase their flexibility and ability to anticipate situations. Furthermore, errors between companies can be reduced, the advantage of size can be used and any risks that might arise may be shared. Accordingly, there are many factors that speak for inter-company cooperation. However many of them fail. (cp. Theis, 1997, page 1). As cooperation is very much determined by personal interaction, problems which hinder collaboration can crop up at any time and thus can endanger the aims of the cooperation or even inhibit them. For a decreased appearances and the reduction of problem fields projects could be divided in phases and relevant management steering steps within each phase.

2. Relevant cooperation phases and controlling

In order to ensure that the knowledge gained is employed systematically, this dissertation examines the implementation of the previously mentioned topics in an integrated approach that considers the progress of a particular cooperation and goes into the detail of certain individual measures. Generally, each phase gives rise to the description of certain aspects of marketing theories and their characteristics. These refer to the ideal type of project phases:

- Composition of the project team
- Planning the cooperation
- Monitoring and leadership of the cooperation
- The end of the cooperation

The management control loop is another useful tool for steering a cooperation. By implementing the methodology in the collaboration between partner organizations and

controlling it continuously, the management control loop, which consists of principal goals, measures, implementation and evaluation, is closed at some stage in the cooperation process.

3. Activities based on the cooperation phases

3.1. Composition of the cooperation team

The cooperation team is the most important task administrator when managing projects. Keeping membership numbers to a minimum and ensuring members' skills are complementary (all the levels of the value chain necessary to implement the cooperation should be represented) are important key points.

Once the cooperation team has been assembled, it should elect a project leader, who is accepted and given authority to act by all project participants. The election of the project leader includes the definition of his/her responsibilities and competencies, as well as his/her organizational grade (cp. Pfetzing/ Rohde, 2001, p. 37). The project leader's tasks include:

- Checking the feasibility of the goals
- Structuring and co-coordinating the group
- Leadership of the group
- Responsibility for the planning, control, steering and information tasks within the collaboration
- Delegation of tasks and sub-tasks
- Assessment and continuous evaluation of the economic viability of the project.

Furthermore, the project leader should be a talented communicator, possessing the skills of social sensitivity, ability to sense how others feel, an antennae for what the other person is saying. Interaction and communication skills are also essential and a two-way awareness of behavior: what impression does the other person give, how does he/she appear to the other person him/herself? (cp. Litke, 1995, p. 224 f.).

The cooperation team, on the other hand, has the following tasks:

- Planning the cooperation
- Electing a project leader
- Independent completion of defined tasks
- Provide suggestions for improvements,
- giving early notification of malfunctions of delays.

3.2. Cooperation planning

Depending on the motivation and goal of the individual cooperation partners, there are a number of different configuration parameters which influence the cooperation and which should be clarified.

Configuration parameters	Form			
Resource	X		Y	
Cooperation orientation	horizontal	vertical	lateral	
Number of partners	Bilateral relationship	Trilateral/multilateral relationship	Simple network	Complex network
Duration	Short-term	Medium-term	Long-term	
Range	Regional	National	International	
Organizational scope	Partially function specific	Function specific	Spanning all functions	
Degree of intensity	Exchange of information and results	Co-ordinated division of labor	Collaborative approach	Organization carried by the collaboration
Relationship	Informal agreement		Contractual agreement	

Fig.1: Configuration parameters for a cooperation Own illustration, based on Nieschlag/Dichtl/Hörschgen (2002), p. 264; Zentes/Swoboda/Morschett (2003), p. 21.

The resource profile differentiates between X- and Y-cooperations. X-cooperations indicate cooperations in which the partner organizations pursue different activities. Y-cooperations represent partners with similar organizational profiles and activities (Rotering, 1993, p. 57 f.). As the cooperation group is composed of members from different organizations, planning should be undertaken by all members. The aim of planning is to gain information about the future (cp. Burghardt, 2001, p. 74 ff.). Fundamental planning consists of the following types of planning:

- Structure
- Capacity (who/what/which)
- Optimizations
- Dates (what/when)
- Capacity (who/how much)

(cp. Braehmer, 2005, p. 88).

- Time(who/when)
- Costs (who/which costs)

3.3. Cooperation monitoring and steering

Due to their complex nature it is impossible to fully plan cooperations. It is therefore inevitable that they need to be adaptable. The project leader is responsible for monitoring and steering the cooperation. In doing so, he/she needs to ensure that:

- Cooperation partners supply the necessary resources,
- Deadlines listed on the date plan and the time plan are kept,
- The necessary steps are taken to bring the project back into the planned timeframe and budget, if there are any deviations from the plan.
- The results meet the previously agreed quality requirements (cp. Meier, 2004, p. 93).

Monitoring should take place for the entire duration of the cooperation by using a target v. actual comparison. The intervals at which the monitoring of the cooperation takes place should be determined in accordance with the duration and extent of the cooperation. Intervals of four weeks are recommended for cooperations of long duration, one to two weeks for shorter ones (cp. Litke, 1995, p. 159 f.).

3.4. The end of the cooperation

The end of a cooperation must also be planned. Once the defined end of a cooperation has been reached, the following tasks still need to be carried out:

- Hold a final review meeting to discuss the cooperation group
- Is the achieved target satisfactory?

- How was the collaboration?
- Analysis of strengths and weaknesses of the cooperation
- Compile final report to record experiences for subsequent projects
- Formally relieve cooperation participants of their monitoring function.
-

As this refers to diagonal and virtual cooperations between organizations, the team is dissolved at the end of the cooperations.

4. Conclusion

The relevance of project management within a cooperation and concrete dedication of the supervising management is essential for the success of a marketing cooperation. A perfect management could be proven by the result of greater transparency, targeted and effective communication, the strong commitment to the jointly marketed project and a efficient and strong goal orientation. As soft facts in addition to the above mentioned phases are also named enthusiasm, solidarity and understanding of the integrated business philosophy of a marketing cooperation.

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Is Business Process Reengineering a Prospect During Depression?

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Abstract. One of the key conceptions of American economy and education is "*best practice*". Under this conception no secrets are meant and sought, but those things are adopted which are working perfectly elsewhere.
We would not either have other task to do amidst today's economic depression, than to copy those possibilities which ensure subsistence. Flexible organisations that are capable of adaptation, manage to find solutions in this period of depression, which, beyond their subsistence, may ensure their development. Social environment and corporate culture, of course, influence the efficiency of a business process reengineering project (BPR) to a great extent, and especially the employees implementing the program as well as their support may guarantee success, provided that the process is planned and managed deliberately.
Business process reengineering (BPR) is today the most actual issue among the corporate management strategies typically running for life.

Keywords: BPR (business process reengineering), key users, development RTEBP (Re-engineering Technology for the Effective Business Process).

1. Incremental Development or Radical BPR?

Instead of continual stepwise improvement measures with far-flung effects, in a sharp crisis or in the case of a chronic problem, or as a consequence of any inner organisation or impetus, despite the fact that it requires longer time and entails higher costs, as an alternative solution process reengineering is recommended which is aimed at good functioning, it is one-time, radical and for that reason affecting only few participants at the outset. Solution is found in business process reengineering (BPR), in setting out from an entirely new state, in a significant change with far-flung effects. Committed company managers must be able to firmly prescind from the currently effective practice and must focus their solution-centric consideration on the near, foreseeable future. (RAFFAI, 1999.)

Reduced cost level and shorter transit time; a system rapidly and flexibly conforming to challenging competition; the enhancement of employees' satisfaction; relevant information gathered during a profound survey of work processes and the possibility of achieving an improved quality standard consequently facilitate for undertakings, requiring effective innovation, the application of RTEBP (*Re-engineering Technology for the Effective Business Process*), that is the methodology of company management reengineering, in the course of crisis management projects. However it is essential to clarify that reengineering requires considerable expenditures on the levels of human-resource, asset and capital resources alike, thus it is not enough to seek the existing best practice and process, to set achievable and measurable targets, and to ensure quantifiable results. (HAMMER, CHAMPY, 2000.)

All fundamental and comprehensive BPR-projects, bringing radical and dramatic results, imply significant risks owing to the fact that they are time consuming, and due to organisational resistance, or an even actively manifesting lack of middle managers' support. A high-grade of specialisation characterising an articulated company with a hierarchical organisation structure as well as the costs emerging at the outset of the project (emoluments due to outsider advisors implementing surveys, a new IT system, training costs) may also be deterrent in today's growingly unsteady economic situation. That is why many experts emphasise that just for cost reduction purposes no process reengineering should be launched, but the objective is the development of long term rational organisational processes conforming properly to market requirements, and cost optimizing as a consequence of a more efficient operation.

Thus it brings revolution, improvement of scale, the establishment of processes adjusted to the varied customer requirements, which will result in the subsistence of a broad tier of well-qualified versatile generalists, who are capable of utilising their more extensive knowledge in particular fields if necessary compared to the generally greater number of specialist employees. This may, of course, lead to labour force reduction, which is the most preferred step for cost reduction in a period of economic depression, although without the restructuring of processes the remaining staff will be burdened with duties of formerly created functions.

Companies in a critical state, the stagnating but foreseeing undertakings and the companies still in market leading positions all apply the BPR projects for the resolution of currently existing challenges of economy.

Time-consuming process-analysis, data collecting, employee's capability and competence measurement and the subsequent training periods as integrated elements of the project are reasonably accordable with decreased work-time attributable to the fall in output of production. In cases when the company does not intend to reduce the staff substantially under the formerly required level despite the economic depression, the possibility is given for the execution of tasks related to the project. By all means, the staff-number will vary as a consequence of the newly introduced processes.

Two encouraging exemplary results: the 5-stage, 7-days' credibility consideration process at IBM Credit was shortened to 4 hours, consequently performance increased to 100 times higher; at Ford Motors Company the staff composed of 500 persons at account liquidation department was reduced by 75/ to 75% owing to process reengineering. (TENNER, DeTORRO, 1998)

2. Presentation of an Implemented Project

Considering the fact that BPR projects, beyond their proven effects on processes, have remarkable impact on employees (education, competences, job or function change or workforce reduction) as well, thus HR experts play essential roles in the project.

With a piece of luck they are involved in the whole process, and execute functions related to co-ordination and observation, and carry out surveys as well as the organisation of trainings, furthermore they undertake key roles in communicating changes.

In the following section of this article a BPR project implemented at the Hungarian plants of a food industrial corporation is presented, with the relevant HR functions in focus.

The company was established on several premises through the merger of several predecessor companies with completely different units as for processes, management systems and corporate culture. Therefore the creation of unity was inevitable, although for 4 to 6 years

preceding the BPR project gradual incremental synchronisation of the units had been in progress. However customer requirements, the competitive market and marker requirements along with continual changes necessitated a radical intervention.

Subsequent to an analysis on effective work execution and process implementation carried out at 16 logistical units, as well as at the related trade organisations and financial departments it was decided that it was not the production but the process of delivery (orders, shipment, invoicing, book keeping) which should be radically restructured for the sake of efficiency. The company management performed the survey along with the leaders and experts of functional areas in the framework of a status monitoring preceding a 3-days' decision making team meeting.

After setting the objectives, work was launched on two streams, one of which was the development of the IT system adjusted to the process and ensuring the newly required results with the involvement of outsider experts, while in the other stream the involvement of affected employees was commenced. As indicated above this article is designated to present the employee related tasks, thus the rest of this article is dedicated to the discussion of this issue exclusively.

3. Selection of Key Users

For the success of the project it was indispensable to "find" a group of *key-users*, who may influence both humanly and professionally the majority of employees, who are capable of communicating changes, and are able to provide operative assistance to the colleagues in the course of everyday work with the adaptation of and mastering the newly acquired knowledge.

After definition of the target group (staff at logistics, trade and financial departments) the communication, problem solving and conflict management competences and skills of administrators and leaders and of their deputies working at depots, as well as their positions, human and professional acceptance inside the organisational unit were examined in the form of a questionnaire based survey. The survey was jointly conducted by a consulting company and the HR staff of the company under review.

In the light of the results we selected 40 employees (possibly 2 persons from one area) to become so-called key users. They got acquainted with the detailed system relevant specifically to their areas (they were instructed by the company who has developed the system), and they were trained to communicate the changes within their particular organisational units and have the changes commonly accepted.

This process took place at the same time with the information and training of unit managers, for it was indispensable to propose the changes locally, and that they should have also deemed the appointed persons competent.

The target with the selection of key users was to have the possibly most profound knowledge regarding the processes and the system within their organisational units, and they were expected to provide assistance for others in solving any possible problems that may have emerged in the course of switch-over.

4. Trainings

To this end the next essential step was to provide the appropriate training facilities for the key users. They attended, first, an attitude forming training, the aim of which was to have the attendees accept the changes, and to prepare them for the proper communication thereof to others as well as to reveal their learning abilities, motivation, and improve common problem

solution, assistance, and the ability of accepting changes, etc. It should be highlighted here that even those employees were involved in the team of key users, who found difficulties in conforming to changes, and had really firm critical views. The objective was with this to achieve, through convincing them in this essential process, and in the course of managing their prejudice, that the communication towards people conforming reluctantly as well as the strategies of supporting and convincing would be in our hands.

Afterwards we planned training on communication and presentation, which was aimed at enabling the key users to instruct others properly on the system elements and the management thereof. We deemed it appropriate to split the complete documentation and description of the system into units corresponding to the organisational units as users. End users received the curriculum, that is, the subject of the instruction, including the parts of the documentation applicable to them so that the relevant part of the documentation was made by us interactive by supplementing the material with practical exercises and instructions. We selected 3 persons from among the key users representing the trade department who were introduced to the training methodology and management of the complete system, and who had contact with the employees of each department involved, whose communication skills were over the average and who possessed the ability of persuasion, thus their personalities and comprehensive knowledge enabled them not only to make the instruction but also to “supervise" the process in everyday work.

Elaboration of the process and training of the key users were followed by the instruction and training of end users by the key users and those trainers who were involved in the development of the IT system on how to use and operate the system on the basis of the curriculum created on the basis of the documentation.

The following issues arise related to the training, preparation/instruction and testing in practice:

- What preparation do key users need methodically in the light of the fact that a special field of presentation and information transfer – that is training on the usage of an IT system – is the aim?
- What trainings or re-trainings are suitable for the realisation thereof?
- Who should edit the curriculum for the end users? Either those participating in the development of the system, or the key users, or possibly a joint team?
- What professional management does this activity require in terms of methodology?

The following steps have been realised related to the trainings supporting the introduction of the new logistical-financial system and regarding the curriculum editing: 1. change and conflict management; 2. communication, learning abilities, assertiveness; 3. training for the preparation of trainers: presentation, basics of adult education, peculiarities of IT teaching in practice; 4. training for trainers: course-book methodology, breakdown of the curriculum, micro-teaching (peer teaching) practice.

Output of the first two training types:

- Preparation of the key users providing local assistance.

Selecting the trainers on the basis of the experiences gained and findings revealed during the two mentioned trainings, or the selecting of trainers on the basis of defining the number of trainers.

5. Syllabus and Course-book Production

Following the acceptance of the logistical model and the definition of job descriptions, the representatives of the outsider company producing the IT system and the related system documentation and the user’s manual created the syllabus. In compliance with the corporate

philosophy – for supporting the non-profit sector and education, and benefiting from the knowledge and expertise accumulated at such forums – and under control of the outsider expert company an organisation functioning in the form of association and the colleagues from the local vocational training institutions set out to work jointly. The editing of the course-book was commenced, and the syllabus was transformed into a lesson based training program with methodological instructions, and on the basis of this the trainer's guide was also produced. Continuous consultation was pursued along with the "top-key users" and the manager colleagues also involved in the training in order that the user friendly modifications assisting the training were possibly completed preceding the test period.

The test period was the training of key users following the production of the course-books, and perfectly worked out materials were available for the training of end users, along with properly "qualified trainers" and supporting partners.

6. Conclusion

The examining, the assessment and the measurement of results, as specified in the training program, became suitable for evaluation in the course of the two-month' test-period and the in-practice testing.

Owing to the capabilities of key users the transition was uninterrupted and appropriately supported. After developing the processes, the accuracy of case- and data processing and administration improved by 47%, while in the case of the management of receivables the improvement was 38%.

As a consequence of reforming the common attitude, communication between departments as well as with customers and suppliers, and the business relationship with partners improved and the trust was also enhanced.

It is also to be declared as a positive result that the employees who were either incapable or reluctant to conform to the system parted from the company voluntarily, and even among the external partners there were some who fell off the system (those who owed notoriously, those making orders under basic orders).

Becoming enthusiastic over the success and in the light of the potentials in the company the next step will be the RteBP developed for the production areas, as well as transformation of the administrative areas into a shared services centre.

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Quality Management Tools Applying for The Identification of Most Frequent Causes of Nonconformities in The Pressure Founding

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Abstract. In the chapter, quality management tools for estimation of pressure casting quality are applied. Appointed causes were subjected to the hierarchization by using the Pareto - Lorenz diagram. There were twelve main reasons: P6 – improper pressure pressing, P61 – wrong casting temperature, P23 – improper speed of piston, P58 - inappropriate temperature of metal, P31 - badly designed gating system, P21 – small strength of machine fault, P28 - complicated form, P30 - poor mould venting, P27 - faults of the form alcove surface, P11 - inappropriate form temperature, P26 – improper making the form, P53 – wrong taking out the cast out of the form.

Keywords: quality, pressure castings, Pareto – Lorenz diagram

1. Introduction

The non-ferrous foundry, established in 1985 in Silesian district, is the object of the survey. At first the company manufactured artistic casts basing the production on the copper alloy wasted wax method. Today the company is a private enterprise with a one-man management system and its work is based on the trade commercial low. The firm produces articles from aluminium, zinc and brass. Production of aluminium casts is basic of material AK 132, and AK 11.

The articles of casting institution are exported to countries of Europa: Great Britain, Germany, France, Denmark and Czech Republic. The main consignee are manufacturers of pumps, armature, devices, hydraulics, energetics, heating devices. 70% of all casts are export.

The pressure foundry delivers the products to many branch of industry:

- machine industry,
- shipbuilding industry,
- lighting industry,
- chemical industry,
- motor industry,
- articles of home farm.

The casts are prepared according to card of cast. The productive process of cast of shield consists with auxiliary and proper processes. Articles for pneumatics should characterize tightness. It causes rigorous requirements for auditors of quality. Articles are executed on cold - and hot ventricular machine, perpendicular and horizontal. Their strength of short-circuit from 100 to 900 tons. The casts from melts of zinc are executed on hot ventricular machine. The strength of short-circuit 50 to 250 tons. Detail from Z 41 alloy are designed to mechanism of the highest precision. Articles from brass are designed to decorative

units. The articles from brass are executed on cold ventricular machine. It's strength of short-circuit since 100 to 250 tons.

Quality of a product is the resultant of a great deal of components, i.e.: quality of a design, quality of a raw material as well as machine efficiency [1, 2].

2. Research findings and its analysis

The period of the research was 2006 year. Research were carrying out on the basis of the pressure foundry reports. Research findings concerning the level of the production and the level of products not fulfilling requirements were presented in the table 1.

Months	I	II	III	IV	V	VI
Production [t]	93,05	135,58	138,28	64,99	35,97	39,82
	VII	VIII	IX	X	XI	XII
	37,78	39,14	45,48	54,21	32,70	47,86
Nonconformities[t]	I	II	III	IV	V	VI
	3,18	3,82	4,49	2,66	1,12	1,21
	VII	VIII	IX	X	XI	XII
	1,01	1,65	1,38	1,64	1,10	1,58

Table 1. Structure of production and nonconformities in 2006 year

The production development in individual months of 2006 in the pressure foundry was presented in the figure 1. It results from this figure analysis, that the greatest level of the production appeared in first four months of the year (the January, the February, the March and the April). In order to show the relation between the level of the production and the level of products not fulfilling requirements, a incompatibilities structure in individual months of 2006 was presented in the figure 2.

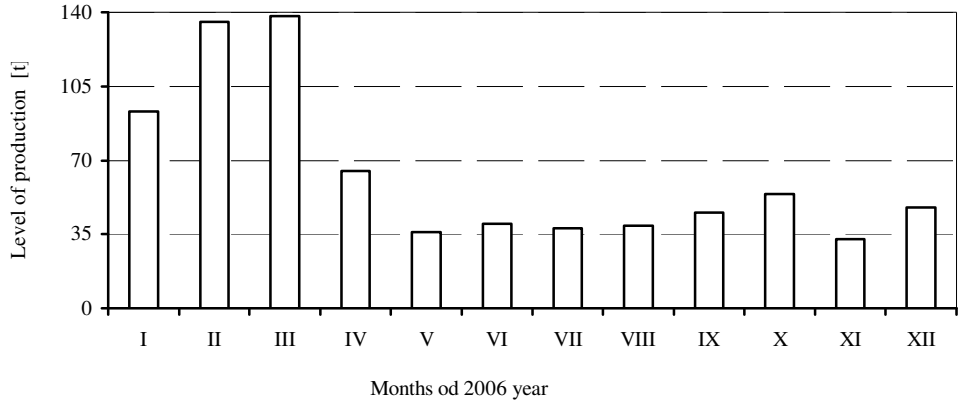

Fig. 1. The structure of production in individual months of 2006 year.

The figure 1 and 2 show that the level of products not fulfilling requirements is closely dependent on the magnitude of the production. The great level of the production in January, February and March cause equally great level of nonconformities.

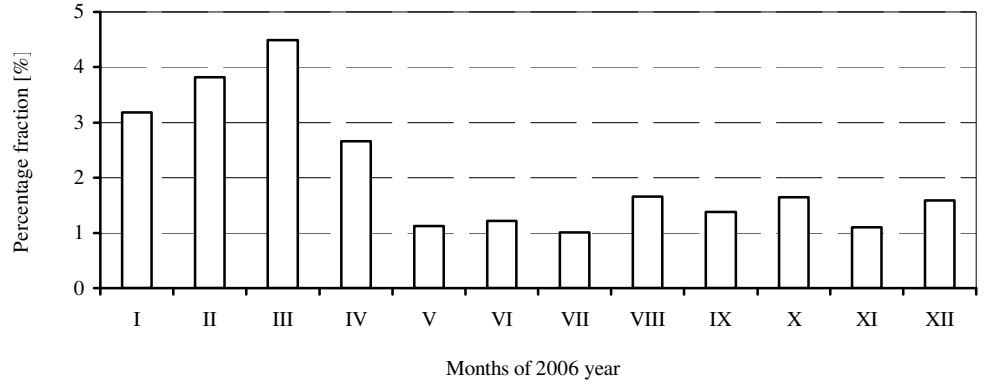

Fig. 2. The structure of nonconformities in individual months of 2006 year.

3. The structure of nonconformities causes in the pressure casting

The findings, get in the previous subsection, were subjected to the hierarchization for describing of the nonconformities reasons meaning (table 2). The Pareto – Lorenz diagram was used for destination mentioned above [3,4] (fig. 3). Pareto – Lorenz diagram is very universal instrument to analysis of quality level and hierarchy of identified nonconformities. Analysis orders data in respect of their quality and is based on assumption that 80% of lacks result from 20% of causes. It is organizational technique enabling qualification in direction of operations heading for product quality measurement improvement [5,6,7].

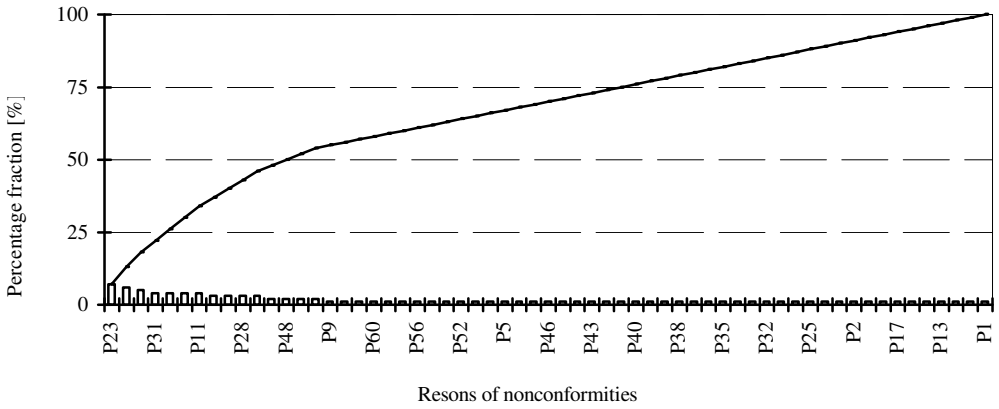

Fig. 3. The structure of nonconformities reasons in the pressure casting.

According to the Pareto – Lorenz diagram methodology saying, that the 20% of causes is responsible for a 80% of effects, 12 causes, which are responsible for the 46% of nonconformities, were identified. These causes are: P_6 - inappropriate pressure of the ironing, P_{61} – inappropriate casting temperature, P_{23} – inappropriate speed of piston, P_{58} – inappropriate temperature of metal, P_{31} – badly designed gating system, P_{21} – strength of machine fault, P_{28} - complicated form, P_{30} - poor mould venting, P_{27} - faults of the form alcove

surface, P_{11} - inappropriate form temperature, P_{26} – improper making the form, P_{53} – wrong taking out the cast out of the form. These causes are responsible for appearing of many nonconformities, in it above all too: misrun casting, fashes and blowholes.

4. Summary

Quality management tools for estimation of pressure castings quality were applied. Causes, which are the most frequent source of nonconformities appearing were appointed by the Pareto – Lorenz diagram applying, like: P_6 – improper pressure pressing, P_{61} – wrong casting temperature, P_{23} – improper speed of piston, P_{58} - inappropriate temperature of metal, P_{31} - badly designed gating system, P_{21} – small strength of machine fault, P_{28} - complicated form, P_{30} - poor mould venting, P_{27} - faults of the form alcove surface, P_{11} - inappropriate form temperature, P_{26} – improper making the form, P_{53} – wrong taking out the cast out of the form.

Examinations also showed, that the most higher number of products not fulfilling requirements come into existence in first three months of 2006. It results from examinations, that the higher number of nonconformities is bound with the higher number of the production. In three first months of 2006 a lack of production capacities of the unit connected with the increased use of machines and devices, wearing out is a main cause of the high of the disagreement of casting forms and with tiring out workers. The main cause of the higher level of nonconformities in the first months of 2006 is the luck of the production capacity connected with the increased machines and devices exploitation, wearing out of casting forms and with tiring out workers. It results from analysis, that misrun casting causes are connected with four areas: technology, construction, machine, material. Big pressure of press moulding, small strength of machine fault, too high speed of piston, construction, making the form or the state of the form surface are responsible for fashes. Causes of blowholes are in construction, machine and technology.

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The Concept of Value for the Customer

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Abstract: The paper deals with the problems of value functions and perception of transport user's utility, the theory of value functions and the value management function are described in it. Furthermore, the paper is focused on possibilities of value functions use including the possibility of utility use as the ground of the decision-making process.

Keywords: Cost of transport, user`s utility, value for the customer.

1. Introduction

One of the first versions of the concept [1] of value for the customer works on the fact that this value becomes an important category of the market economy, capable of playing not only the role of a reliable accuracy criterion of complexly based decisions of economic subjects on the demand side in the exchange process, that means products and services purchase, but also effectiveness of decision-making in all cooperation relations among customers. It fulfils also the role of the marketing concept of customer's value in a high quality and competently, and it comes up to expectation of the innovative concept of value for the customer as an effectiveness criterion reliably. At present the universal concept of value for the customer is completed as a consequence of influences related to processes of unique value co-operative creation with the customer, which emphasize the role of this market category as a conflict of customer's economic interests on the demand side and providers of products and services on the supply side even more.

2. Value Functions

In general expression the function in value management is explained as a mutual relation among the need and attributes of the object as a special-purpose system. Mutual linkage is depicted in the following figure 1.

The upper arrow indicates customer's requirement, what should be done, and the bottom arrow, what the product offers and performs in reality.

It follows from the characterization of the function as a mutually orientated relation among the need and attributes of the object that the function represents the ability or the expression of the action of attributes by that the object serves for meeting a certain need, at the same time. In this context the function represents, what the object can and what it does, on the one hand, and the ability of the object to meet a certain need through expressions of its attributes action, on the other hand.

Generally we can classify the object's functions according to quality and purpose:

- qualitatively defined object's functions are those that characterize the kind of its behavior that is conditioned and caused by qualitative features of its structure,

- functions defined through purpose are those that characterize object's behavior at its various purpose use.
- In value management therefore the product function plays a biunique role, namely:
- a heuristic role, when it is defined and formulated through an information about sense, purpose or behavior of the object, kind, character or nature of the need,
- a criterion role, when it becomes an important instrument for quantification of value for the customer in the universal concept by its figures of the function importance, the degree of its fulfillment and costs on its ensuring and use.

The function is a defined, existing, discovered or newly arising need and defined expression of a relative characteristic action.

Then we can say that every function is attended or specified by one parameter at least. Subsequently, the function specification can be understand as exact finding or expert determination of the value of parameters that attend every function, as quantitative description of its existence, or expression of a relative characteristic or a potential object action.

On the basis of the way and the possibility of quantification we can differentiate:

- exactly measurable parameter values,
- expertly determined parameter values.

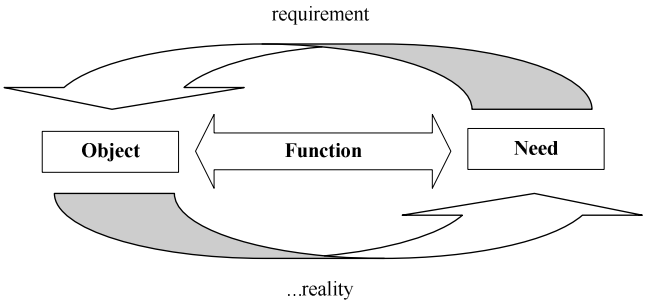

Fig. 1. Value management function (source: author)

3. Value Functions Use

Utility or utility effect is useful action of a given product's relative use property (characteristics). This utility or useful action is perceived by the customer as a certain extent of its needs saturation. In other words, utility that is its perception in the form of the extent of meeting customer's needs is the same as functionality.

For the differentiation of the category of perceived utility, functionality and subsequently its measurement as the extent of customer's need saturation it is necessary to emphasize that a product or a service are not useful themselves yet. They are only bearers of potential utility as mere ability, possibility to meet some need. In order to have a real utility they must be useful for somebody particular. They must find their consumers, a customer that longs for meeting his need through a given product or service. He will buy and use them. We can therefore say:

- utility is a subjective extent of meeting a need,
- utility or functionality don't exist themselves but they prove their existence only in the case that a need exists that can be meet by them,
- the measure of utility isn't in it itself but it lies outside it, namely in the category of the need. Utility is an ability of the object's to meet the need in a certain extent. In this qualitative or quantitative concept we talk about the extent of perceived utility, which is perceived or felt by the customer as the extent of meeting his need,

- utility (functionality) as an economic category consists of usefulness and quality.

Usefulness is necessity, reasonability and for the customer and the consumer also explicitly expressed importance of utility that is able to meet its need.

In our concept quality is perceived not only as the quality concerning the operating finish of utility characteristics of a given object but also as the technical or sophisticated level of utility characteristics and their attendant parameters.

4. Use in Decision-Making in Transport

4.1. Value of Functions Importance Determination

An integral part of value functions' weight or categories determination is which importance they are credited with by particular customers. In following lines there are simpler methodical procedures described.

- Method of functions importance expert evaluation

The basis of this method is the team members' expert opinion (estimation) concerning the importance of evaluated functions. An important aid for the quantification of the function importance coefficient (k_i) is the universal table of function importance fulfillment figures.

- Method of comparative numbers

At this method we must assign the value of the function importance coefficient $k_i=1$ to the least important function at first. The importance of the rest functions is determined by an expert estimation with the help of the coefficients through them we can express the proportion of the importance to the least important function. The advantage of this method is the fact that it respects different various interval distribution of the importance of particular functions and that this scale is not closed in advance and it can take any values. It is helpful especially if large differences in the importance of particular functions exist.

- Method of pair comparison

This method lies in gradual comparison of the importance of one function with the importance of the rest functions and in determination, which of them is the most important. Particular functions are entered horizontally and vertically in the same order into the table. The comparison of the functions importance is carried out according to the vertically entered functions. In every line there is always entered the number of the function that is more important in comparison with the function representing the column. Then it is necessary to count up in every line those cases, when the function with the same number as the line was determined as more important.

- Method of variance scale

This method, which is based on the calculation of standardized values concerning the functions importance (v_i), is used most frequently in value management practice. The standardized value of the function importance (v_i) can be calculated according to this relation:

$$v_i = \frac{1}{\sum_{i=1}^{n} k_i} k_i \qquad (1)$$

These methods offer the arrangement of the whole complex of functions according to their importance, including determination of main, basic functions and mathematical formulation of the non-standardized value of the function importance with the help of the function importance coefficient (k_i). For the reason of easier economic interpretation the non-standardized calculated values of the function importance are transformed into the standardized values of the function importance (v_i) with the help of the variance scale method.

4.2. Decision-Making Process of the Transport User

Utility as an economic term represents subjective sense of satisfaction following from the goods consumption. In economic theory the consumer who behaves rationally tries to maximize his utility.

Consumer decides what kind of consumption basket (that means combination of goods and services) he chooses. The choice, if it is rational, must always fulfil basic axioms.

For expression of utility in transport we can determine the utility function (2):

$$U\left(k_1,\ldots,k_o,n_1,\ldots,n_n,t_1,\ldots,t_m\right) \tag{2}$$

where k means comfort, n costs and t time.

Utility is represented by the optimum of the utility function (3) on condition (4):

$$U_0 = \max_{k_1,\ldots,k_o}\left(\min_{n_1,\ldots,n_n}\min_{t_1,\ldots,t_m} U\left(k_1,\ldots,k_o,n_1,\ldots,n_n,t_1,\ldots,t_m\right)\right) \tag{3}$$

$$k_l \geq 0 \quad \forall l \in 0\ldots o,\ n_i \geq 0 \quad \forall i \in 0\ldots n,\ t_j \geq 0 \quad \forall j \in 0\ldots m \tag{4}$$

The utility function could be further expressed in this form (5):

$$U\left(k_1,\ldots,k_o,n_1,\ldots,n_n,t_1,\ldots,t_m\right) = \omega_1\sum k_l + \omega_2\sum n_i + \omega_3\sum t_j + \varepsilon \tag{5}$$

where $k_1,\ldots,k_o$ mean comfort components, $n_1,\ldots,n_n$ cost components, $t_1,\ldots,t_m$ time components $\omega_1,\omega_2,\omega_3$ weight components and ε means subjective (error) component (inexpressible). Furthermore, it holds for the weight coefficients of the utility function: $\omega_1+\omega_2+\omega_3=1$.

In the framework of the decision-making process, we calculate optimal utility for particular variants or alternatives and through mutual comparison we choose that one, with the highest value of optimal utility.

Optimal utility for particular alternatives can be then expressed:

$$U_0^S = U\left(k_0^s,n_0^s,t_0^s\right) \tag{6}$$

$$U_0^{\check{Z}} = U\left(k_0^{\check{z}},n_0^{\check{z}},t_0^{\check{z}}\right) \tag{7}$$

$$U_0^{IAD} = U\left(k_0^{IAD},n_0^{IAD},t_0^{IAD}\right) \tag{8}$$

$$U_0 = U\left(k_1^0,\ldots,k_o^0,n_1^0,\ldots,n_n^0,t_1^0,\ldots,t_m^0\right) \tag{9}$$

road transport (6), railway transport (7), car transport (8), general combination of alternatives (9).

5. Conclusion

Recently also political point of view, which must be taken into account, comes into focus in modelling of the transport user's value functions and subsequently in their use in decision-making concerning the choice of transport system. Transport user's perception is also

influenced by the historical development; when e.g. a car is understand as a property form, not means of transport.

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Digital Factory as Tool for Projecting of Workplaces

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Abstract: These article deals about the Digital Factory as tool for manufacturing systems and single workplaces as a parts of manufacturing systems projecting. In the first part of the article we will describe possibilities of projecting in this environment - the first steps by project processing and in the second part of the article will described the possibilities of ergonomic evaluation of a working system, specifically in DELMIA Process Engineer and DELMIA V5 Human background.

Keywords: Digital factory, projecting, ergonomics.

1. Introduction – Digital Factory

Nowadays plants and companies must look for new concepts how to hold their position on market let us say how overrun its competition and satisfy demands of the customers. One of the newest tendencies is also Digital Factory. Nowadays it represents the most progressive approach to complex, integrated of products, manufacturing processes and manufacturing systems design [2].

Digital Factory is virtual presentation of manufacture, plant processes, products and resources in order to simulations and optimalization. This software is able to try out and reveal all problems and limitations of existing working system and to reveal and remove limitations and problems, which could be discover in still in no existing working system and then plan a preventive arrangements [1].

Is used especially in automotive industry environment, but also is significantly used in world scene industry like air, electrotechnical and health environment.

2. Modules of Digital Factory DELMIA

Digital Factory DELMIA is product of Dassault Systems Group company in Paris. We can divide its models in three areas: the first is analytic area, which uses the module DELMIA Process Engineer – it is a planning and analyses of processes and resources, the second part is DELMIA V5 – this module includes 3D modeling of products, resources and manufacturing processes. Third area is dynamic simulation environment which was designed and analyzed in previous both modules of DELMIA.

2.1. Project in DELMIA Process Engineer

By projecting of manufacturing system or simple workplace we must at first create a project. Project consists of three parts – Product, processes and resources – PPR Hub.

- Product – what is going to be manufactured – product and variants of product,
- Process – how is it made – technologic process,

- Resources – what we need for fabrication – all resources.

Fig. 1. Hub and Project structure in DELMIA Process Engineer.

The next step after the creating a project is filling information about the **product** – what kind of product is it. These are requiring information from producer. In a tree structure we will fill following data: product item, subassembly, part, raw material, auxiliary material. In every item we can insert its main characteristic in properties dialog. The product structure is arranged from assembly to smallest elements in a product structure.

In **process** part all processes which are necessary for manufacturing of product are described. The data are reached from technological process which given by producer. In frame of processes we create a process graph. It is visualization of complex assembly sequence.

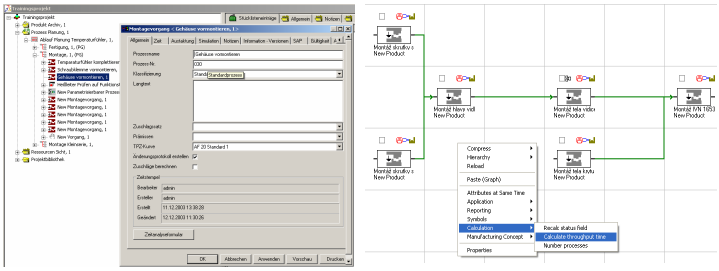

Fig. 2. The tree structure of process and process graph.

The third part – **resources**, describes structure of organization of resources from a plant to workplaces. The workplaces are connected with all needed equipment like: machines, assignment, conveyers, containers, palettes and many others. In part of resources we create a manufacturing concept. It is graphic view of manufacturing system.

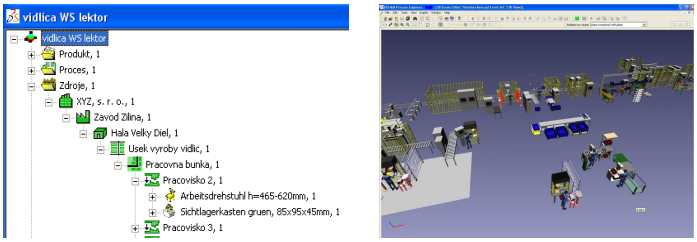

Fig. 3. Resource structure and the layout.

Next step after the resource processing is graphic editing. It titivates placement of items, machines and facilities. So is created gross layout of workplace (Fig. 3.).

2.2. Ergonomic Evaluation with DELMIA Process Engineer Support

After the creating of manufacturing concept is possible to make a detail ergonomic evaluation of a working system. In DELMIA Process Engineer is possible to perform ergonomic evaluation through two groups of ergonomic analyses:

a) calculation analyses - oriented on workstation dimensions, handling of loads and muscle loads and
b) checklists - includes questions concerning workstation design and equipment and working environment.

Within the framework of the calculation analyses it is detected, if is the workplace adapts to anthropometric workers dimensions, if gives out to overloading of the worker, which manipulate with load during the working performance, or which is resort to load of upper arm, hands and fingers on arm by workers, is this load unbearable, optimally or little.

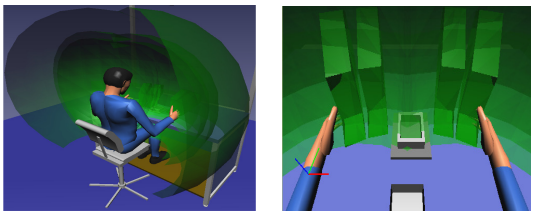

Fig. 4. Ergonomic evaluation of a reach range and angle of visual field of a worker

Checklists serve for evaluation of the workplace design, securing more convenient work on the workplace as well as evaluation working environment. Some analyses are oriented on the proposal of a computer workplace, choice of a work chair, form of a manipulation with load, workplace lighting, beating up of the manufacturing process, a health protection, etc.

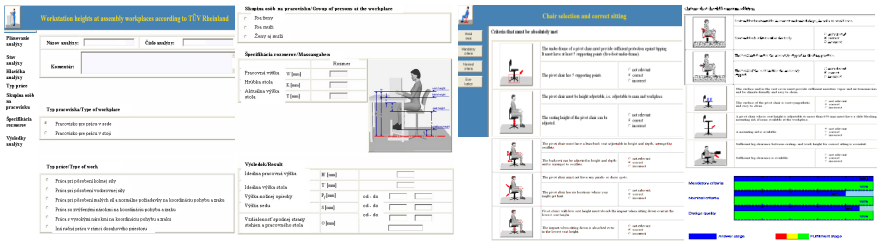

Fig. 5. Demonstration from calculation analyses and checklist

2.3. Ergonomic Evaluation with DELMIA V5 Human Support

DELMIA V5 Human features tool for a simulation of the human body at a production environment and factors which functioning on human. It makes possible to create specifically model of the human, set up his anthropometric facilities, create an animation of all working activities, reveal a collisions at the work, perform the load analyses (RULA, NIOSH, Snook&Ciriello,...) and the kinetic analyses also allows to model and simulate activities of the work.

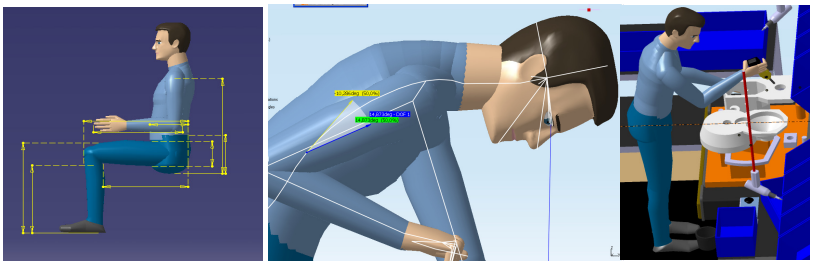

Fig. 6. Ergonomic evaluation in DELMIA V5 Human background

3. Conclusion

Digital factory brings many opportunities and high potential for improving processes, optimalization, shortening the process times, design of products and also will bring new area for improving quality and increasing flexibility of companies. The results of savings implementing of digital factory are summarized in CIM Data study:

Cost saving - reduction of property	10%
Areas saving - layout optimalization	25%
Cost saving - better exploitation of resources	30%
Cost saving - material flow optimalization	35%
Number of machines, tools and workplaces saving	40%
General cost saving	13%
General manufacture increase	15%
Time to market reducing	30%

Tab. 1. CIM Data Study.

Ergonomic evaluation in DELMIA Process Engineer and DELMIA V5 Human is given an information about it, if the working system is projected with respect of ergonomic requirement, safety and health at the work. This ergonomic evaluation is allowed precede all the possible problems right in the project stage.

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The Role of Marketing Communication in Transport

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Abstract. During the period from the beginning of the implementation of marketing communication in the management of transport enterprises to the present theory not only passed but also experience its own evolution in the form of new tools of marketing communication mix. There are innovative approaches to marketing, management and application of advanced information and communication technologies in society. It is apparent that as the market of transport requirements in a permanent development, is constantly evolving view of the use of marketing communication tools in companies of transport.

Keywords. Marketing, marketing communication, customer, transport service, management

1. Introduction

The efficient transport system is a prerequisite for sustainable development and prosperity by providing essential resources and mobility. Nowadays, it is necessary to deal with the application of marketing in the field of transport. The role of marketing in the transport sector is to create supply for transport services.

The issue transport services affect not only the service provider, but also the environment and all processes that support the provision of services. This raises the need for road transport companies to strengthen and extend the basic tools of marketing mix. Before reading on, stop for a moment and think about how you would define marketing.

2. Marketing activities

The American Marketing Association (AMA), which represents marketing professionals in the United States and Canada, defines **marketing** as the process of planning and executing the conception, pricing, promotion, and distribution of idea, goods, and services to create exchanges that satisfy individual and organizational objectives. [1] Marketing in the transport system is a process of management, which results in an understanding, predicting, influencing and in final phase to content needs and whishes of customer to meet the objectives of providing a transport company. [2]

Content of marketing is a system of interrelated activities and tools such as:

- analysis and prognosis of the development offer in the transport market,
- analysis and prognosis of development of the marketing environment,
- marketing research (customer behavior, competition, pricing, etc.),
- segmentation transport market,
- marketing planning,
- marketing audit and control,
- marketing mix.

The market must be analyzed through customer research, and the resulting information must be used to develop an overall marketing strategy and mix. Marketing mix is made of price, place, promotion, product (known as the four P´s), that includes people, processes and physical evidence, when marketing services.

The basic task of marketing is combining these four elements into a marketing program to facilitate the potential for exchange with consumers in the marketplace.

3. Integrated marketing communication

Marketing communications is promotion from the marketing mix. Integrated Marketing Communication (IMC) is a cross-functional process for creating and nourishing profitable relationships with customers and publics. The historical development of marketing and marketing communications has entered a new phase.

A task force from the American Association of Advertising Agencies developed one of the first definitions of **integrated marketing communications**: a concept of marketing communications planning that recognizes the added value of a comprehensive plan that evaluated the strategic roles of a variety of communication disciplines [1] – for example, general advertising, public relations, sales promotion, personal selling and direct marketing – and combines these disciplines to provide clarity, consistency, and maximum communications impact.

Now, these five basic elements are supplemented by other forms of marketing communications, for example: telemarketing, event marketing, e-communication, sponsorship. They must be integrated to present customers and publics with a consistent message, identity, or theme and to contribute to brand equity for an organizations.

The purpose of any form of marketing communication is to provide a set of information to target audience in a way that encourages a positive, or buying, response. Before the transport company engages in any communications program with its customers, it has to decide:

- What company wants to say
- Who company wants to say it to
- How to present its message
- Where to distribute its message
- When to send its message

4. Marketing communication in transport services

The role of marketing management is affecting the temporal and spatial distribution of transport means, which will help the transport company to achieve its objectives. The role of marketing communication in the transport services:

- ***Inform*** – a target audience by providing new information about a services, their time, place of transport services and forms of sale.
- ***Differentiate*** – The product of passenger transport (transport service) is characterized by transportation quantity, modes of transport, the distance of the communication, quality of passenger transport and additional services. [3]
- ***Feedback*** - The rapid growth of the Internet which is changing the very nature of how transport companies do business and the way they communicate and interact with customers. The Internet is an interactive medium that is an integral part of communication strategy.

- ***Focus on the quality of passenger transport*** – includes a set of indivisible factors: factor of traffic-organizational nature (security, speed, reliability, offer travel opportunities, etc.), factor of hygiene and traffic nature (microclimate, the quality of driving, noise in the vehicle, environmental impact, etc.), factor of traffic-operational nature (additional services). [4]
- ***Customer Relationship Management (CRM)*** – Today most marketers are seeking more than just one-time exchange or transaction with costumers. The focus of market-driven companies is on developing and sustaining relationships with their costumer. This has a led an emphasis on relationship marketing, which involves creating, maintaining, and enhancing long-term relationships with individual costumers. [1]
- ***Focus on the advantage of public transport*** – Public passenger transport is about 2,2 times less energy and much cheaper compared to 1,6 individual automobile transport. [5]

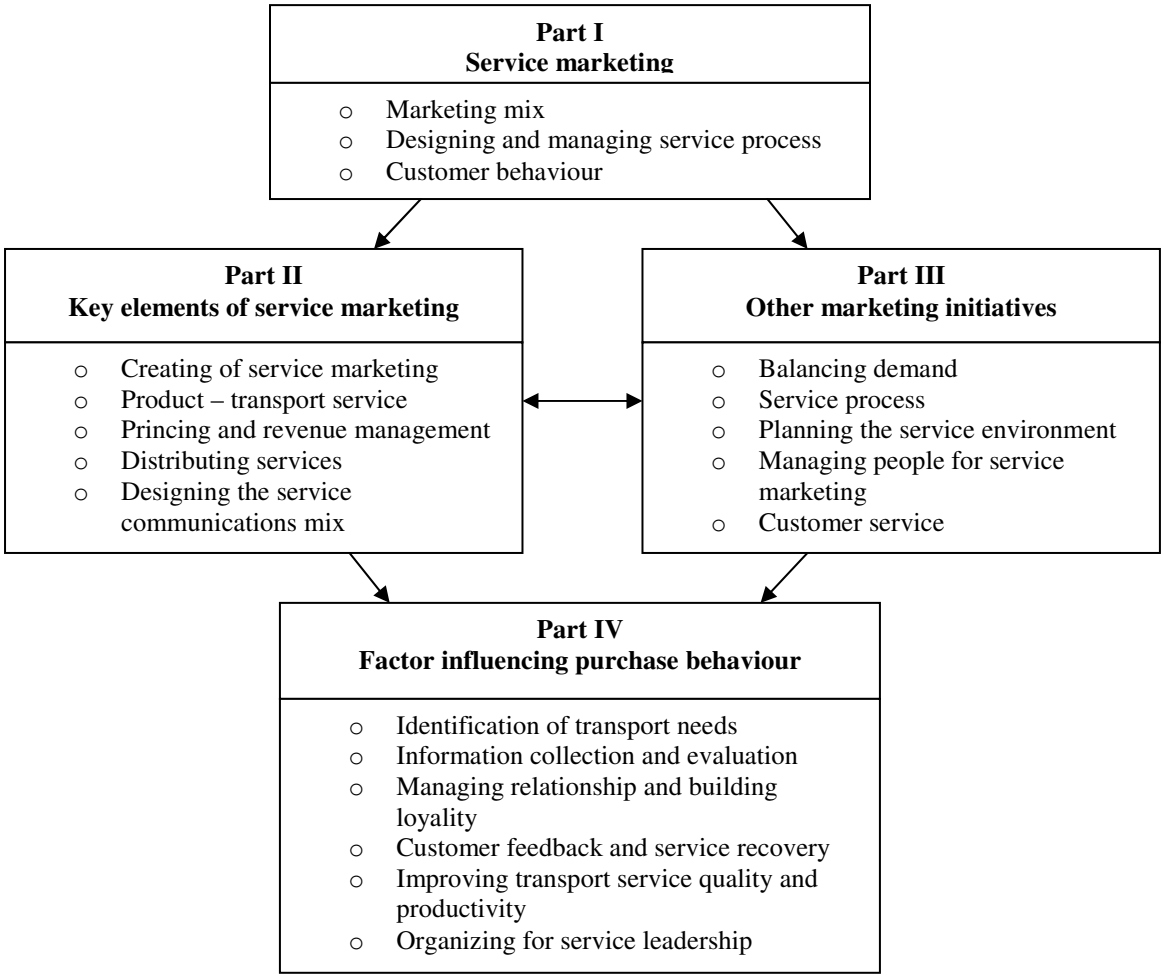

Fig. 1. Parts of implementing service marketing in transport

The term distribution can be considered a system of interviews, agreements and decisions that serve to transport service of transport business "given" to the ultimate consumer. This means that the load distribution, such as supply, transport process, and partly the creation of sales have not place in the distribution sub-mix of transport company. [7]

Marketing communications implemented in the field of transport should take into account the following specificities:

- *Provide tangible evidence* - product (transport service) is intangible, there it is not possible to highlight the example packing, shape, color, style and so on in advertising.
- *If there is demand for transport services at the time of its creation, is losing.*
- *Continuity of communications* – transport companies should use a single corporate symbolism, signs, culture, etc.
- *The structure of supply is characterized by the coexistence of public and private transport companies.* In addition transport to adversely affect the environment.
- *The transport service if often a partial summary of various types of transport services*, activities and other ancillary services.
- *Direct communication with employees* – in the service sector often leads to direct contact with customers and employees. There is important to focus on marketing and communications staff, and thereby increase their motivation.
- *It can not use the price case, if on the basis of a uniform set of tariffs perform all transport companies in a particular field of transport.* The transport company can increase sales of services, which have a fixed price, through the implementation of effective marketing communication with customers.

5. Conclusion

In conclusion, I would like to emphasize that from the perspective of effective management of the transport company should be given to undertaking a marketing communication. Marketing and the better information of the public transport can increase the share of passengers on the 5 – 25%.

This paper has been elaborated in compliance with the research plan VEGA 1/0471/08 Marketing communication in companies of services – an integrated model of company communication and communication with customers.

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Railway Transport and Sustainable Mobility

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Abstract. This paper deals with actual problems in transport from the point of view sustainable mobility. Continual increase of transport mobility has caused a lot of environmental and community problems. The harmonization of condition on roads and railways is necessary also in term of environment impact. The article compares transport performance of freight and passenger transport by modes in the European Union and in the Slovak Republic, describes transport impact on environment in the EU and SR and defines economic benefits that can by generated by railways transport.

Keywords: sustainable mobility, economic benefits, railway transport, transport modal split, harmonization of conditions.

1. Introduction

In Europe in recent years there has been a lot of discussion about the external costs of different transport modes: accident, pollution, noise, energy consumption, and so on. Total external costs of transport in Europe are 7.3 % of total GDP by the INFRAS/IWW study. The most important mode is road transport, causing approximately 80 % of total costs. The search for equal treatment depends on finding ways in which these costs can be internalized and reflected in the charges paid by the users.

But different modes of transport bring economic and social benefits which are not always internalized to the advantage of the operator. An efficient railway can bring many benefits to the community. Such benefits have a monetary value, which could significantly increase rail's financial viability, and perhaps encourage greater use through better service and lower tariffs. [3]

2. Actual Problems in Transport

The mobility is obvious presently. Continual increase of mobility cause a lot of environmental and community problems:

- Development of individual modes of transport is unequal.
- Problems with congestion such as consequences of unbalance between development of transport and transport infrastructures.
- Transport impact on the environment has been increased.
- Problems with transport accident and so on.

2.1. Situation in the European Union

The growth of goods transport within the EU, at a rate of 2.8% per year, was broadly in line with economic growth, which was 2.3% on average in the period 1995-2004. Passenger

transport grew at a lower rate of 1.9%. Overall, goods transport grew by 28% and passenger transport by 18% during the period 1995-2004, with transport by road growing by 35% and 17% respectively. Short sea shipping grew at almost the same rate.

Rail freight transport grew by 6% in 1995-2004. Rail passenger transport has increased considerably (albeit not as fast as other modes) and almost a quarter of this is now attributable to high speed trains. Inland waterways transport showed strong growth in the last decade in certain Member States (50% in Belgium; 30% in France). [1]

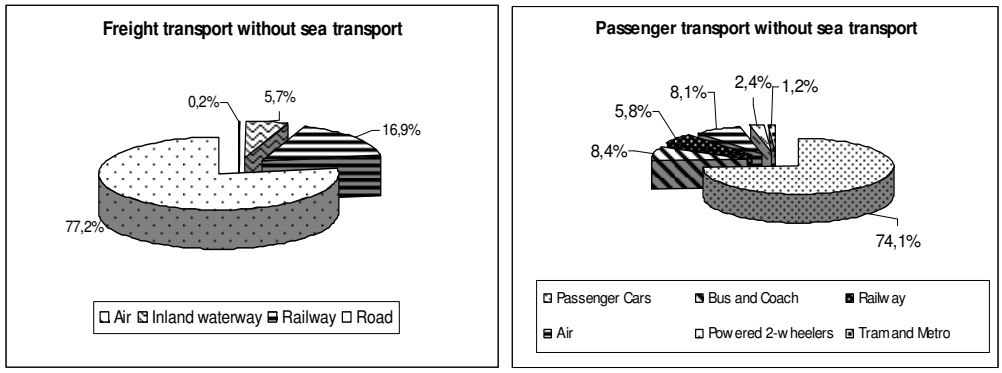

Fig. 1. Modal split of freight and passenger transport in the EU 25, 2005

Transport involves a cost to society. The efforts to achieve the aims of meeting growing mobility needs and strict environmental standards are beginning to show signs of friction. For example, air quality standards are not being met in many cities, and infrastructure development needs to be designed with due respect for nature protection and planning restrictions. While harmful emissions from road transport have declined significantly, the introduction of catalysts, particle filters and other vehicle-mounted technologies has helped to reduce emissions of NO_x and particulates by between 30 and 40% over the last 15 years despite rising traffic volumes.

Shipping is a large emitter of air pollutants. Although airlines have reduced fuel consumption by 1-2% per passenger-kilometre in the last decade and noise emission from aircraft has declined significantly, but the overall environmental impact of civil aviation has increased due to buoyant growth in traffic. Overall, domestic transport accounts for 21% of greenhouse gas emissions; these emissions have gone up by around 23% since 1990, threatening progress towards Kyoto targets.

2.2. Situation in the Slovak Republic

Trend of goods transport in the Slovak Republic has been increasing in last years and has been broadly in line with economic growth analogous to EU 25. Good transport grew by 5.6% and passenger transport by 7.2% during the period 1995-2005.

The road transport is predominant in the structure of goods carried by modes. The pace of the growth in road haulage has been extreme since accession the Slovak Republic to the EU and above all to Schengen. Transport performance of road transport has increased by 26.1% while transport performance of railway transport decreased by 20.3% during the period 1995-2005. Air transport and inland waterway transport are not significant in the Slovak Republic, their part are only 2.2% of all transport.

In the passenger transport, passenger car transport increased by 43.7% while public transport degreased; road public transport by 37.8%, urban public transport by 64.6% and rail public transport by 48.1%. The modal split of passenger and goods transport show following figure.

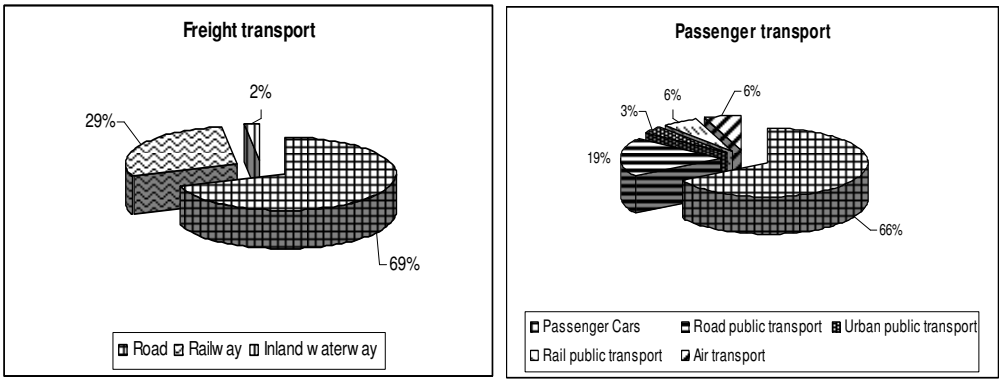

Fig. 2. Modal split of freight and passenger transport in the SR, 2005

Mainly problem in passenger transport is that most motorists do not realize that they need to include a portion of the value of vehicle, tires, oil etc into the price calculation for each kilometer traveled; mostly they just think of the per-kilometer price for petrol or diesel.

In the Slovak Republic the most affordable, fastest and most comfortable mode of transport is by road, which harms the environment with noise, dust, frequent accidents and above all exhaust gases. On the present, rail freight transport is interesting economically and in terms on distance approximately 300 kilometers or more. There are more fundamental imbalances between the conditions for road and rail transport, tolls for using transport infrastructure are the most important. While the toll for using the rail tracks here is paid by every train, lorries pay only the motorways stickers. The real price per kilometer is at least 2.5-times higher than on the road. The harmonization of conditions on roads and railways is necessary also in term of environment impact, which is considerably lower with rail transport. Another factor is the accessibility of transport infrastructure in real time. On some main railways line and in agglomeration in a period of strong passenger transport, a freight train cannot get a track whenever it needs one.

3. Economic benefits that can be generated by railway transport

With high levels of fixed infrastructure cost, railways are by nature expensive to build, operate and maintain. Each route needs to generate sufficient revenue to cover its costs and, and if privately owned, it should also be profitable enough to give the shareholders a reasonable rate of return.

Railway can bring many advantages to the community that do not necessarily result in a direct financial return. Often these include multiplier effects [3]:

- Less traffic congestion reduced the need for new high-way construction.
- Improving safety.
- Decreasing of impact to the health of population and environment.
- During construction and operation can graduated jobs.
- Railway has the capacity to handle large volumes, using less energy per unit of transport than road and air transport.
- Rail can carry passengers at higher speeds then road and its freight hauling capacity can support the development of industries that may not be practical with other modes.

Table 1 shows basic categories of economic benefit that can be generated by encouraging greater use of rail, and the player to which the value of such benefits primarily accrues.

Benefits	Railway	Government	Population
Increased passenger travel	x	x	x
New industries	x	x	x
Industrial expansion	x	x	x
Lower cost freight transport	-	x	x
Increased community income	-	x	x
Increased land value	-	x	x
Reduced land-take for roads	-	x	x
Reduced road congestion	-	x	x
Reduced road maintenance	-	x	x
Value of time saving	-	-	x
Energy saving	-	x	x
Reduced pollution:			
Noise	-	-	x
Water	-	-	x
Particulate emissions	-	-	x
Gas emissions	-	-	x
Improved transport safety	-	x	x

Tab. 1. Categories of economic benefit that can be generated by railways

Each of the categories presented in the Table 1 present its own challenges in terms of quantifying the benefits and monetizing them to the advantages of the railway. This can be demonstrated by looking at same examples.

4. Conclusion

The negative consequences of transport are the important problem for present and future population because the load of environment of transport is elevated. Compared with other types of transport, railway transport is one of the environmentally friendly but on the other hand your performance has been degreasing all the time in comparison to road transport. There is necessary to made many of measures to sustainable transport first off governments would have a transport police that treats all modes equally, and ensures a high level of coordination between them.

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The Preparation for the Euro Introduction in the Judiciary of the Slovak Republic and Changes in the Commercial Register

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Abstract. Within the public sector courts are not fungible branch of justice. To take effectual steps in judicial system of Slovak Republic, signifies improvement in domestic and foreign business environment with extensive economic acquisition. These effectual steps present one of short-term and middle-term priorities of our state resulted from National program in time when the acquis communautaire was accepted as well through reports from several availling of Europe Union (EU) in this sphere. Judiciary, its position and activities in modern society are determined by two principal facts - place in the economic system and the form of its financing. This now raises the need to deal with the open issues of the impact of the euro introduction in the judiciary. The effectiveness of their activities must be understood in terms of their contribution to the solution of the benefits for citizens and businessmen.

Keywords: euro, courts, judiciary, judicial management, jurisdiction, judicial treasure.

1. Introduction

The shaping of the economic system of the Slovak Republic (SR) represents a process which is greatly influenced not only by the socio-political system, but also by the world's constantly ongoing processes of economic integration and approximation of European law.

These objective facts bring fundamental changes in economic environment of the private business sector, in response to the changing attitudes and shaping the public sector. Its condition is well-founded whether in terms of real securing the specific needs of citizens (health, education, courts, military, and others), as well as businesses, while respecting legal norms. In many cases the ignorance of the law, and also the conscious attempt to go against the laws stresses the importance of the judiciary in resolving open issues of the society in administration of the law and its consequences caused by this non compliance of law by the public (citizens, companies, institutions and particularly businesses).

2. The impact of the euro adoption in the judiciary

Brief treatment of the issue - the impact of the euro introduction in the judiciary respects the Ethical Code prepared in cooperation with the Government mandatory for the euro introduction in the Slovak Republic and signatories of Slovak)Business Alliance, making their activities in the territory of the Slovak Republic.

The euro Introduction significantly affected the Slovak economy. Purity of the euro introduction at the same time emphasizes the requirement of acceptance of ethical standards for the whole society - citizens, business entities of public administration in its entirety.

The Ethical Code affects more facts. General Act No. 659/2007 Statute book on the Euro Introduction and Amendments of Certain Laws, led to the amendment of certain laws related

to financial and economic impacts, environmental impacts, impacts on employment and business environment. This Act has brought positive findings. That method is reflected in a requirement for the euro introduction into the system of state debt enforcement.

SR did not suppose an adverse financial impact on the public finances - the state budget (SB), the budgets of cities and towns. ***SR did not suppose*** adverse financial impacts in the environment (no environmental impact). ***SR did not suppose*** any negative impact on employment or unemployment in the country.

The euro introduction in the Slovak Republic assumed a positive impact on economic growth and the growth of Gross Domestic Product (GDP).

The comprehensive and rigorously prepared analytical report "The Impact of the Euro Introduction on the Slovak Economy", produced by the Research Department of National Bank of Slovakia (NBS) and publicly available on the NBS website, showed that the euro introduction in Slovakia has brought some economic benefits but also disadvantages. Costs for the euro introduction in SR were estimated at around 0,3 % of GDP, transactions costs for the euro in shops in SR ought to contribute to the savings approximately 0,36 % GDP. There are not yet available official information whether this information correspond to the facts. The disappearance of exchange rate risk against the euro in other EU countries and generally euro introduction in the Slovak Republic contributed to a gradual, significant growth of foreign trade and foreign direct investment. The application of the euro in the trade relations means the currencies stimulation in other countries towards the Slovak Republic, which is unsound. The euro introduction shouldn't have the impact on current development of the employment, but due to financial crisis, the euro did not present, as it would be expected. Particularly the job creation should not be affected in the future. Due to the global crisis the impact of the euro is simultaneously accompanied by a negative way, whether in terms of export capacity which decreases or Foreign Direct Investment (FDI).

A serious fact is that the euro introduction has caused that businessmen are required to recalculate the basic capital (BC), respectively the conversion shall be made by the court ex officio (ex officio) and asked for registration in the commercial register. In general, the business environment has not been changed. In this context, the main source of funding of the Slovak judiciary is the statutory part of the state budget (SB), court fees, fines, levies.

The aim of this report is to demonstrate what kind of the initial theoretical and technical knowledge were applied by judicial treasury at the stage of the euro introduction. Taking into account the conference thematic focus, the author tries to explain the optimal procedure for the euro introduction for the specific example of judicial treasury at Regional Court in Bratislava.

3. Specific requirements of the euro introduction

The rapid increase in the number of cases, so called affairs, and the resulting burden on the courts, at the same time opened the financial problem in the Regional Court in Bratislava, leading to the gradual preparation of conversion of claims court enforcement in accordance with ***the provisions of Act No. 65/2001 Statute Book on the Administration and Enforcement of Court Claims, as amended***, by judicial treasury because the way of administration and enforcement of court claims is not simple. The euro introduction affected the state public administration. Therefore, it reacted and prepared for the euro conversion in advance. Bodies of public administration, state administration and the self-government should bear in this context the obligations, like all legal persons, in relation to citizens, to their employees and partners. The euro affected all cash flows, software of judicial bodies and many operational activities. Each body of public administration, including the judiciary, was entirely responsible for its organizational transition to the euro currency.

Judicial treasury as a separate department at Regional Court in Bratislava with a total of 100 employees operating throughout the Slovak Republic in the administration and enforcement of judicial claims, had to ensure a smooth transition of the Slovak crown to the euro by the following steps:

- Establish working group for the euro introduction from 1May 2008.
- For this purpose the same group of workers was established which serves as the Commission on the implementation of the Act on Court Claims Enforcement of the Ministry of Justice.
- Carry out a rigorous analysis of impacts of the euro introduction on processes and information technology, so on programming systems used until now in judicial treasury.

In this context, the preparatory phase, which started from 1 May 2008, analyzed the data model and processes of the software Administration and Enforcement of Judicial Claims, in case the draft changes to data structures, algorithms and business logic. Under the provision of § 18 article 7 of General Law No. 7. 659/2007 Statute Book. On The Euro Introduction and amending certain laws, the court claims did not require dual display. In preparation for the euro introduction in the judicial treasury it was first considered voluntary adoption of dual display in the documents, which would be used in legitimate communications with a mandatory (for example, prompted a timetable agreement deductions, etc.

The intention of the Ministry of Justice was to facilitate a conversion of all sums of money to the entries in the Commercial Register. Businessmen had opportunity to submitt proceedings of conformity and potential objections by the Internet web site. In parallel with the euro introduction in the Slovak Republic the laws were changed in the judicial organization and management, the status of judges and at the level of departmental ministries in the execution of the activity of legal experts, interpreters and translators, as well as feedback control.

It is worth noting that the dual representation was required in particular in the determination of state property prices, including judicial property, which are published in newspapers or on the Internet for the purpose of transfer of ownership. The property value had to be referred everywhere in Slovak crowns and also in euros, under condition that tenders have been implemented before 24 August 2008. Information on the property value, published after 24 August 2008, was also shown dual. Under the Act and relevant regulations on the rounding of payments it was necessary to make difference between the income and the expenditure of SR. Obligatory payments to the treasury as income to the state budget, were rounded to two decimal places down.

4. Conclusion

The euro introduction in Slovakia led indubitably to the changes that are needed to be prepared. The successful transition evoked trust and sense of sufficient information in public institutions, businessmen and consumers. Judicial treasury managed to complete this task without any serious intervention in the financial and personnel in the judiciary.

The judiciary is a part of the public sector and its structure is included in the branch ensuring the needs of society. As regards the judges, they contribute to the euro introduction in the manner that they help to the development of the judiciary in particular in preparing of judgments by monitoring of euro impact on judicial decisions within the framework of European Union (EU) until 2010, and its impact on the legal standards of the SR. The court

decisions have established the amount of value in Slovak crowns by the end of 2008 (regardless of the duration of court proceedings) and in the euro exclusively from 1 January 2009. In principle, in the judiciary the dual currency of Slovak crown and the euro is not directly related with the courts jurisdiction. Businesses whose legal form requires mandatory registration in the Commercial Register are obliged by law to provide information on the change quantification BC in the euro currency under ***Regulation No. 246/2008 Statute book on the Rules and Procedures for the Conversion of the Nominal Value of Deposits to Capital and the Nominal Value of the Capital of the Slovak Currency to the Euro.*** The change of currency is administered as a proposal in the Commercial Register in the prescribed form, which is attached to this report for the view. Many businesses have requested a change of currency in the Commercial Register before the end of 2008. The number of changes that were executed by businessmen in euro currency represents a smaller percentage of the total number of registered business subjects. Their value in Slovak crowns is from 1 August. 2008 calculated under the conversion rate for the euro currency (1 euro = 30,126 Slovak crowns). Information on the conversion rate was published by the Council of the European Union on 24 July 2008.

The author of this report would like to present to readers the transition of Slovak crown to the euro currency in terms of state organization - judicial treasury at Regional Court in Bratislava in Slovakia.

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Water-Supply and Sewerage Economy in Ukraine: the Concept of System Consideration in Terms of Innovative Development

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Abstract: The contemporary condition of water-supply and sewerage economy (WSSE) in Ukraine is characterized by two major issues – water and power resources waste. It requires the system approach to the solution of these issues. Over-expenditure and waste analysis is one of the urgent tasks in the system of WSSE that considers both direct and indirect waste in the system model. The key strategic goals of WSSE development are presented in chain interconnections and their connecting links constitute integrity and coherence of the system of WSSE. The strategic development of the system of WSSE is researched in two associated blocks – reserve-resource and investment-innovation blocks that form the model of innovative development of WSSE.

Keywords: System approach, waste and over-expenditure analysis, chain interconnection, innovative development.

1. Introduction

Nowadays the communal industry of drinking water-supply is presented in the cities of Ukraine as one of the largest ramified structures of spatial economy. It is the most volumetric sector of urban economy as to the amount of processed and transferred product and one of the large-scale consumers of electric power resources. Along with energetics, the most important resource of the system is natural water. The core issues here are low quality of natural water and limit of water resources involved in the economic circulation [1,2]. The urgency of the problematical character of WSSE in Ukraine as an economic system is presented by two negative attributes: water waste varies in different cities at 20-45% of volume of net supply and electric power waste constitutes 12-17%. The given estimation of the current situation indicates that improvement of WSSE efficiency is the actual issue in Ukraine, which is of high interest of the government, regions and enterprises of centralized water-supply and sewerage.

2. System Approach to WSSE

The contemporary methodology presupposes the system approach to the solution of the issues of such level (Fig.1) [3, 4].

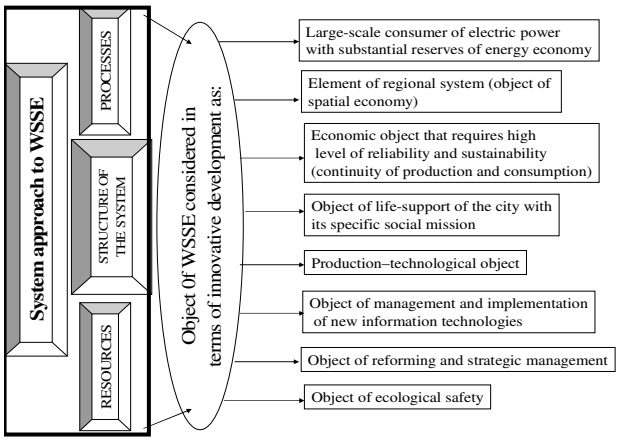

Fig. 1. Constituents of system approach to WSSE

The presented structural model of the most significant characteristics of WSSE (Fig.1) can be applied for the analysis of the potential of the researched object and solution of the tasks of its strategic development. In terms of evaluation of the potential of WSSE the efficiency of use of capital assets, indicators of financial activity and volumes of production are mainly at stake of researchers' interest, which is rightful for rational economic thinking [5,6]. However, in contemporary renovating conditions we consider the detailed research of waste and over-expenditure to be one of the actual tasks in the system of WSSE.

2.1. Waste and Over-expenditure Analysis in the System of WSSE

The urgent issue of waste, over-expenditure and irrational use of materials and power resources in WSSE requires conceptual and methodological elaboration. Analysts' reports on water-supply waste state that power consumption of 1 m^3 of water in Ukraine is twice as much as its analogous European index. However, the issue is of a broader nature. It is necessary to define the essence of concept 'waste'. Along with generally recognized direct waste, other kinds of waste should be taken into account: damage, over-expenditure, received less benefit, delay in time of circulating mediums, non-used potential that is losses of resources, potential, rates of development and profits. Other indirect waste comprises ecological losses – damage to health of people by low quality water; accident rate because of breaks of systems of plumbing-sewages; losses of the government that has to grant thriftlessness and subsidize non-payments; losses of industry and businesses that have to pay in addition at high tariffs for the population; decline of sustainability and reliability. Thus, the model of waste in WSSE is multi-contour, multi-element and multi-profile that needs to be researched as a complex phenomenon.

System character of waste and over-expenditure does not have quality analytics due to many factors, as they can be constant, episodic, acceptable, seasonal, accidental, technical, economic, organizational, etc. They result in the society as underdeveloped culture of water consumption and lack of understanding of thrift that lead to social tension. All these factors have a direct influence upon efficiency of WSSE, well-being of the population, strategy of WSSE development and region as a whole.

Based on the above mentioned characteristics of the waste issue in WSSE there appears actual special purpose task of their research as a system in terms of structural model of waste, chain reactions in their system, negative multiplier effect (in contrast to synergy), etc. The concept of "system model of waste" can be used in different domains – tariff policy, choice of

priorities, elaboration of systems of stimulation, substantiation of investment calculations, etc. It is especially actual in strategic planning and management.

2.2. Key Strategic Goals in WSSE Development

We define the following basic criteria of evaluation of WSSE and determinants of strategic goals of WSSE development:

- *reliability and sustainability*: WSSE as a life-support system of the city must function continuously in optimum regime by providing normative needs and normative quality of goods and services though certain local failures and disorders can be accepted in case of their efficient liquidation;
- *economy and efficiency* means the use of all existing resources with high output-input ratio, minimization of expenses, electric power economy, decrease of waste;
- *safety* involves proper standards quality of drinking-water, margin of safety, economic sustainability, ecological safety (minimum impact on the environment);
- *manageability* presupposes adaptability, efficient functioning in non-standard situations, readiness to innovations, ability of cooperative work, easiness of transformation onto a new regime of work, etc.;
- *corporateness in regional system* refers to balanced inclusion both into WSSE and the sector of urban economy as a whole, observance of normative relations, synchronousness with other industries in regard to change of tariffs, work with public.

The noted features of the object (WSSE) play the role of the key goals in its strategic development and achievement of these key goals transfers the system onto a new level of image and organizational development.

While elaborating the strategy evaluation work on prognosis of the major technical-economic indexes of the system is usually undertaken without finding a connection between them. The research of separate dependences and evaluation of different factor influences on integral indexes of economic activity of WSSE does not give systemic information about the actual situation in the economy of the object. In this regard, it is more efficient to research not the closeness of dependences in integration centers of the system but the chains of interconnections. For the system of WSSE, we define the following chains of interconnections:

1. Financial condition – level of compensation of expenses by tariffs – promissory balance – management economy – investment – development.
2. Target criteria: reliability and sustainability – economy and efficiency – safety – manageability – corporateness.
3. Resources/potential – strategy/mechanism of implementation – investment policy/economic policy – strategic directions/criteria of development – reliability/sustainability.
4. Strategic direction – market structure – reforms – interests of participants – organization of cooperation.

The combined chains contain connecting links – potential, investment, reliability, development, interests. These connecting links possess properties of different nature but they characterize coherence and integrity of the system.

3. Model of Innovative Development of WSSE

Chain interconnections are of a high importance for the solution of strategic tasks of development. An actual task is the selection and estimation of direction of search of reserves of WSSE and uniting this resource basis in the model of manageable development of the

system. Overall, the problem of providing sustainability and potential of development can be researched in two associated blocks – reserve-resource and investment-innovation blocks. The model of innovative development of WSSE is presented on Fig. 2.

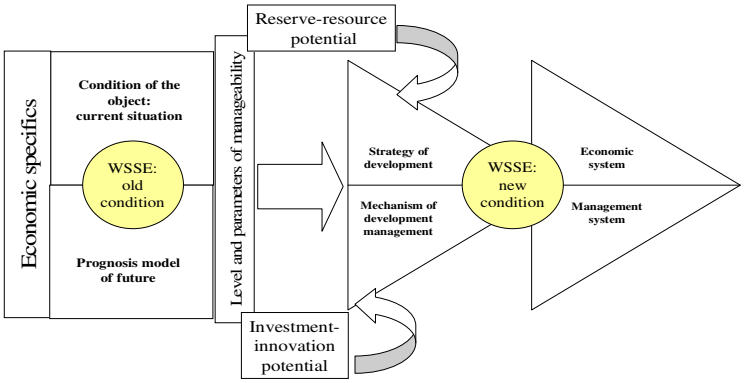

Fig. 2. Model of innovative development of WSSE.

Reserves (resources) and innovations play the role of basic sources of economic development, increase of efficiency and potential. In the process of development, the system realizes its own strategy that comes from internal energetics and factors of influence from external environment.

Innovative character of WSSE development in Ukraine is characterized by the change of priorities in the dynamics of years. In the 90's the priority tasks were technological models, creation of automated systems of management, partial reorganization. Later issues of non-payments, development of customers' service, sanation of networks were in the focus. Since 2000 the problems of tariff policy, resource and power supply, technical modernization have played a major role. In this period, projects of reorganization, waste decrease, and ecological safety have become of greater importance. The perspectives of the contemporary innovational development are complete technical modernization, investment, adaptation to market conditions, improvement of quality of water and services, change of management mechanisms and realization of innovation projects.

4. Conclusion

To sum it up it is worthwhile to list the most significant results of the research.

First, both the object and external environment require application of system methodology for estimation, analysis, prognosis and projection of future conditions and strategic models of development. The basis of the presented system approach is the view on WSSE as an object of economy, participation in regional economy, ecological safety, power input, etc.

Second, the ambivalent task of waste and over-expenditure analysis and increase of power efficiency is becoming an urgent issue. It requires scientifically grounded answers to such questions as what is wasted, where is it wasted, who is concretely harmed by waste, what scale is it wasted at and what are the consequences?

Third, the defined key directions of strategy of WSSE development – reliability and sustainability of the system, economy and efficiency, safety, manageability, regional

corporateness – have a criterion value each individually, but the main task here is the exposure and practical application of the solutions of the tasks of development of the most substantial intercommunications between them. In our research some chains of such interconnections have been defined that can be used for elaboration of factor models of development management.

Fourth, the motive force of development of WSSE as well as of any economic system is embedded in such categories as needs and interests. Innovative orientation and mechanisms of management provide for the development. In this regard the conceptual methods of «concordance of interests» and basic principles of deformation of innovative policy of WSSE are offered in the research. Based on these assumptions, it is possible to organize the practice of elaboration and realization of strategic programs of WSSE development in a systemic way.

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Determinants of Creating Long-Term Financial Decisions in Local Government Units[1]

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Abstract. In the article was presented fragmentary results of empirical research carried out in 203 local government units of five voivodeships in Poland. The purpose of research was identification of conditioning factors as well as used tools in a process of making financial decisions about a long-term character in local government units.

[1] Scientific work has been financing from scientific finance in a period of 2006-2008 as a research project Nr 1 H02C 103 30. Grant's manager was Prof. Beata Filipiak, Ph.D., whose under supervision was done this research. Presented results are only a small part of the wide research, which were passed to publishing.

Keywords: territorial self-government, financial decisions, financial instruments.

1. Introduction

A local government unit faces many problems, which require of making defined decisions. It can point that each activity, running by a local government unit, accompanies a decision process, which result is a concrete decision. Making decisions in local government units is a process of recognizing and choice of defined activity direction, which leads to solving a concrete problem [8, p. 238].

The aim of this article is pointed out created factors as well as instruments, which are used in a process of making long-term financial decisions in local government units.

2. Types of Financial Decisions

Financial decisions are decisions which concern a process of accumulating, expending and management public finance that are located at given local government disposal, and also decisions caused financial effects in a long or short period [1, p.104-106]. They are made by organs of local government units from law force, as well as by employees these units after obtaining suitable authorization from organs.[2]

It may point out the most significant fields of financial decisions in governmental activity, they are:[4, p.17; 3, p.14-18]

1. short-term – effects of these decisions concern one year; in governmental practice are those decisions, which results will concern budget of given year;
2. long-term – are decisions, which effects go beyond period of one year; in practice they concern budgets of following years and activity running by governmental organs in future periods.

A governmental unit to efficient and effective management of possessing resources (especially financial), has to make optimal decisions as well as aims at continuous development.

3. Conditioning Factors and Instruments Used in a Process of Making Long-Term Financial Decisions in Local Government Units

The base of making long-term financial decisions should be instruments, which help to estimate a financial situation of local government unit, not only ex post but also ex ante. These tools should support planning revenue and expenditure, evaluation of ability to fulfilling from liabilities in a long-term period, and also should point out financial liquidity as well as support to estimate effects of debt (especially, in keeping liquidity and realisation tasks as so-called compulsory tasks defined regulations). To these instruments include: Multiannual Investment Programme, Multiannual Financial Programme, Task Budget, Multiannual Budget, Financial Strategy. Fig. 1 presents utilization in practice mentioned above instruments in a process of making financial decisions in a long-term period.

It should notice, that among pointed instruments only Multiannual Investment Programme has own full powers in a law. All mentioned instruments are admitted by the law, and their using are not forced by the law, what it means a voluntaries of using.

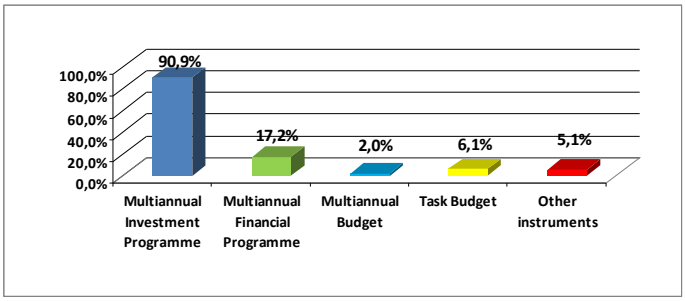

Fig. 1. Types of instruments used in making long-term decisions

Source: Own elaboration on the basis of results from researched grant Nr 1 H02C 103 30

From the presented figure comes out that only Multiannual Investment Programme is instrument used generally. Only few local governments have not put it yet to the practice of making decisions. Other instruments are used occasionally and they are modern instruments, which allow to realize all above pointed evaluations and give a base to the research.

Fig. 2 presents types of carried out analyses before starting a decision process. From this figure comes out that almost a half local government units make long-term decisions without use information from analyses.

Considering answers, the most of decision-makers (if a base of decision are analyses) use analyses concerning defining real possibilities of their financing with taking investment and exploitative cycle under consideration as well as costs and benefits analyses from the point of view satisfying needs of society. Analyses concern creating income/revenue and expenditure/costs of given tasks in the past are used a little bit. The same analyses and forecast concerning predicted creating income/revenue and expenditure/costs of tasks in the future.

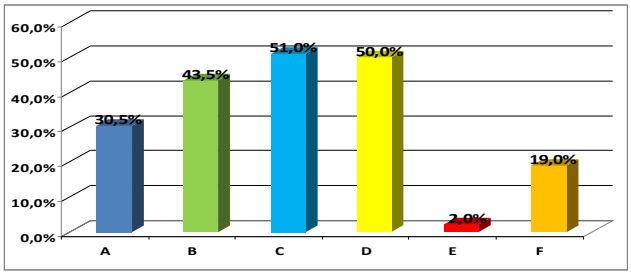

Fig. 2. Types of analyses preceding making long-term decisions

legend:
A- analyses of creating income/revenue and expenditure/costs of tasks in the past
B- analyses and forecast concerning predicted creating income/revenue and expenditure/costs of tasks in the future
C- analyses concerning defining real possibilities of their financing with taking investment and exploitative cycle under consideration
D- costs and benefits analyses from the point of view satisfying needs of society
E- any field's analyses are not made
F- decisions are made In discretion way from the point of view decision-makers or in case of political pressure
Source: Own elaboration on the basis of results from researched grant Nr 1 H02C 103 30

It also analysed purposes which were taken under consideration in a process of making long-term financial decisions (fig. 3). In majority it means about increasing effects of committed public finance. It is the important purpose, especially if it says about a development of local and regional societies. Next aims are a search of savings in connection with limited or decreased financial resources as well as a limitation of political influence on decisions in a range of tasks realisation. These instructions have a particular pro-effective meaning if it says about doing long-term expenditure.

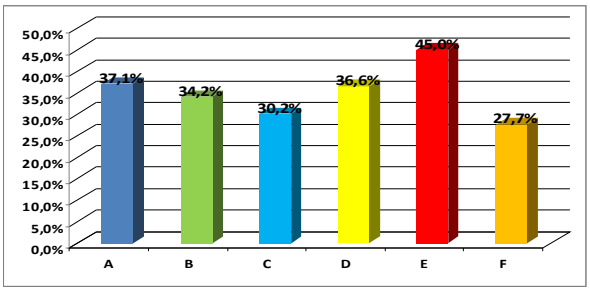

Fig. 3. The purposes taken under consideration in a process of making long-term decisions

legend:
A- a search of savings in connection with limited or decreased financial resources of local government unit
B- better allocation of public finance
C- elimination of discretion in making decisions about tasks realisation
D- limitation of political influence on decisions in a range of tasks realisation
E- increasing effects of committed public finance in tasks realisation
F- increasing of control spending public finance
Source: Own elaboration on the basis of results from researched grant Nr 1 H02C 103 30

The following purposes also possess a character, which intensify effectiveness of making decisions, moreover they point out better allocation of possessed resources. The control always was necessary element and concerns of governmental decisions. Therefore, it that put the aim is not surprised.

4. Conclusion

It should state that carried out research show that in many units should change a management and a decision approach. Implementing modern instruments, which support a decision process is necessary. No insignificant is here ability of running analyses and their using in a decision process. Doubts raise too low rate of effects and results monitoring made financial decisions about a long-term character. Besides, in this field is necessary rebuild attitudes of governmental decision-makers.

Despite a general improvement of attitudes and increase of awareness using modern instruments, which support financial decisions, a change of law in force become very necessary. Only introducing a statutory obligation of using instruments supported process of making decisions, obligatory carrying out analyses, which support process of making financial decisions about a long-term character as well as effects' monitoring of made financial decisions forces their general use.

Therefore, the law is a based factor determined use modern instruments, which support financial decisions and also allow to monitoring of effects. But if these actions should make? Yes, because it should increase awareness of governmental decision-makers, especially in the age of global economy, free flow factors of production, and also towards governmental competition. Better instruments are better self-government and better decisions allowing more to do, more effectively, doing efficiently in society.

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Basic Methods for Cost of Equity Capital Estimation

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Abstract: For all enterprises and other organizations is essential to monitor and correctly analyse cost items at present. The correct estimation of the cost of common equity capital and debt can help by accurate and strategic decision making and planning of the further enterprise´s activities. I concentrated in my article on the cost of common equity capital before all, because it is in most cases more difficult and labourious to estimate its costs that make cost estimation for the debt. There exist more methods from which can enterprise choose the most suitable one depending on the structure of its equity capital. The most often used theories and methods are dividend discount model, capital asset pricing model, the arbitrage pricing theory a Build-up method. I outlined shortly these methods to cover basics of every one of them.

Keywords: cost of capital, cost of equity capital, capital asset pricing model, dividend discount model, arbitrage pricing theory, build-up method

1. Introduction

Cost management and monitoring of the cost items is essential for every enterprise with the main goal to be profitable, especially from the point of decision making and strategy of the enterprise. Above all in these times of financial crisis, it is necessary to carefully consider where into what and how much finance we invest to reach maximum profitability at minimal costs.

Equity of the enterprise can be basically split into debt capital (capital from external sources) and equity capital (from own resources). From the volume point of view the most important area of debt capital is credit and on the equity capital side is it the own shares emission. Separate indicator – cost of capital does not have significant information value however it serves as a basis by decision making and company management. From the economic principles it is known that equity capital is more expensive than debt capital, from this reason bigger part of this work is devoted to equity capital.

2. Cost of equity capital

Costs of equity capital are represented for the enterprise by the net yield expected by the owner and gained for the investment of his capital into the enterprise. For the stock company it is represented by the dividend and increase of the share´s market price. The “price” expected and demanded by owners varies from the enterprise to enterprise and depends on the risk

embedded in the investment into certain company. The least risky are shares of the big stable company. More risky are investments into non-stable and smaller companies. With growing risk also grow costs of equity capital as they have to compensate increased endangerment of investors´ capital.1

The field of costs of equity capital is not described and characterized in literature in such a detail as quantification of the costs of debt capital. Simply said, costs of equity capital are more estimated than precisely measured. We know a few theoretical models for the estimation of the costs of equity capital. We had chosen the most used ones:

- Dividend discount model,
- Capital asset pricing model (CAPM) and The arbitrage pricing theory (APT),
- Build-up method.

2.1. Dividend discount model - DDM

The DDM is the simplest and oldest present value approach to valuing stock. From the perspective of a shareholder who buys and holds a share of stock, the cash flows he or she will obtain are the dividends paid on it and the market price of the share when he or she sells it.

If an investor wishes to buy a share of stock and hold it for one year, the value of that share of stock today is the present value of the expected dividend to be received on the stock plus the present value of the expected selling price in one year:

$$V_0 = \frac{D_1}{(1+r)^1} + \frac{P_1}{(1+r)^1} = \frac{D_1 + P_1}{(1+r)^1} \qquad (1)$$

V_0 = the value of a share of stock today, at $t = 0$,
P_1 = the expected price per share at $t = 1$,
D_1 = the expected dividend per share for Year 1, assumed to be paid at the end of the year at $t = 1$,
r = the required rate of return on the stock.

Equation (1) applies to a single holding period the principle that an asser´s value is the present value of its future cash flows. In this case, the expected cash flows are the dividend in one year and the price of the stock in one year.

For an n-period model, the value of a stock is the present value of the expected dividends for the n periods plus the present value of the expected price in n periods (at t = n). If we use summarion notation (2) to represent the present value of the first n expected dividends, the general expression for an *n*-period holding period of investment horizon can be written as[2]

$$V_0 = \sum_{r=1}^{n} \frac{D_t}{(1+r)^t} + \frac{P_n}{(1+r)^n} \qquad (2)$$

2.2. Capital asset pricing model (CAPM) and The arbitrage pricing theory (APT)

[1] VLACHYNSKÝ, K. a kol. *Podnikové financie.* IURA EDITION, Bratislava. 2006. ISBN 80-8078-029-3.
[2] STOWE, D. John & co.: Equity Asset Valuation. John Wiley and Sons, 2007. ISBN 978-0-470-05282-2.

The capital asset pricing model (CAPM) is a theory of the relationship between the risk of a security or a portfolio of securities and the expected rate of return that is commensurate with that risk. The theory is based on the assumption that security markets are efficient and dominated by risk averse investors. In other words, the CAPM argues that investors are willing to take on more risk only if they can reasonably expect a higher returtn.

The measurable relationship between risk and expected return in the CAPM is summarized by the following expression (3):

$$R_i = R_f + \beta_i [R_m - R_f] \tag{3}$$

where Ri is the expected return on security or portfolio i, Rf is the return on a risk-free security, βi is the beta of security or portfolio i, and Rm is the expected return on a broad index of equity market performance.[3]

The arbitrage pricing theory (APT) eliminates the defects of CAPM. It has been proposed to explain risk and return. APT states that the expected returns of securities are influenced by a number of industry and financially related factors. This model claims to give a broader explanation of the positive relationship between risk and returns. The APT model implies that the returns of a security are determined by all the projected information available to investors. This information includes the unexpected part of an event sucha as new discoveries, changes in interest rates, inflation, industrial production, earnings announcements, and so forth.

Each stock reacts differently to a projected factor´ event and its sensitivity to that factor is captured in the beta coefficients assigned to each factor. Beta, therefore, measures the response of a stock´s returns to a factor. The relationship between expected returns and a factor can be either positive or negative. That will determine the plus or minus sign assigned to the corresponding betas.

Putting these observations into a three-factor equation (4), we come up with the following:

$$Er_{ab} = \alpha + \beta_a F_a + \beta_b F_b + \beta_c F_c + e \tag{4}$$

where

Er_{ab} = expected return,

α = alpha,

β_a, β_b, β_c = betas related to each factor,

F_a, F_b, F_c = projected change in factors,

e = error term representing specific risk or influences that are not relevant in this relationship.[4]

[3] BellSouth Telecomunications, Docket No. 29054, http://www.psc.state.al.us/29054/BellSouth_DirectII/Billingsley/040120_29054_Exhibit_RSB-4.pdf, 19. 02. 2009, 12:30.

[4] GROPPELI, A. Angelico & co.: Finance. Barron´s Educational Series, 2006. ISBN 978-0-764-13420-3.

2.3. Build-up method

The typical build-up model for estimating the cost of common equity capital consists of two primary components, with three subcomponents:
a) a risk-free rate,
b) a premium for risk, including any or all of these subcomponents:

- a general equity risk premium,
- a small company premium,
- a company-specific risk premium.

In international investing, there may also be a country-specific risk premium.

The equity cost of capital can be estimated by the build-up method as (5):

$$E(R_i) = R_f + RP_m + RP_s + RP_u \tag{5}$$

where:
$E(R_i)$ = expected (market required) rate of return on security i,
R_f = rate of return available on a risk-free security as of the valuation date,
RP_m = general equity risk premium (ERP) for the market,
RP_s = risk fremium for smaller size,
RP_u = risk premium attributable to the specific company or to the industry (the *u* stands for unsystematic risk).[5]

3. Conclusion

As it results from the article, by estimating costs of the equity capital we can choose from more options – methods of the calculation, and gained results can be further used as a base for the decision making in the company. However not every model is suitable for every company for example Dividend discount model is not applicable in the company which does not emit own shares and that is why it does not pay off the dividends as well. Before decision about the concrete method we have to take into account where we will use gained results.

By this article I would like to outline shortly one chapter of my PhD. thesis "Theoretical and methodological aspects of the estimation of the costs of capital and their practical use in company management".

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Heuristics and Biases in the Product Creation Process

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Abstract. In the Product Creation many decisions under uncertainty are necessary. Thus not all decision alternatives and their possible results are known. Empirical analysis show that the judgements in these complex and sometimes confusing situations are biased as result of heuristics which are used as rules of thumb. This article describes the specifics of the Product Creation followed by the basics of heuristics and biases. Finally several examples for heuristics and the subsequent biases are described.

Keywords: Product Creation Process, Product Development, Heuristics, Biases.

1. Introduction

The introduction of new products is one necessary but not sufficient contribution to secure the long-term continuance of companies, especially for those with technical industry products.[1, 2] The determination and development of these new products takes place in the Product Creation Process.

1.1. Product Creation Process

The Product Creation is analyzed either under an institutional or process perspective. [3] The institutional approach comprises all employees, information and facilities that are used in the product creation. This paper founds on the process approach which encloses all the production and sales cycle preceding activities.[4] These activities last from the product finding until the testing of the components in the final system and the production start. Thus, not only technical processes but also organizational, marketing, sales and production related processes are summarized in the Product Creation.[5] In contrast, the term Product Development focuses mainly on construction related activities. The sub-processes of the Product Creation are either described based on a chronological or on a content based classification. The chronological classification with the steps research, product planning, product development, prototype testing and production is not examined in the following passages.[6]

1.2. Content based Classification of the Product Development Process

The product creation process is divided in several sub-process which are classified as follows:[7]

1. Product determining processes: These processes define the geometry, material and surface of the future customer product.

- Initial and product finding processes
- Product specific planning processes
- Product design processes
- Processes for the setting and preparation of the production and logistic

- Processes to prepare the market introduction
- Processes for the result revision

2. Product specific processes: The corresponding planning and preparation processes are directly linked to the product and are carried out solely for it.

- Process to form the organization
- Product specific processes of planning and supervision
- Product specific controlling processes

3. Processes with vague or no product reference: They include general management processes and pre-development or technology development processes. Due to the missing direct product link these processes are not examined in detail in this paper.

1.3. Decision Theory

During the product determining and the product specific processes several decisions and judgements under uncertainty are necessary. The decision theory relies on rational acting people. The underlying concept of objective or global rationality assumes that no information problem exists. Unlimited transparency and foresight are supposed.[8] The practical-normative theory [9] does not consider that people may act in an irrational manner.[10] It can be regarded as analysis of rationality.[11]

The human decision making in reality deviates from rationality[12], especially in the product creation process.[13] One approach to handle this fact is the concept of bounded rationality. It bases on individuals which try to act rational but have "cognitive limitations in storing, processing, and communicating information."[14] Furthermore the alternative options in the decision problem have first of all to be identified. Additionally the decision maker has only limited and imprecise knowledge of the consequences of each of the particular options.[15] One procedure to react to the limitation of information extraction and information processing is the simplification of the decision itself.[16]

To better understand decision making it is helpful to describe and explain actual decisions rather than focusing on the prescriptive decision theory.[17] Therefore, some heuristics and biases which occur in the Product Creation Process are outlined below. The resulting findings can later be used to describe a decision theory for the Product Creation.

1.4. Biases and Heuristics

Heuristics describe simplifying strategies which are used when making decisions.[18] They are often useful to deal with complex situations but the assumed patterns are not always valid.[19] The emanating negative effects of an inappropriate use are called biases.[20]

1. Biases and Heuristics according to Kahneman/Tversky[21]

- Representativeness Heuristic: People tend to search for traits with former stereotypes when judging about an individual or object.
- Availability Heuristic: The assessment of the frequency or probability of an event is affected by the degree to which memories of that event are called to mind.
- Adjustment and Anchoring Heuristic: When estimating values, first people usually start from an initial value and try to appropriately adjust it. Second, this starting point may be either be implied in the question or be estimated. In either case, the adjustment is usually not sufficient.

2. Biases and Heuristics according to Bazerman/Moore[22]

- Availability Heuristic: see above
- Representativeness Heuristic: see above

- Positive Hypothesis Testing Heuristic: Often selective data is used when testing hypothesis instead of considering all possible associations between separate events.
- Affect Heuristic: The judgement is influenced by the emotions that occur before any rational and complete analysis.

2. Heuristics in the Product Creation Process

2.1. Judgements in Product Determining Processes

As one example of a product determining process the technical and financial target-setting is discussed. Usually derivations from previous products are used for the target-setting, although innovative components are hard to assess.[23] The quality and degree of adjustment from the preceding product generation defines the quality of the target. Therefore it is essential to exactly know both the (technical or financial) value and the content of the basic product and of the future product.

2.2. Judgements in Product Specific Processes

The assessment of technical risks preceding the final component or product release is one example for product specific processes. Although usually several test procedures and catalogues are used to assess the maturity level of the product it is still necessary to decide about the final release.

Another example for a judgement during the product creation process is a project status or project review. The aim is to assessed both the current status and the reaching of the specified technical and financial targets at the end of the product creation. Not all necessary information is quantitative and measurable.

3. Biases emanating from the Heuristics in the Product Creation Process

3.1. Biases in the Product Determining Processes

The most significant bias from the previous heuristic is the 'Anchoring' (Bazerman/Moore) or 'Insufficient Adjustment'(Kahneman/Tversky)-Bias. It describes the insufficient or inappropriate adjustment from the starting point of the derivation. The easier certain events which occurred at the reference project are remembered and brought to mind the more they influence the adjustment (Kahneman/Tversky: 'Bias due to the retrievability of instances', Bazerman/Moore: 'Ease of Recall'). Inappropriate targets may result from these biases.

3.2. Biases in the Product Specific Processes

For a successful Product Creation, usually several event must occur in a previously defined way. On the one hand side people usually overestimate the probability of these conjunctive events. On the other hand side, the probability that just one of many events occurs is underestimated ('Conjunctive and disconjunctive events bias'). First the release of a component or product may be given to early or late. Second this bias has an significant impact on the validity of the assessed project status. The description of the project status may be wrong and necessary measures are taken to late.

4. Conclusion

This articles shows how judgements in the Product Creation Process are biased from heuristics. People often use these rules of thumb unconsciously when the decisions are complex and the person cannot rate all alternatives in detail. These effects should be noticed when putting forward a theory of the Product Creation.

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Adjustment of Internet Marketing for Service Sector

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Abstract. The paper examines the possible implementation of internet marketing methods and areas in services. After presenting main methods of internet marketing (own www page, other www pages, SEM, e-mailing, online PR activities, marketing research, WEB 2.0 and others) and main areas of internet marketing (promotion, internal marketing, conducting marketing research and information management, service rendering, distribution, sales, customer service and others) their usage for different types of services is discussed.

Keywords: Internet marketing, Service marketing.

1. Introduction

The development and constantly growing popularity of internet influence the operations of enterprises, organizations and institutions. The properties of the global network [1,2] create new opportunities for market entities. It is especially true for the enterprises, as the general movement towards operations in internet can be observed. Enterprises either operate fully in the network or (more often) utilize the network as a new, complementary form of operations. In practice and theory the realizing of some actions or tasks in the internet is called "e-action", "electronic action" or "internet action"; therefore there can be distinguished, for instance: "e-business" or "internet business" [3,4] "e-commerce" or "electronic commerce" [5,6] etc. Analogically running marketing actions in the internet is called "e-marketing" or "internet marketing" [7].

It should be stressed that running marketing activities (e-marketing) in the internet does not change the general rules of marketing. The customer, his needs and wants, should still be in the center of any marketer's mind; there is a constant need for gathering and managing information; adjusted and integrated marketing instruments should be implemented, etc. Although the general rules remain the same, there are some dramatic changes in internet marketing as well, which are, among others: the available tools, ways of competing, management of relations with new e-customers, the approach to business and its strategy. In other words internet marketing offers new methods and new areas of operations.

Another issue is adjustment of these new methods and new areas of operations to the service enterprises. According to literature there is a significant difference between the marketing of tangible products and the marketing of services [8,9,10,11]. This is the basis for the objective of this paper, which is examination of internet marketing methods and areas in the context of services. After the presentation of author's point of view for the internet marketing methods and areas, the attempt to adjusting them to services will be made.

As this paper is limited to only 4 B5 pages, it was not possible to include the entire author's research on the subject of internet marketing usage in services. Some findings are presented in a short form of a one sentence but is should be kept in mind that these sentences are the results of long research.

2. Review of typical e-marketing methods and areas of usage

2.1. E-marketing methods

In the dynamic environment of internet marketing the actions (methods) are subject to a constant change [12]. Therefore one clear and full list of all methods is very difficult (or even impossible in a longer term) to prepare. Having this in mind, an attempt to clarify at least some basic actions has been made by the author. According to author's observation of enterprises' behavior there are some general e-marketing methods implemented in virtual reality, which are presented on Fig. 1.

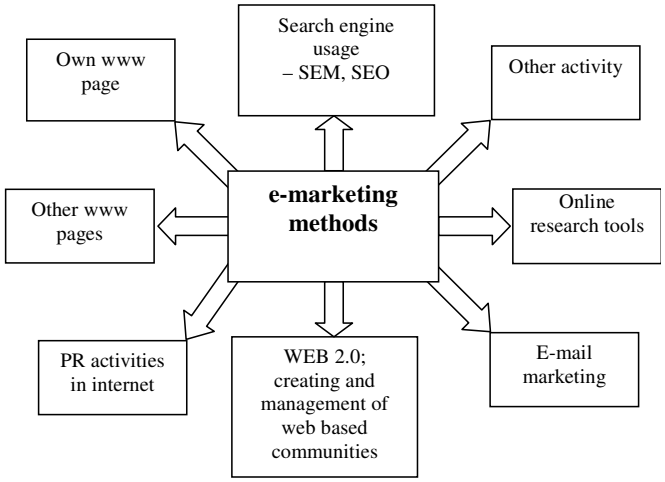

Fig 1. Main internet marketing methods, source: own elaboration

Methods presented on figure 1 probably do not create the full list of internet marketing methods but in the author's opinion are sufficient enough to cover most of e-marketing actions.

The starting point for internet marketing is own www page. Sometimes it is even perceived as the synonym of existing in internet. There are many guidelines, norms and standards of how a correctly prepared www page should look like [13] so this matter will not be discussed in the paper.

One of the clearest trends in internet marketing is the growing importance of Search Engine Marketing (SEM). SEM seeks to promote websites by increasing their visibility in search engine result pages (SERPs). SEM methods include: Search Engine Optimization (SEO), Paid Placement, and Paid Inclusion. The growing popularity of SEM is caused by several reasons:

- SEM is relatively low aggressive: the user decides whether to click a link or not;
- the message is adjusted to the needs of users (appears usually only if a certain phrase has been typed in the search engine);
- there is relatively high level of acceptance of this form of advertising among users – according to the Gemius research of Polish internet users [14] 55% of internet users perceived the sponsored links as "useful";
- SEM is available both for big companies and for the SME sector – even the smallest enterprises, which do not possess huge funds, can use this form of advertising;
- the expenditures for SEM are easy to control (widely implemented PPC – pay per click way of payment);
- advanced methods of efficiency management of SEM.

Still new and not fully described in the scientific literature part of internet marketing is so called Web 2.0. This term become popular in 2004, after the conferences organized by O'Reilly Media and MediaLive International. The name Web 2.0 is used for defining the internet services, where the majority of the content is generated by the users of the service. Such service is called "community service". The examples are youtube, wikipedia, facebook and others. The importance of this approach to internet was noticed by the Times that granted the title "man of the year 2006" to "You", meaning the internet users. The Web 2.0, as an important trend, should be noticed by marketing in order to find ways of utilize this phenomena into marketing actions and objectives.

Another form of internet marketing, e-mail marketing, despite criticism, is still a widely used method. The advantages of e-mails, such as short time of delivery, multimedia capacities, high possibilities of targeting, easy personalization and very low cost causes the constant popularity of this method.

2.2. E-marketing areas of usage

Internet marketing can be used for promotion – in this case it offers a great number of possibilities, such as: communication via own www page and other www pages (mostly in the forms of banners and links), e-mailing, search engine positioning, and others. In some cases (like creating www pages, hosting services, e-learning, etc.) the production or the product itself happens in internet. Global network is also a good place of trade – it can be used for negotiation, sales and gaining clients. In this case, it is the transaction that takes place in internet; the product distribution or service rendering can happen either in internet or in the real world. Despite of sales, internet is a good place for customer service: it can be complementary or even subsidiary to, for instance, call centers. So the internet customers have easier access to communication with an enterprise in cases such as: warranty, getting information, adjusting the service to the particular needs, etc. The electronic distribution, understood as the way a product goes form the manufacturer to the customer, for some products, like e-books, happens mainly in the internet. Internet has also become an important platform for marketing research, including both primary researches: on-line questionnaires, mystery shopping in internet, e-focus groups, gathering information about internet users (cookies technology) and secondary research (lots of large available databases). Not only external actions are possible in internet: another area is internal marketing: e-trainings for personnel, communication with employees, etc.

Summarizing the internet marketing areas of usage are: promotion; production; negotiation, sales and gaining clients; customer service; distribution; marketing research; internal marketing.

3. Adoption of internet marketing areas of in service sector

The above mentioned methods of internet marketing (own www page, other www pages, SEM, e-mailing, online PR activities, marketing research, WEB 2.0 and others) can all be adopted by service companies. In other words in this case the difference of service and tangible goods appears in the way of using, not in the fact of using methods.

Different situation appears in internet marketing areas: in different services only some of the areas can be implemented. From the above mentioned areas of internet marketing the following can be implemented in all the kinds of services: promotion, internal marketing and conducting marketing research and information management. Other internet marketing areas, such as: production (in this case: service rendering), distribution, sales and customer service

can be implemented only to a limited extend. It is mainly caused by the features of services that distinguish them from tangible goods – services are [15,16]: intangible, heterogeneous, simultaneously produced and consumption, perishable.

Especially simultaneous production and consumption causes, in some cases, that service rendering or distributing via internet is impossible. This is the case of, for instance: repairs services, transportation services, restaurants, haircuts, etc. However, in some of these cases it is possible to sell the services via internet (although the service is rendered in the real world). The example of this can be those airlines, where tickets can be bought only on internet. There are however such services that can actually be rendered via internet, such as e-learning and online banking. In these cases the services are rendered and distributed via internet. Other services, such as health care services, cannot be rendered, distributed nor even sold in internet and the customer service via internet is very limited.

4. Conclusion

The wide scope of both internet marketing methods and areas can be used in service sector. As for the internet marketing methods: any of them can be implemented by the service entities. Different situation is in the case of internet marketing areas: according to the type of service only some of them can be implemented. The areas that can be implemented by any service entity are: promotion, internal marketing and conducting marketing research and information management. The areas that can be implemented only in certain kinds of services entities are: service rendering, distribution, sales and customer service.

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Relationship Between Economic Value Added and Total Productivity

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Abstract. The paper introduces the idea of mutual relationship between Total Productivity (PT) and Economic Value Added (EVA). The mathematical model of Total Productivity and EVA were described. The Break Even Point concept of Total Productivity was used by the development of relationship model of EVA and Total Productivity. The final solution was simplified for easy practical utilization.

Keywords: Analysis and evaluation of productivity, the Break Even Point of Total productivity.

1. Introduction

In the past, the enterprise performance was mostly evaluated according to its profit. Like many analyses have shown, enterprise profit increase does not directly ensure the increase of its economic value added.

Economic Value Added (EVA) indicator belongs to the range of new enterprise indicators [7]. As it will be shown in more detail later, EVA is determined as a subtraction of operating profit and capital costs. Using of this indicator enables better enterprise performance analyzing. The value of the indicator signalizes, whether the enterprise creates economic value or not. Another advantage of the indicator is the fact, that it can be used for many decision making tasks [1], for example decision of order acceptance, product rejection from production line etc.

Total Productivity is a measure of internal efficiency of enterprise [8] and it gives an information whether increase of enterprise performance was reached by effective management and utilization of internal resources, or only by changing of external factors [2].

Several publications on productivity and profitability analysis have already been published [3], [4], [5], [7].

No mathematical formula for Economic Value Added (EVA) and Total Productivity relationship has been derived and published yet. This solution, developed by author of the article is appropriate for more detailed studies of EVA and Total Productivity interactions and their influence on performance of enterprise.

2. Total Productivity Model

Model of Total Productivity was developed by Sumanth [9]. It has been described in more detail in [6] and its final form is as follows (1):

$$P_T = \frac{O_1 + O_2 + O_3 + O_4 + O_5}{I_H + I_M + I_{C,F} + I_{C,W} + I_E + I_X}, \quad (1)$$

where total outputs are:

- O1 – Finished units completed (for sale and internal use).
- O1 – Finished units completed (for sale and internal use).
- O2 – Partial units completed (for sale and internal use).
- O3 – Dividends from securities.
- O4 – Interest from bonds.
- O5 – Other income.

The total inputs are:

- I_H – Human (workers, managers, professionals, clerical staff).
- I_M – Material (raw materials, purchased parts).
- $I_{C,F}$ – Fixed capital (land, buildings, machinery, tools and equipment, others).
- $I_{C,W}$ – Working capital (inventories, cash, accounts receivable, notes receivable, other receivables).
- I_E – Energy (oil, gas, coal, water, electricity, vapour etc.).
- I_X – Other expenses (travel, taxes, professional fees, information processing etc.).

3. Break Even Point of Total Productivity

Break Even Point of Total Productivity is a relationship between Total Productivity and profit. This concept has already been described in detail [6], that is why only the final form of the model and information needed for derivation of relationship between EVA and Total Productivity are presented.

A linear relationship exists between profit and Total Productivity:

$$Z = a.P_T - b\,. \tag{2}$$

By plugging regression coefficients into the model for Break Even Point of Total Productivity, it will be obtained:

$$P_{T\_BEP} = 1 - \frac{I_{C,W}}{\sum_{i=1}^{n} I_i} = 1 - \frac{a - b}{a}\,. \tag{3}$$

Whereas regression coefficients of linear model are as follows:

$$a = I_H + I_M + I_{C,W} + I_{C,F} + I_E + I_X\,, \tag{4}$$

$$b = I_H + I_M + I_{C,F} + I_E + I_X\,. \tag{5}$$

Then Total Productivity is:

$$P_T = \frac{\sum_{i=1}^{5} O_o}{I_H + I_M + I_{C,F} + I_{C,W} + I_E + I_X} = \frac{\sum_{i=1}^{5} O_o}{a}\,. \tag{6}$$

4. Economic Value Added (EVA)

EVA compares Net Operating Profit After Tax (NOPAT) and capital costs. Capital costs (CC) represent expected efficiency of own and foreign capital. They are determined as a product of rate of capital costs, or weighted average cost of capital (WACC) and capital employed (CE).

$$EVA = NOPAT - CC\,, \tag{7}$$

$$CC = WACC.CE\,. \tag{8}$$

Net operating profit after tax is:

$$NOPAT = EBIT(1-T)\,, \tag{9}$$

whereas EBIT – Earning Before Interest and Taxes.

The EVA value can be determined using relative ratios, for example ROCE [1]. Multiplying EVA spread by capital employed, EVA value will be obtained:

$$EVA = EVASpread.CE\,, \tag{10}$$

$$EVASpread = ROCE - WACC\,. \tag{11}$$

5. Relationship Between Eva and Total Productivity

Using the equations (7) and (8) EVA is as follows:

$$EVA = NOPAT - WACC.CE\,. \tag{12}$$

Using this equation, a simple relationship between NOPAT and EBIT will be obtained:

$$Z = NOPAT(1-I) = EBIT(1-T)(1-I)\,, \tag{13}$$

whereas:

- T – tax rate (according to actual legislation 19 %, or 0,19),
- I – interest rate of capital employed.

Then:

$$NOPAT = \frac{Z}{(1-I)}\,. \tag{14}$$

Substituting NOPAT in equation (12) by formula (14) it will be obtained:

$$EVA = \frac{Z}{(1-I)} - WACC.CE\,, \tag{15}$$

then:

$$EVA = \frac{Z - WACC.CE(1-I)}{(1-I)}\,. \tag{16}$$

Using Z from equation (2):

$$EVA = \frac{a.P_T - b - WACC.CE(1-I)}{(1-I)}\,. \tag{17}$$

Using P_T from equation (6):

$$EVA = \frac{a\dfrac{\sum O}{a} - b - WACC.CE(1-I)}{(1-I)}\,, \tag{18}$$

then:

$$EVA = \frac{\sum O - b - WACC.CE(1-I)}{(1-I)}\,. \tag{19}$$

Using the regression coefficient b, the final form of the model will be obtained:

$$EVA = \frac{\sum O - I_H - I_M - I_{C,F} - I_E - I_X - WACC.CE(1-I)}{(1-I)} \cdot \qquad (20)$$

The above mentioned formulas can be used for studying of EVA and Total Productivity relationships. Using this model, the influence of selected factors on EVA value can be studied.

6. Conclusion

Performance improvement of enterprise requires new, effective methods of performance measurement, monitoring, analysing and evaluation. Economic Value Added is one of often used ratios for performance evaluation. This ratio, like profitability ratios, does not provide the information, whether the performance increase of enterprise is a result of internal performance increase, or whether it is significantly influenced by external factors. Total Productivity of the enterprise is the measure of its internal efficiency.

The author of this paper developed a theoretical model of EVA and Total Productivity relationship, using the concept of Break Even Point of Total Productivity.

Practical verification of models developed, is being implemented at the Department of Industrial Engineering of the University of Žilina.

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The Diversification of Companies Income in the Light of the Research of Spa Companies in Poland

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Abstract. The article concerns on diversification receipts of the health resort enterprises in Poland. Above diversification is important aspect in husbanding subjects, it limits risk of functioning enterprises. In work author concentrated over analysis sources receipts of health resort companies, which are the example of subjects economic in Poland. For author important searchingly was meeting of main sources in structure of receipts analyzed health resort firms. Author in work subjects investigation verification of thesis: Still in most healthcare companies the main source of income is NFZ (National Fund of Health) as a part of the national medical health insurance system. Moreover author tries to answer on question: How does the structure of income diversification among healthcare companies that run not only healthcare, but also different spa activity, look like?

Keywords: diversification of receipts, the health resorts companies.

1. Introduction

The diversification of a company's income is important factor of its activity. The variety of the sources of income is an element that limits the risk of enterprises' management. Their activity on different markets allows them, in case of any problems on one of them, to function on the others. The diversification of income – which is often a result of providing different services – can be seen in economic analysis of many subjects.

In Poland one of them are health resorts which have been financed for years from the state budget in the confines of the so called the budget system. Since 1999 the main institutions that financially have supported the health care services are "Kasy Chorych" (health departments) and since March 2003 The National Healthcare Fund (NFZ).

At present in Poland NFZ, as a part of the national insurance system, is often the limited source of financial support for medical services for many healthcare units.

Some of the healthcare units where the share of total financial support of medical services is one of the smallest are national healthcare joint ventures (joint-stock and limited liability companies), which manage healthcare resorts. In the recent years financing from the public system of spa healthcare – which is a part of 22 medical departments – has been among the lowest and equaled on average just above 1%, that is about 320 million zlotys[1] of all resources available for the healthcare from the national insurance system.

Because of insufficient funds from the national health insurance system since the 1990s a lot of healthcare joint ventures have experienced economic problems, which made them look for alternative sources of income.

[1] 1 EUR = 4,57 zloty – average course in March 2009 according to National Bank of Polish (NBP).

The above phenomenon has encouraged the author to get to know the diversification of healthcare companies incomes, becoming the main target of his research. Learning about the variety of incomes will allow to answer the following questions:

What are the main sources of income for healthcare companies in Poland?

How does the structure of income diversification among healthcare companies that run not only healthcare, but also different spa activity, look like?

The above questions has made the author give the following statements:

Still in most healthcare companies the main source of income is NFZ (National Fund of Health) as a part of the national medical health insurance system.

In healthcare companies that run not only healthcare, but also different spa activity the share of NFZ funds in the income structure is not prevailing anymore.

2. The income structure in healthcare companies

To answer the main research problem and other questions and also to verify the statements presented above, in 2008 the author asked for permission to do research in all 24 national healthcare companies in Poland. The research sources were financial documents of spa companies, which contained information on the size and diversification of the income of the analyzed companies.

No.	Healthcare Companies	Total income (zl)	The income diversification						
			NFZ (%)	ZUS (%)	Commercial (%)	The sale of own products (%)	Funds from NFZ for salaries (%)	Others (%)	The percentage of commercial income from foreign guests (%)
1	Horyniec	5487000	41	0	31	5	4	19	1,2
2	Iwonicz	15140000	54	15	13	9	5	4	0
3	Kamień Pomorski	10000000	80	0	15	1	1	3	15
4	Kraków - Swoszowice	3175000	77	0	16	0	7	0	10
5	Połczyn	.	31,2	21,9	27,1	0	2,46	17,38	37
6	Przerzeczyn	3735000	53	0	30	0	5	12	0
7	Rabka	17153065	63,37	8,05	4,36	1,57	8,05	14,6	0
8	Ustka	.	84,5	0	15,5	0	0	0	0
9	Wieniec	7700041,5	26	49	16	5	3,8	0,2	0,1
10	Wysowa	14467000	27,71	0	12,94	55,39	2,16	1,8	1
11	Busko	45887213,6	45	0	15,5	16,5	6,6	16,4	6
12	Ciechocinek	33693843	38,13	5,87	26,03	13,67	3,47	12,83	0
13	Cieplice	11751500	47,6	18,6	14,9	0	5,1	13,80	54,91
14	Inowrocław	16265412	50,19	21,06	18,69	0	5,12	4,94	3,3
15	Kołobrzeg	27773400	46,76	0	43,45	0,91	4,84	4,04	11,77
16	Konstancin	13295783	29,1	8,5	6,7	19	4,7	32	1
16	Krynica	34648425,8	18	0	19	42	2	19	6
18	Lądek	24658000	36	30	15	0	4	15	0
19	Rymanów	25226000	36,30	20,5	13,2	25,5	4	0,5	1
20	Szczawno – Jedlina	.	.	.	.	.	.	.	.

21	Świeradów	15703901,7	48,4	19,3	16,5	0	5,6	10,2	69,0
22	Świnoujście	16935700	65,32	0	19,98	0	6,64	8,06	1,50
23	Ustroń	40485836,4	.	.	.	.	.	.	24,52
24	ZUK in Polanica	102740801	15	5,50	10	59,5	1,50	8,5	56,0

Tab. 1 The income structure of the national healthcare companies in 2007.
Source: own study

Tab. 1 shows that considering the income „ZUK" („Zespół Uzdrowisk Kłodzkich") joint-stock company is the leader. In most analyzed companies the main source of income is still NFZ as a part of health insurance system. That source of financing prevails in "Uzdrowisko Ustka" ltd., „Uzdrowisko Kamień Pomorski" ltd. and „Uzdrowisko Kraków – Swoszowice" joint-stock company.

Some companies have income from pre-pension rehabilitation services resulting from contracts with The Public Insurance Department (ZUS). The income from rehabilitation services are noticeable in total income especially in „Uzdrowisko Wieniec" ltd. (tab.1). Beside the source of income for healthcare services for patients from NFZ and ZUS, companies have profits from pre-pension rehabilitation services for farmers from Agricultural Insurance System (KRUS). Such incomes can be seen in tab. 1 as "Others".

The situation on the market has made some healthcare companies provide services for patients and commercial tourists paying total sums for their stay in the spas. However, this source of earnings is only a minor part of their total income. Only in "Uzdrowisko Kołobrzeg" joint-stock company it is over 43%, which makes it almost equal with the income from NFZ.

Some companies widen their earnings by so called the sale of their own products (tab.1), especially mineral water. Some of the companies leading in this activity are: „Zespół Uzdrowisk Kłodzkich" (ZUK), „Uzdrowisko Wysowa" and „Uzdrowisko Krynica-Żegiestów". These companies sell well-known brands of mineral water: „Staropolanka" from ZUK, „Wysowianka" from Wysowa and „Kryniczanka" from Krynica. These brands, beside „Nałęczowianka" that is produced in the only privatized spa resort "Nałęczów", have the biggest share on the mineral water market in Poland.

It must be stressed that only in these three companies analyzed above, the income from NFZ is not the biggest in the income structure (tab. 1).

Important guests in spas are foreign commercial patients and tourists who spend more money than national guests. But, as table 1 shows, only in three spas in Lower Silesia ("Uzdrowisko Świeradów-Czerniawa", „Uzdrowisko Cieplice" and „ZUK") located near Germany and The Czech Republic, the share of income from visits of foreign guests in 2007 was bigger than from national guests.

3. Conclusion

The research of spas has proved that in most analyzed subjects the main source of financial support is NFZ, which is a part of the national health insurance system. Only in the spa companies which have also different offers than healthcare services, the share of NFZ funds in the income structure is not the most important anymore. The good example are companies producing well-known brands of mineral water on the national market.

Moreover, in the income structure of Polish spa companies compared to other countries such as Slovakia, The Czech Republic and Hungary, the income gained from the visits of foreigners still has a small meaning. There are many reasons for that. It must be remembered that on the competitive market of healthcare services the price competition itself is not enough. What is more, except the competition in the quality of services, the diversification of products is also important, as it enriches the structure of the income structure of healthcare

companies. It seems that the situation could be improved by developing various attractions connected with thermal waters.

The reason of not very complex income structure of healthcare companies is a lack of progress in privatization of the Polish spas. In 1999 on the basis of acts of privatization the Minister of Treasure changed The National Healthcare Companies („PPU") into the state joint ventures (joint-stock and limited liability companies). It was aimed at preparing the privatization of spa resorts. But so far only one company has been privatized ("Uzdrowisko Nałęczów"), and two companies have returned to their former owners (spas in Solec and Szczawnica).

Another problem on the way to increasing the sources of income is the lack of appropriate legal system of private health insurance, which could help to solve the problem of the poor public health insurance system.

Undoubtedly, bad and not coordinated promotion of Polish healthcare regions has had an influence on low income outside NFZ in the analyzed companies [2]. It resulted in a small number of visits in spas compared to their capacity.

The spas' income based on systematically decreasing level of social insurance security endangers their functioning. That forces the companies' managers to diversify their services, often on the basis of tourism. This method of management gives them the possibility to increase the variety of income and simultaneously to lower the economic risk of commercial activity.

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Performance Management as a Way to Deal with Critical Economic Periods

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Abstract. This paper shall provide a suggestion on why to try to improve performance of an organization to succeed in dealing with hard periods in business environment as we have been experiencing recently. The paper defines the meaning of performance management and tries to specify its difference from just simple performance appraisal. It offers a view on the performance management as a system that, due to its complexity and interrelation nature, stimulates all elements of organization to achieve what has been set. It brings the information on the performance management as a complex process of stabilizing of the effectiveness of organizations focused on exactly specified goals including survival in the economic crisis.

Keywords: performance, performance management, performance appraisal

1. Introduction

Over the few past months the word "economic crisis" has settled in our everyday vocabulary. We hear it on radios, the TV news are full of information from the business sphere and it seems that all disasters, conflicts and terrorist attacks have "freed their seats" to problems of closing the companies, firing the people and liquidating of organizations.

People running small family businesses or those managing international corporations, they all face a challenge of how to solve this situation, how to manage it without losing too much.

The economic crisis has rolled across the Atlantic and spread around Europe and despite all rosy forecasts it has reached also Slovakia to an enormous extent. Even the most pessimistic experts did not expect such a serious effect of the crisis on the environment of the Slovak economy. Now also our managers are trying to answer the same question as those all around the world: What to do to save the company and how to make the company strong enough to deal with a similar situation in the future.

There are a lot of different theories, systems and process that advise us how to manage the organizations to bring positive effect. However, to enable the organizations to meet the set objectives, to be flexible in the setting of these objectives and to be forced to find an optimal solution in the organizational strategy the process of performance management has been suggested.

1.1. Definition of Performance Management

Managers manage people. They manage their activities, their approach and their final results. The managers´ task is to manage their subordinates to achieve the goals, to help them to fulfill the tasks and to motivate them to achieve higher performance. "Performance

management is usually described as a system through which organizations set work goals, determine performance standards, assign and evaluate work, provide performance feedback, determine training and development needs and distribute reward."[1]

1.2. Performance Management and Performance Appraisal

In the last twenty years different performance appraisal methods have been introduced, such as competing-based appraisal systems, staff appraisal of managers, team-based appraisals, customer appraisals, 360-degree feedback systems etc. However, performance management applies more than employees. Performance management is about managing an organization. "It is a natural process, not a system or a technique."[2] "It is about managing within the context of the business, namely its internal and external environment. This will affect how it is developed, what it sets out to do and how it operates."[3]. The context is a base and Jones goes even so far as to say "manage context, not performance."[4]

2. Principles of Performance Management

Performance management is based on the principle that everyone within the internal as well as the external environment of the organization at any level contributes to achieving overall goals and objectives of the organization. Performance management should be strategic, i.e. it is about broader issues and longer-term goals, integrated - it should link various aspects of the business, people management, and individuals and teams.

2.1. Principles of Performance Management by IRS[5]

The principles of performance management have been summarized by IRS as follows:

- It translates corporate goals into individual, team, department and divisional goals,
- It helps to clarify corporate goals,
- It is a continuous and evolutionary process, in which performance improves over time,
- It relies on consensus and co-operation rather than control or coercion,
- It creates a shared understanding of what is required to improve performance and how this will be achieved,
- It encourages self-management of individual performance
- It requires a management style that is open and honest and it encourages two-way communication between superiors and subordinates,
- It requires continuous feedback,
- Feedback loops enable the experiences and knowledge gained on the job by individuals to modify corporate objectives
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2.2. More about Principles

There are also other principles that are helpful in the design and implementation of effective performance management systems. Though organizations vary in their character, goals and strategies, these principles seem to be useful across such variation. The goal of the performance management system is improved individual and organizational performance. The system must be simple. It should be easy to understand and use, and favour efficiency over comprehensiveness. The process should ensure clarity of goals and expectations and accountabilities for achievement/success. Goals need to be set at flexible enough levels that they are able to be adapted or modified to meet changing priorities and business challenges. Feedback should focus on specific expectations and behaviours that are related to job requirements and organizational goals. The delivery of feedback should be continuous, contain

a distinct informal element, and utilize input from multiple sources. Informal feedback should be real-time. "Saving up" performance issues (good and bad) for discussion at a later date is detrimental to individual and corporate health. The process should provide direction for individual development and career planning. Numerical ratings and forced distributions of performance measures work against the primary goals of performance management. These should be avoided. Accountability mechanisms must be built into the system to ensure that positive performance-related interactions occur and are conducted in a manner that achieves their intent. The system should balance consistency and flexibility; there should be consistency in application across the organization along with enough flexibility in the system to adapt to the specific needs and preferences of departments and business units. Individual performance is one of many factors considered in determining pay. A performance management system, then, must provide objective support to this aspect of the compensation decision. However, since individual performance is only one factor in determining pay, it is important to communicate a pay philosophy that clarifies the organization's perspective on the relationship between pay and performance (see Appendix on pay philosophy). The performance management system should support and be integrated with the host of other human resource actions: selection, disciplinary processes, training, retention efforts, etc.[6]

3. Performance Management as an Integrated System

Performance management is certainly not an isolated task of an HR department that should do an appraisal once a year and then is forgotten. It expects that the combined effort and cooperation of all units of an organization will lead to higher effectiveness of the organization operating and therefore will improve the performance of the organization.

As I have already mentioned business is in the hands of people and only people are responsible for the results of organizations. People are able to affect their performance and due to synergic effect they are able to multiply organizational performance when they involve all the parts, units, departments, individuals into the only one objective – to achieve higher performance.

Performance management is not a task for one week, one month or a quarter. It is a long and continuous process that allows managers to evaluate the performance, to assess achieving of the goals, to discuss the set goals and what is the most important to adapt the goals and the ways to achieve them to current situation in the internal and external environment. Therefore, in the time of an economic crisis, in the time of worse business conditions it is simple to modify the processes and activities to conform the real economic situation.

Armstrong and Baron define performance management as "a process which contributes to the effective management of individuals and teams in order to achieve high levels of organizational performance. As such, it establishes shared understanding about what is to be achieved and an approach to leading and developing people which will ensure that it is achieved"[7]. They go on to stress that it is "a strategy which relates to every activity of the organization set in the context of its human resource policies, culture, style and communications systems. The nature of the strategy depends on the organizational context and can vary from organization to organization."[8]

Performance management is about establishing a culture in which individuals and groups take responsibility for the continuous improvement of business processes and of their own skills, behavior and contributions. It is about sharing expectations. Managers can clarify what they expect individual and teams to do; likewise individuals and teams can communicate their expectations of how they should be managed and what they need to do their jobs. It follows that performance management is about interrelationships and about improving the quality of relationships - between managers and individuals, between managers and teams, between

members of teams and so on, and is therefore a joint process. It is also about planning - defining expectations expressed as objectives and in business plans - and about measurement; the old dictum is “If you can't measure it, you can't manage it”. It should apply to all employees, not just managers, and to teams as much as individuals. It is a continuous process, not a one-off event. Last but not least, it is holistic and should pervade every aspect of running an organization.[9]

It is obvious that performance management provides great opportunity to manage the company effectively and due to its continuous nature and flexible implementation it offers very effective chance to adapt on difficult conditions of critical periods occurring in any areas of business from time to time.

4. Conclusion

The economic situation today shows that while managing the organizations we must count with any fluctuation and even in the third millennium business is not stable. It is up to managers how to solve the critical situations and how to manage their subordinates to survive in such hard times.

The theories suggest various ways and methods on how to approach to management. One of them is performance management that relies on increase of performance that should ensure achieving of company objectives and this way also help to ensure the company to overcome the critical periods.

Performance management is not about performance appraisal only. It spreads all over the organization and becomes an integral part of any company life.

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Social Networks and their Application in the Academic Sphere

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Abstract. Social networking sites are attracting with a growing tendency the attention of academics, marketers and researchers fascinated by their affordances and reach. Since the beginning of this century, when networks as such stepped into our everyday lives, social networking sites link millions and millions of individual users worldwide. Based on simple, strong and stable principles of social connectivity between various subjects, researchers review the possible benefits of this phenomenon. In this paper we focus on one of this beneficiary uses of these community sites. We hold for evident that the right use of such information sharing platforms in the academic sphere would excel knowledge generation and communication between academic staff, postgraduate students and third party subjects willing to cooperate, contribute and gain university research output at the same time. We will list some key characteristics and factors to sustainable functionality of such proposed platform.

Keywords: Social networks, academic sphere, online communities, research, collaboration.

1. Introduction

Since the introduction of the first generation of information technology hardware, communication was one of the key aspects of further development. From military use it slowly made its way to the professionals and at last with the introduction of the personal computer to the general public. With creation of the first networks, followed by the Internet and services as World Wide Web, computers growing on computing power became a everyday tool of work and what is more important in the present time – common communication. Today, computer networks are everywhere around us. Every second, there are millions of individuals exchanging all sorts of information worldwide – beginning with e-mail messages to all kinds of media files. People all around the world use the Internet to be in touch with colleagues, friends and family. They create, share and consume information at the same time. Connectivity became very important. But why do people care to be connected anyway? We use our computers to get work done everyday, yes, but how do we explain the hundreds of millions people spending their free time by communication with people they even don't know and probably won't meet in real life? What stands behind this phenomenon?

2. Social Networks

In sociology, using a computer network to connect people or organizations is seen as contributing to the creation of a social network, i.e. a set of social relationships in the community [1]. A social network represents a common interest of the people in the

community and it can be defined by the pattern of relations between various subjects [7]. As this, it comprises nodes (usually individuals or organizations) and ties (the connections between them), which may operate at many different levels, ranging from families and close friends to sovereign nations [6]. Social networks often have a critical role in the management of organizations, enabling problem-solving, decision-making, collaboration, and information sharing, as well as facilitating trade and commerce [2].

As a metaphor, the principle of social networks has been known and used for over a century to connote complex sets of relationships. The first, who coined the term was J. A. Barnes in 1954 [3]. Today social networks, real world of computer aided, are in the focus point of entrepreneurs worldwide, who try - with help of complex social network analysis approaches [5] – to see behind the mechanisms of their customer segmentation, purchase behavior, etc.

3. Social Networking Sites

We define social networking[1] sites as web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site. These are the websites that encourage the building of online social networks of members with similar interests, or merely as a communication network using technologies like chat, blogs, discussions and mailing tools [4].

Since their introduction, social networking sites in late 20th century - such as MySpace, Facebook, have attracted millions of users, many of whom have integrated these sites into their daily practices. At the present time there are hundreds of these sites, with various technological affordances, supporting a wide range of interests and practices. While their key technological features are fairly consistent, the cultures that emerge around them are varied. Most sites support the maintenance of pre-existing social networks i.e. Facebook, but others help strangers connect based on shared interests i.e. MySpace, political views, or activities. Some sites cater to diverse audiences, while others attract people based on common language or shared racial, sexual, religious identities. Sites also vary in the extent to which they incorporate new information and communication tools, such as mobile connectivity, blogging, and photo/video-sharing.

What makes social networking sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks. This can result in connections between individuals that would not otherwise be made, but that is often not the goal, and these meetings are frequently between "latent ties" who share some offline connection [2].

Although exceptions exist, the available research suggests that most social networking sites primarily support pre-existing social relations. Ellison, Steinfield, and Lampe [2] suggest that Facebook is used to maintain existing offline relationships or strengthen offline connections.

By reviewing some of the above mentioned websites, we came to a set of few aspects we think of as advantageous and at the other hand disadvantageous for a common user. Some of the below mentioned aspects aren't meant to be general for all social networking sites.

Advantages:

[1] http://www.youtube.com/watch?v=6a_KF7TYKVc

- free to join – a key aspect, which enables network's growth;
- easy customization and use (of interface and functions);
- practical and effective sharing of information;
- chance to find alike minded people;
- maintain a lively long distance contacts;
- immediate alerts and responses to events and posts of fellow members;
- knowledge generation.
-

Disadvantages:

- privacy concerns and lack of anonymity;
- time consuming;
- lose of everyday real world communication;
- possibility of addiction.

4. Collaborative Effects in Academic Use

The most common social networking sites (such as Facebook[2] and MySpace[3]) are not intended for students or academic staff to interact with one another. There is an entire new generation of web-based social networking sites geared to scientists, physicians, researchers, and the like.

There exist various academic social networks in the present time. They include for example sites oriented on:

- general use: Academici, 2collab;
- biology and medicine: BioMedExperts, BioWizard, Nature Network, Ozmosis;
- methodology: Methodspace.

Again, by reviewing these sites we came upon an interesting idea of creating a managed small scale social network within a academic institution or institutions. What would be the basic characteristics of such specialized academic network? With these questions in mind we agreed upon the statement, that every network has to be set upon rules which make it sustainable for future use of its members. In the above mentioned examples of specific social networking sites aimed on research collaboration we identified these basic elements – characteristic of formal academic social network. It should be:

- inline with the organization, hierarchy and communication strategy of the founding academic body;
- professional and non-anonymous;
- semi-open - only credible staff and accredited members should have the chance to join in.

Upon reviewing the elements of a these sites we came upon the conclusion of the following tools a good academic social network should have. We propose a vision of a academic social networking site with these basic functionality tools:

[2] http://www.facebook.com
[3] http://www.myspace.com

- **papers** – ability to post, share, comment, collaborate and review abstracts, papers and documents;
- **profiles** - listings of your professional skills, project groups that you've been, field of expertise, etc.;
- **3rd parties insolent or so-called "bumper zone"** – simple feature to bridge the demand and brain capacity of the network's members with the real world demand on solutions. Companies should see at least a part of the profiles;
- **project groups and discussion boards** - being able to set up research groups would be really interesting;
- **event calendar** – feature to share information on conferences and other relevant events searchable by categories;
- **fulltext search capability** – in members profiles (their skills and fields of expertise), discussion groups and papers.

As a next step, set of control indicators should be defined to be able to review the sustainability of such a network. It's here for discussion what a "healthy" academic network should look like. We propose traffic and output measurements i.e. the level of demand of other academic employees and 3rd parties to join in would be trasparent indicator of success.

5. Conclusion

Social networking sites based on the natural behavioral patterns and principles bound by the concepts of social networks represent a popular tool of information sharing in our private and working lives. New possibilities of use came with time and to date researchers understand the basic mechanisms behind the success of such tool fair well. It gives us the possibility to expand and strengthen the everyday collaboration between fellow research staff and the business sector. It creates a transparent and productive environment – a bridge linking the sometimes introvert research capacities of a academic institution with the real life demand on knowledge and out of the box solutions. By this we foresee a beneficiary collaboration in which students and their tutors cooperate on real problems and see the effect of their actions.

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Innovation Problem at the Universities and Possibilities of its Solution

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Abstract. Innovations in general mean changes by implementing new or significant improved product. Innovated product means a product, service, marketing's or organizational method at the workplace or in external cooperation. Changes can be considered as innovation when product, service, process or methods bring new or very improved solution. Innovations are very often connected with information and communication technology nowadays. Its implementation could bring the fundamental innovations changes. Information and communication technologies are implemented at the universities environment but there are not significant changes in the providing of education services. It can't be said that the innovations at the universities are implemented at a upper level. Some areas of innovations and the possibility of its solution at the universities are described in this contribution.

Keywords: Innovation, Strategy**,** Innovation Management, Long-term aims

1. Introduction

Lisbon strategy is the basic strategic document for economy development in Europe nowadays. Competitiveness Strategy for the Slovak Republic until 2010 [1] is the basic overall strategy of economics development of the Slovak Republic until 2010. It is the basic document that started up the way of Long-term Slovak competitiveness and creates a condition for the knowledge economy. The knowledge economy means that productivity growth will be based on the Slovak people accomplishment to work with new information, produce new knowledge and use them in the practice. Four most important areas are needed for the knowledge economy development:

- Education and employment
- Information society
- Science, R&D and Innovation
- Business environment

University education is directly related to all of the above areas. Each of the areas has its priorities specified, and some of these are directly connected to education.

2. Strategic areas of development

The most important priority in the area of Education and employment is a modern educational policy, which needs to be provided by all educational institutions. It needs to be related to a universal and complex system of measuring the quality of teaching and institutions. The reform must provide the student with a high level of freedom to choose a school, and the school with the possibility to select the form and content of the education.

At the university level it is necessary to focus on an enlargement of capacities and improving quality. The key to achieving the goal is creating a flexible system, in which universities will be able to react, in particular, to the requirement of the labour market and to those of young peoples´ demands, as well as to the demand of a life-long learning. The best of the universities will at the same time become research and development centres at an internationally comparable level.

In the Information society area, the following priorities are directly related to the education: information literacy and providing information literacy of all age and social groups of inhabitants. Therefore, it is necessary to change the traditional school as soon as possible into a modern one, and at the same time, it is also necessary to change the contents and form of education, with regards to the information society.

The main goal in Science, R&D and Innovation area is to ensure a long-term development of a quality science potential. The main objectives in this area are "raising and supporting highly qualified scientists, research of international quality, adequately interconnected with the business sector and effective public support of business activities in the areas of R&D and innovations" .Therefore it is necessary to introduce the mechanisms of independent programmes and projects of quality evaluation, and compulsory publishing of the results of all public supported research projects.

Area Business environment priority Effective public support of business activities in the areas of R&D and innovations specifies the following goals for universities "to include the classes aimed at basic business knowledge and skills into the standard of educational structure of technical universities and to improve educational activities on the possibilities of venture capital for business people and potential business people."

The solutions above mentioned areas are coordinated by the government but the final implementation is the competence of universities and colleges. The implementation itself is up to the academically employees themselves.

3. Universities plan strategically

Each university is supposed to integrate the strategies into their own development strategies. Slovak universities have processed their strategies into their Long-term aims. There they express their strategic goals in different areas of activities.

Within the framework of the research activity "Possibilities of implementing innovative management at universities", we have carried out an analysis of the Long-term aims of eight Slovak universities at the University of Žilina, [2]. By means of comparative analysis we have investigated the identical innovation activities of the universities, in which we would like to use the innovation management principles.

The Long-term aims of the universities have been very different. They have no unified structure, nor the contents. To be able to compare them, we had to select unified comparative parameters, in order to achieve the required result. What had inspired us when selecting the comparative parameters were the Long-term aims of the Commenius University in Bratislava and the University of Žilina in Žilina. Their aims have explicitly specified two main areas of the development: Education and Science and research. Other specified areas are to provide support for the main areas. The subdivisions of the supporting areas are also different. We have chosen the comparative parameters according to which the most remarkable innovation activities have been declared.

The following innovation activities comparative parameters have been created according to the analysed strategic aims see table 1. – 3. This universities were compared: TUKE –

Technical University Košice, STU - Slovak Technical University Bratislava, UKF – Constantine the Philosopher University in Nitra, UMB – Matej Bel University Banská Bystrica, TUZVO – Technical University in Zvolen, ŽU – Universizy of Žilina, UK – Comenius University in Bratislava.

UNIVERSITY ACRONYM	STUDY PROGRAMS INNOVATION ACCORDING TO THE NEEDS OF THE PRAXIS	MODERN TRENDS IN EDUCATION	ICT SUPPORT IN EDUCATION	STUDY PROGRAMS IN FOREIGN LANGUAGE	QUALITY MANAGEMENT AND CONTROL IN EDUCATION	EMPLOYMENT OF THE GRADUATE STUDENT MONITORING	ADVISORY INFO CENTRE	STUDY PROGRAMS JOINT WITH FOREIGN UNIS	LLL
TUKE	yes	yes	yes	yes	yes	yes	yes	yes	yes
STU	yes	yes	yes	yes	yes	no	yes	no	yes
UKF	yes	yes	yes	yes	yes	yes	yes	no	yes
UMB	no	yes	no	yes	yes	no	no	no	yes
TUZVO	yes	no	no	yes	yes	yes	no	no	yes
ŽU	yes	yes	yes	yes	yes	yes	no	yes	yes
UK	yes	yes	yes	yes	yes	yes	yes	yes	yes

Tab. 1. Innovation activity in the education area

UNIVERSITY ACRONYM	RULES FOR COMPLEX PROJECT DEVELOPMENT WITHIN RESEARCH PROJECT TEAMS	ACTIVITY SUPPORT FOR RESEARCH AND DEVELOPMENT ISSUE REALISATION	RESEARCH AND DEVELOPMENT JOIN WITH REGIONAL INNOVATION STRATEGY	CENTRAL SYSTEM OF PROJECT REGISTRATION	SECTOR RESEARCH AIMS DEFINING	TECHNOLOGICAL PARK/ INCUBATOR/ UNIQUE PLACE OF WORK	LAB INNOVATION
TUKE	Yes	yes	yes	no	yes	no	yes
STU	Yes	yes	no	no	no	yes	yes
UKF	Yes	yes	yes	no	no	yes	no
UMB	Yes	yes	yes	yes	no	yes	yes
TUZVO	Yes	yes	yes	no	yes	yes	no
ŽU	Yes	yes	no	yes	no	no	yes
UK	Yes	yes	no	no	yes	yes	yes

Tab. 2. Innovation activity in the science, research and art

UNIVERSITY ACRONYM	INTER-NATIONAL COOPE-RATION	HUMAN RESOURCE AND SOCIAL CARE	COPLMEX QUALITZ SZSTEMS	ORGANISATI ON AND MANAGEMENT	PUBLIC RELATION	ICT DEVE-LOPMENT	INVESTMENT AND MATERIAL DEVELOPMENT	MULTI-SOURCE FINANCING	BUSINESS AND REGION SUPPORT
TUKE	yes	Yes	no	yes	no	yes	yes	yes	yes
STU	yes	Yes	yes	no	yes	yes	yes	yes	no
UKF	yes	No	no	yes	yes	yes	yes	yes	no
UMB	yes	Yes	no	yes	yes	yes	yes	yes	no
TUZVO	yes	No	no	yes	yes	yes	yes	yes	no
ŽU	yes	Yes	yes	yes	no	yes	yes	yes	no
UK	yes	Yes	yes	yes	yes	yes	yes	yes	no

Tab. 3. The supporting areas

The Long-term aims analysis has unambiguously confirmed that the universities have been expressing their need for innovation changes. The need has mainly been expressed in a form of strategic goals, and requires processing the tactics part which would provide methods and instructions of how to implement the strategic goals. This finding is the starting point of the groundwork/cornerstone/basic hypothesis for our next research.

4. Basic hypothesis for next solution

Conclusion from the previous chapters can be resumed as a concrete problem: The need of the society changes are declared in an European and Slovak strategic document. The changes are caused because of the ICT rapid development. This problem can be for universities also developed. Implementation of the innovations needs connection with new knowledge that people obtain in various form of education. If arrive the change in society so have to be arrive the change in education.

Next part of the solution is definition of assumed hypothesis, which shows the first condition of what is needed to be solved.

These are 3 basic hypothesis:

- Implementation of long-term aims demands systematic approach in solution
- Implementation of innovations has to be managed and realized on the basis of elaborated methodics
- Innovations and implementing of ICT have to be linked very closely.

Are above described hypothesis right or not? These are the next tasks in our research.

5. Conclusion

Nowadays one can enunciate that a lowest levels innovation have been minimal implemented at universities, and also the mission of the Lisbon Strategy has often been understood just as a document without any particular implementation conclusions.

A system approach is needed for the successful implementation solving. Innovation management principle can be used as the basic methodology. The innovation management is a set of new methods and approaches of management, which is necessary for the implementation of an innovation. How set of methods in needed for the universities innovation we will find in our next research.

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National economies in the globalizing world

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Abstract. Globalization of the world economics is a stage and a continuation of modernization, which is a special form of transformations that embrace and change all spheres of the social life. Globalization has an essential influence on economic development in all the states of the world. This process may have positive as well as negative consequences. Today we are the witnesses of vivid demonstration of one of the globalization vices, namely, the world economic crisis, whose possible consequences are felt by all national economics. It is possible to mitigate negative consequences of the crisis, evoked by globalization if a country would choose an alternative evolution plan, namely, economic nationalism, based on own historical experience of economic practice, as for this basis the economy type and the economic methods were elaborated. Besides the economic practice must conform to historical, geographical, demographical factors and institutions, such as national mentality, traditions, norms and customs.

Keywords: national economics, globalization, mentality.

1. Introduction

Every country possesses its own historical experience of economic life. Economic types and methods conforming to historical, geographical, demographical factors and institutions such as national mentality, and traditions and norms interconnected with it, are elaborated on the basis of the experience. In their turn the traditions and customs are the existence forms of norms and models, and they are accumulated and turned over to the next generations. In addition, this transfer guarantees conservation of repetition of definite situations that have great significance for society.

2. Globalization and the specific development model

The specific development model was imposed upon the traditional societies in the process of modernization. Modernization is a process of the transformations directed to the changing of all spheres of society life and to their approximation to the models of Western European civilization. This model were formed in Western Europe at XVII – XIX centuries and were propagated in economical, political and ideological aspects all over the world. The globalization may be seen as a latest stage and a part of modernization process that is desirable and useful not for everybody, but being inalienable element of modern development process of the human society.

Globalization appears as the universalization of the connections and relations, as a formation of the united structures within the various spheres of the public life all over the world. First of all globalization is the objective historical process, the reality of the external world.

Integral human nature and the law-governed nature of social evolution in common are reflected in this process.

Measured by the majority of the main parameters of the social life, at the beginning of the XXI century the world is becoming an integrated system. So the individual states and peoples do not have enough possibilities to choose from – to be or not to be included into the globalization process. They are doomed to take part in this process by the natural course of events, for they can't dodge the integration into the international community.

Peculiarity of this process is linked to the following circumstance: the globalization moves the country's economy to the new quantitative level, smoothing and annihilating the country's cultural and historical distinctions.

However there are factors that can be the drags of globalization process. The person is among the most important factors that influence the economic development. Therefore the leading role is given to the concept of national mentality nowadays. Modification of human consciousness, manner of the economic thinking, norms of activity, mentality is a key to successful society modernization.

Mentality question may be seen as the ideological or socio-political and socio-economic one that can explain the special features of the economic development of any constitution, including the State nation. It also can explain the historical state path by the means of the economic development.

Unfavorable factors influencing the globalization process are the conservation of traditional society elements and absence of the rational consciousness among the majority of people. Correction of consciousness may lead to the possible creation of the efficient system of social, economic, political and cultural institutes and relationships that will be agreeable to the Western ideals, establishments and institutions of civil society, that are based upon the Roman laws and Western Christianity. However, the that nations have forgotten their own traditions and changed their own mentality during instantaneous modernization impacts, can lose their individuality and own nationality.

Various personality types and various national mentalities were formed by influence of different natural and social factors. The distinctions conditioned different conceptions of economic liberties, purports and fundamental principles of economical activity. The West-European mentality is based on the concept of Protestantism which is remarkable for the strongly marked rationalism and individualism that are necessary for capitalism building. Nevertheless it was expansion of West European civilization that determined the main features of world history development at last centuries.

Globalization has a number of positive aspects. There are benefits of international labor division, increase of technological innovation exchange, high capital and labor power mobility, commodity market expansion.

But the positive appreciations of globalization are typical for the certain type of the world outlook, for the persons from the "golden billion", who are cosmopolitan in conformity with their mentality and their perception of the world. Such mentality is formed by the lifestyle and by the wide possibilities for the use of material and spiritual goods provided by the global civilization.

An overwhelming majority of the Earth population is on the low socio-economic development level. Poverty, destitution and the absence of the prospects push this majority to the roadside of the world development processes.

It is the most important cause that the negative appraisal of globalization preponderates obviously all over the world.

Globalization is seen as a threat to the national interests first of all in the fields of economic, politics and culture.

There are as well negative outlay and consequences which are dangerous for all countries. American economist and politician Patrick Buchanan picked out four negative globalization consequences. The first was the intensification of the people's and the countries' division into the rich and the poor. The second was the loss of independence and national sovereignty. The third consequence had vital importance for highly developed countries. It was the deindustrialization and denationalization of the industry. These outlays are expressed in the form of the capital motion from the developed countries to the states with cheap labor. The other form is the movement of the labor force from cheap countries to developed ones, where the resident workers can not compete with the newcomers. The fourth consequence is a country's vulnerability to financial crises, which periodically come and inevitably are uncontrollable. As a result, all countries suffer through crisis being independent on their economic development level [1].

Humanity looks for a way to overcome the global problems and attempts to formulate the world outlook principles. On the basis of those principles different peoples and states must co-ordinate themselves.

It is possible to mitigate the negative consequences of the outlay evoked by the globalization by making a choice of the alternative evolution plan, namely economic nationalism.

As an important obligatory rule, the solution must be passed on the basis of the best interest of the nation, but without detriment to the others.

3. Conclusion

For Russia, being made weak as a result of sudden transition from the planned economy to the market one through "perestroika" and privatization, accompanied by the erosion of all social, economical and political connections, the absence of globalization outlay consideration can result in further lowering of industrial and agricultural production, life level, worsening demography indicators. For the further development of Russia as a great State, for the sake of economics renovation and normalization of the social relations it is necessary to find the ideology that will correspond to social; economical and political reality, and will take into account the Russian mentality peculiarities, which were formed under the influence of many factors during the long and tragic Russian history. We must understand the direction of the world economic development, we must know the deformations, that have already happened and are currently taking place within the capitalist system after its victory in competition with Socialism. In the transition era which we currently endure, when all people and all states sense regeneration necessity, Russia is in need of reorganization more than the others. But the reformation must be carried out most deliberately and as carefully as possible.

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The Knowledge Management as Process in the Enterprise Practice

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Abstract. This paper advice the single steps of the knowledge management process involved by the needs of enterprise practice. The knowledge management process included fight important parts, that are identification of need for knowledge, knowledge sharing, creation of knowledge, knowledge storage and knowledge update. Each of those steps contains necessary activities towards to effectiveness, enhancement and improvement of each business process realized by the enterprise on its way to achieved business goals.

Keywords: knowledge management process, knowledge, strategy, business process.

1. Introduction

For the enterprises that towards efforts to implementation of knowledge management process have a choice in different knowledge management strategies. For some enterprises could be knowledge presented as a product, it means the knowledge is generated, packaged and sold.

Another enterprise could choose strategy in transfer of knowledge and best practices by identification of best practices and transfer to other parts of the company or strategy established on customer focused knowledge what is realized by capturing customer's needs, preferences and businesses to increase sales.

It is also possible implemented the strategies like are: personal responsibility for knowledge based on support every single people in identifying, maintaining and expanding his or her knowledge and strategy resulted from intellectual assets management - enterprise level management of specific intellectual assets like technologies, patents and operational and management practices.

2. The knowledge management is a important process into business processes

Knowledge management is possible to define as systematic and integrating process of managed and coordination in wide portfolio of enterprise activities how to received, created, linked captured, shared, developed and used knowledge of individuals and groups for the purpose achieved higher enterprise effectiveness.

The necessary option of implementation knowledge management process to business strategies and business processes presents cooperation between the enterprise, people, knowledge, knowledge process and infrastructure of enterprise. Knowledge management implementation into enterprise practice created as the advance in the next steps:

1. Determine critical knowledge includes analysis of typical knowledge fields, determine knowledge assets and determine knowledge content in knowledge assets, identification space of creation knowledge and identification of people who works with knowledge.
2. Identification of knowledge intensive business processes, it means coordinate process to knowledge assets and description of process.
3. Determine employees provided knowledge intensive business processes.
4. Organization of employees and their competences.
5. Determine information technologies into knowledge process.
6. Designed implementation plan of knowledge system includes inventory of knowledge intensive processes and inventory of storage in knowledge, creating of design in system of knowledge management in the enterprise and inform the employees with knowledge management system.

Knowledge management is a systematic approach in creation, capturing, sharing, using and in active utilization of knowledge with goal of enhanced enterprise performance. It means the knowledge management is a process of identification need for knowledge, knowledge sharing, knowledge creation, knowledge storage and knowledge update.

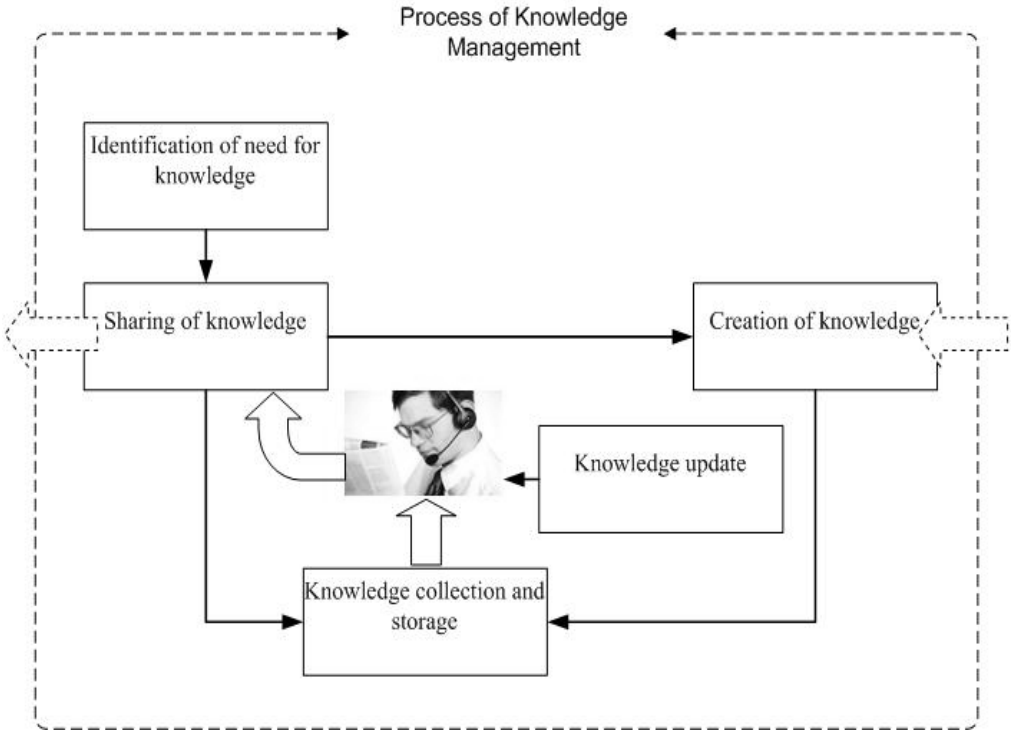

Fig. 1. Knowledge management process

This figure shows relations, internal knowledge flows and external knowledge flows and flow activities between the single parts of knowledge management process. Internal knowledge flows are presented by thick solid arrows. External knowledge flows are presented by thick dashed arrows. Flows activities are presented by solid line with arrows. At the beginning of knowledge management process stand need for knowledge then supposed be

people willingness of sharing the captured knowledge in the storage of inside the enterprise and outside, but also sharing the new knowledge what has been created by the sharing knowledge through internal and external knowledge flows. But can't be forgotten knowledge update what is necessary especially in the present age characterized by changes. This includes changes of markets so as changes of business strategies, technologies, processes and customer needs.

2.1. Identification of need for knowledge

Identification of need for knowledge is a process where the input of identification process depended on the area of application and various types and origins. Then it is necessary to indentify the need for knowledge by the activities of knowledge management. The next step of this process is determining of the identification it means that somewhere is a need, expressed by someone for knowledge a specific purpose. The output of identification process is the identification of the need for new knowledge initiates the determination of the requirements on the needed knowledge.

First important thing is, before knowledge can be shared or created, the need for knowledge has to be identified. Additional requirements on it have to be determined to allow finding the right knowledge in the case of sharing and to enable the creation of the right knowledge in the case of creation.

The needs for knowledge appear when starting run business in a new business area for example, when starting to production of new products, becomes a need of using new techniques and technologies implementation in the production process. These needs are brought out when improving current work practices by implementing the new business processes and when changing the type of market. It exist various possibilities that may lead to the identification of a need for knowledge, such as:

- The analysis of business processes can identify shortcomings that lead to a need for additional knowledge.
- When starting implementation of new business strategy to enterprise practice, the question whether existing knowledge can help in performing it must be answered. For example, when starting a development task on management information system design, knowledge of management information system in general and specifically from the project viewpoint is needed; consequently, it is possible to utilize knowledge embedded into already existing management information system modules.
- When the business activities are starting in new type of market implies a need for new knowledge, for example when starting work with different type of enterprise such as the change from a small service enterprise to Manufacturing Corporation.
- The changes in the customer segment, like for example orientation on the new customer groups, new development of marketing strategies, etcetera are likely to act as triggers for needs of new or at least changed knowledge.
- Providing of analysis in the management projects (measurement analysis, lessons learned) can help to identify a need for knowledge to solve specific problems that have occurred.

In the fact of two types of need identification can be differentiated: identification in advance during planning (for example planning the change to another business strategy) and identification during performance, for example when starting development of business project.

2.2. Knowledge sharing

One of concrete options in implementation and function of knowledge management is knowledge sharing culture it means culture of sharing knowledge and important information. It is actually willingness in share of own knowledge, skills, findings and it allowed profitable for all employees in profit to whole enterprise.

Same important expectation is also the skill of employees understated the context within concrete knowledge has been created so as their willingness this knowledge accept, adopt them and next used them and enhanced them. Knowledge management a goal is to provide a means of sharing knowledge, and all other processes are more or less enablers for this. Sharing knowledge is a complex and difficult process. The right knowledge has to be found, must be transferred and needs to be absorbed, id est. brought into proper use. Searching is a problem if there is a large amount of knowledge available and the right knowledge becomes difficult to find. The technology used must suit the knowledge management process. Still the success furthermore depends on factors like environment, type of organization, psychological issues.

Exist two ways of how knowledge sharing is performed: the active pull of knowledge needed and the passive push. The first way includes all cases where the project members identify a need for knowledge. The knowledge is searched for, retrieved if available, and then adopted. Knowledge can be pulled by either direct communication between people or by utilizing information technology systems. Beside the knowledge retrieved, also it exist the important variant of transfer of knowledge to people known to need it, what is called knowledge push. It might be sensible to inform certain persons about new knowledge.

2.3. Creation of knowledge

Creation of knowledge can understand as continual process within individuals conquered the barriers and limits created by information and knowledge form past and they received new view on reality, they perceived and understated new relations and they achieved new enhanced knowledge. A strict of knowledge sense is generated in the minds of people only. It is hard but possible to steer this process by making people deal with specific topics. Additionally, knowledge creation can and should also take place in an uncontrolled manner. This process is similar, whether it is initiated in a controlled way or takes place unconsciously. After the need for knowledge has been identified, available options are determined. These represent the possibilities to acquire the desired knowledge, for example through sending people to training, have them read books, assigning a consultant that provides knowledge, etcetera. An evaluation of the identified candidates then leads to a decision on which approach should be taken to get the knowledge. The candidates need to be evaluated and the selected candidate needs to be modified to fit the surroundings. New knowledge is the product produced as a consequence of all this.

2.4. Knowledge collection and storage

In the enterprise the knowledge can be stored in documents, manuals, minds of employees and technological processes. Collection and storage of knowledge is presented by the processes identify, evaluate, codify and store knowledge. Depending on the way the processes have been planned this might simply mean an update of a knowledge map or the storage of packaged knowledge into an electronically realized knowledge management system. Whenever new knowledge is generated this needs to be recognize first to be able to collect and store it. As the knowledge may arise unconsciously from everyday work, it is not principally identified, except in the case of consciously driven knowledge generation. After new knowledge has been identified, an evaluation is needed to determine whether the

knowledge is worth integration to the repository. If the knowledge has been decided to be worth making it available using a knowledge repository, then knowledge package needs to be designed, the knowledge needs to be codified to it and the package needs to be integrated to the repository. Any further changes in the knowledge environment require the knowledge map of the enterprise to be updated.

2.5. Knowledge update

The present age is defined as environment full of change it means that the needs of market are rapidly changing so as the customer's expectation, business strategies, business processes, production, management, marketing politics and the same applies to knowledge. From this point the changes touched also people thinking, technologies and products, but also politics. Consequently, there arises a need to verify if knowledge is still up to date in order to exclude expired knowledge. The validity of knowledge has to be checked and outdated knowledge needs to be updated or removed. To perform these activities, one needs to identify the need for such actions first. To know and accept that knowledge and its use change over time is an essential principal that needs to be addressed in knowledge management. Even small changes in the environment and or the working processes may require the knowledge to be modified. While this kind of change might sometimes be predictable, so that the according knowledge packages can be updated beforehand, it is likely that especially smaller changes happen without the knowledge being updated accordingly. Needed changes to knowledge need to be identified, because the acceptance of the whole system might be endangered as outdated knowledge calls the system in question as a whole. Updates on knowledge can take various forms; therefore an evaluation of the needed changes is necessary.

3. Conclusion

At present age of information, changes and world recession each enterprise tried insists market position. The market becomes constantly changes, so as the enterprise needed to change its approach of activities towards on the market. It is necessary changed the properties of the products and forgot what is right now inept and concentrate on market needs. The knowledge is the key how to survival on the market. Just who has knowledge would survival, what is today above standard tomorrow it doesn't need to be tomorrow. The knowledge management process gives the chance of improvement each of business process by implementation of knowledge management activities into enterprise strategies. The knowledge allows enterprises to make better decision.

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Materials Management - Purchasing

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Abstract. This article deals with materials management. Materials management is the branch of logistics that deals with the tangible components of a supply chain. Integral aspects of materials management include purchasing and procurement. Procurement is a wider term than purchasing. These terms are often used interchangeably, although they do differ in scope. Purchasing generally refers to the actual buying of materials and those activities associated with the buying process. Procurement is broader in scope and includes purchasing, transport, warehousing and all activities related to receiving inbound materials.

Keywords: Materials management, purchasing, procurement, costs.

1. Introduction

The logistics management is concerned with the efficient flow of raw materials, in-process inventory and finished goods from point of origin to point of consumption. As a part of the logistics management process is materials management, which encompasses the administration of raw materials, subassemblies, manufactured parts, packing materials and in-process inventory.

Fig. 1 shows that logistics is comprised of both materials management and distribution management.

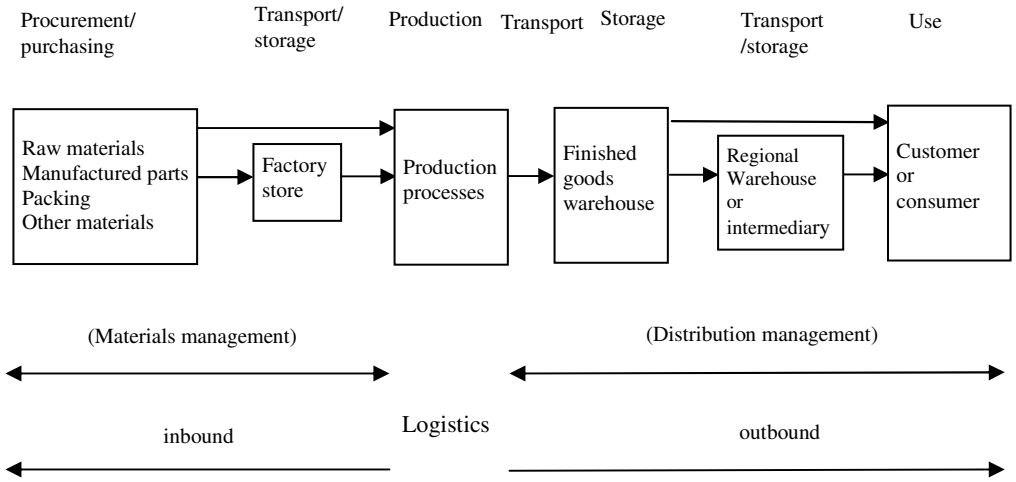

Fig. 1. Scope of logistics management

2. Materials management

Materials management is critical to the total logistics process. Although materials management does not directly interface with the final customer, decisions made in its portion of the logistics process will directly affect the level of customer service offered, the ability of the firm to compete with other companies, and the level of sales and profits the firm is able to achieve in the marketplace.

Without efficient and effective management of inbound materials flow, the manufacturing process cannot produce products at the desired price and at the time they are required for distribution to the firm‘s customers [2].

2.1. Scope of Materials Management

- Materials management is typically comprised of four basic activities:
- Anticipating materials requirements
- Sourcing and obtaining materials
- Introducing materials into the organization
- Monitoring the status of materials

Materials management is concerned with the flow of materials. As shown in Tab. 1 [1].

Materials flow	Typical activities
Planning	Preparation of materials budgets, product research and development, analysis, standardization of specifications.
Procurement	Determining order quantities, stores requisitions, issuing enquiries, evaluating quotations, supplier appraisal, negotiation, placing contracts, progressing deliveries, certifying payments, vendor rating .
Storage	Stores location, layout and equipment, mechanical handling, stores classification, coding and cataloguing, receipt of purchased items, inspection, protection of stores, providing cost data, stock records, disposal of obsolete, surplus or scrap material.
Production control	Forward ordering arrangements for materials, preparing production schedules and sequences, issuing orders to production, emergency action to meet material shortages, make or buy decisions, quality and reliability feedback and adjustment of supplies flow to production line or sales trend.

Tab. 1. Materials flow activities

Functions performed by materials managers include purchasing or procurement, inventory control of raw materials and finished goods, receiving, warehousing, production scheduling and transportation.

2.2. Major objectives of materials management are following:

- Low costs (to optimize materials costs, capital costs and overhead expenses).
- High level of service (to optimize response towards production and markets).
- To maintain and improve the quality of material.
- Low level of tied-up capital (to optimize capital tied up in inventories).
- Support of other functions (to support sales and design development, etc.).

Integral aspects of materials management include purchasing and procurement, production control, inbound transport, warehousing, management information system, inventory planning and control and salvage and scrap disposal.

3. Purchasing and Procurement

Procurement is a wider term than purchasing. These terms are often used interchangeably, although they do differ in scope.

Purchasing generally refers to the actual buying of materials and those activities associated with the buying process.

Procurement is broader in scope and includes purchasing, transport, warehousing and all activities related to receiving inbound materials [2].

Purchasing can be depicted as a sequential chain of events leading to the acquisition of supplies in Fig. 2.

The link in the purchasing process chain is information. Each sub-process in the chain is responsible for capturing or otherwise processing information that enables us to answer the questions (for example: What are we required to purchase?, Where and how can the required supplies be obtained?). A process chain relationship can therefore also be considered a message chain relationship. Previously messages, both internal (such as requisitions) and external (such as order and payments), were transmitted on paper documents via the mail. Nowadays is used common electronic transmission (EDI – electronic data interchange, e-mail). The electronic transmission has revolutionised the cost and speed of purchasing processes.

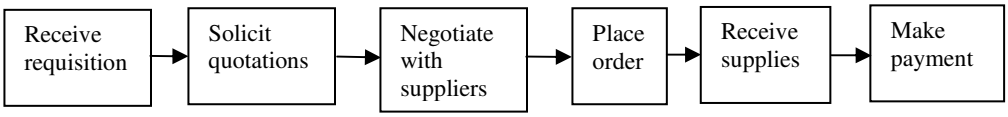

Fig. 2. The purchasing process chain

Giunipero's and Pearcy's study identified the following ten subjects as the most important to purchasers:

- Total cost analysis
- Negotiation strategies and techniques
- Supplier/partner management
- Ethical conduct
- Supplier evaluation
- Quality techniques
- Purchasing strategy and planning
- Price/cost analysis
- Electronic data interchange
- Interpersonal communication

3.1. Purchasing marketing mix

Elements of purchasing marketing mix for a company (as the purchaser with different intensity) which it uses these elements towards supplier are following (G. Tomek a J. Tomek):

- Information mix
- Communication mix
- Supplier mix
- Competitive mix
- Price mix
- Product mix
- Quality mix
- Quantity mix
- Term mix
- Mix of purchasing conditions

4. Conclusion

Effective logistics plays an important role in effective materials management. Purchasing focused on getting the right product or service to the right place at the right time – in the right quantity, in the right condition or quality, and from the right supplier at the right price.

As organizations have developed and matured, the role of materials management has expanded to meet the challenges of market-driven, rather than production-driven, economies. While many things, such as the need to reduce costs and provide high levels of customer service, will remain important, materials management will be characterized by a changing set of priorities and issues: global orientation, shorter product life cycles, electronic data processing and interchange, lower level of inventory (important role of procurement) and market-orientated focus.

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Innovations in the Postal Sector

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Abstract. Article deals with implementation of innovations in the postal sector. First, there are defined key factors (globalization, liberalization and development of information and communication technologies), which have influenced postal sector in recent years. Postal operators have to respond to changing environment and build up competitive advantage. They need to innovate in order to adapt changes, overcome weaknesses and improve provided products and services. Consequently there is listed product innovation which represents introducing of new or improved product and process innovation focused on enhancing efficiency. At the conclusion, there are mentioned real examples of product and process innovations in Swiss mail sector.

Keywords: Globalization, liberalization, development of ICT, product innovation, process innovation.

1. Introduction

During recent years, postal sector have been undergoing important changes. Main factors which influence this situation are: globalization, liberalization of postal market and development of information and communication technologies (ICT). Traditional postal operators need to improve efficiency, reduce costs and develop new streams of revenue. In effort to accomplish these objects and build up sustainable competitive advantages, they need to innovate. Because only through innovation it is possible to deliver increase of productivity and better fulfill growing customers' expectations in a digital world. [5]

2. Key factors influencing postal sector

As we have mentioned above, there are three main factors which influence postal sector:

- **Globalization** – integrates various fields (economic, politic, cultural, environment, etc.), wipes differences and create homogenize world culture. Enterprises try to expand worldwide their products, services and localization. And so they are looking for global postal services and solutions. *"Trend in demand is for postal and logistics services to be more standardized, available from a single buying-point, across geographic areas and transport modes, for all consignment weights and types, in a range of time-definite options."* [7]
- **Liberalization** – gradually eliminates the monopoly role of traditional postal operators and opens market for new competitors' entry. Increasing number of competitors can both positive and negative influences traditional postal operators. On the one hand, competition forces them to increase effectiveness and reduce production costs, what leads to the optimalization of profits. But on the other hand, competition decreases

rents of traditional postal operators and may reduce its market share and so they have fewer sources for investing in new processes and technologies. [2]

- **Development of ICT** – raised substitution of traditional postal services by various electronic products (also called e-substitution) and so has contributed to decrease of mail volume. Postal operators in several European countries (Belgium, Finland, the Netherlands, Luxembourg, etc.) estimated that e-substitution has reduced only the volume of addressed mail of about 4 %. Moreover, development of ICT has changed customers' behavior and their expectations towards postal services. Nowadays they want faster, reliable and more sophisticated services available from any place with internet connection. Fig. 1 shows e-products provided by postal operators in four lines of postal services – messaging, retail, distribution and financial services.

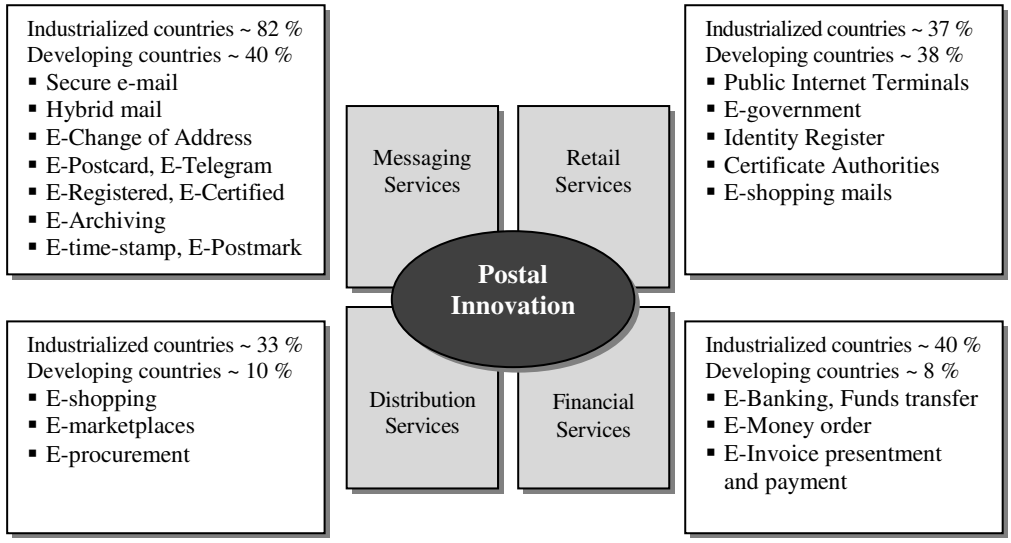

Fig. 1. E-products provided across four lines of postal services (Source: International Bureau of the UPU, 2006).

The ability of postal operators to build up sustainable competitive advantages largely depends on their competences to cope with changes in environment and express innovative behaviour. Right in changing environment, innovations present key factor for adapting changes, overcoming weaknesses and improving provided postal products and services. [5]

3. Innovations in postal sector

For a long time, innovations in the postal sector were focused on improving efficiency of manual processes and their automating through new mechanical and technological developments. Since that innovation has shifted from rapid change development of new services (using traditional postal tools in a new way) to opening up new forms of access and availability of postal services.

We can distinguish between:

- **product innovation** – represents introduction of new or substantially improved product (its functional characteristics, abilities, etc.) and
- **process innovation** – focused on increasing efficiency and reducing costs.

In the postal sector, *product innovations* were supported by development of ICT. It facilitated new possibilities for adding value to traditional postal services and helped postal

operators become smarter and able to better fulfill customers' expectations. Through technology innovations can operators offer multiple web services (for example e-banking, mail-accounts, etc.) and so partially compensate effect of e-substitution. [4]

Process innovations appear throughout the whole postal value chain. At the collection, ICT help to integrate operations of traditional postal offices and enable realize hybrid mail. At the sorting can be used OCR technology (Optical Character Recognition) which increases speed and quality of sorting. Another technology – RFID (Radio Frequency Identification) facilitates "Track and Trace" thanks to which can customers control their shipments. In transportation and delivery can be used software for transport simulation and load prediction which help to optimize mix of transport means. Other innovative inspirations are pick-up locations and boxes for parcel deliveries to households. [4]

Postal operators try to innovate and so create competitive advantage. Between prominent European postal operators in the field of innovations belongs Swiss Post. During recent years it has implemented several product and process innovations.

3.1. Product and Process Innovation in the Swiss mail sector

Swiss Post experienced a series of product innovations in recent years (see Tab. 1). Most of the products reflect positive trend in the use of direct marketing or depend directly on the availability of telecommunication technology. Revenues generated by new mail products increased from around 0,5 mil. Swiss Francs in 2003 up to 3 mil. in 2007. The performance is measured since 2003, because earlier product innovation was obviously not an important issue. One can said that liberalization (or its expectation) must have had major impact on innovation. [3]

. Year	Product innovation
2003	Direct Response Card; Direct Marketing Services; Hybrid Post; Geo Post; Mail2Paper
2004	Direct Response Card; Hybrid; Virtual Direct Mail; Promo partially addressed; Geo; Address data; Sorting data
2005	Free newspapers; On Time Mail; Direct Self-mailer
2006	Free newspapers; On Time Mail; Direct Self-mailer; Prepayment Post

Tab. 1. Product innovations at Swiss Post Mail (Source: JAAG, Ch.: *Innovation in the Swiss mail sector: deregulation versus liberalization)*

Besides product innovations there are also process innovations focused on reduction of costs. Implementation of OCR technology allowed automatic sorting. Since 2009 project REMA (Re-engineering Mail Processing) centralizes sorting activities and has reduced number of sorting facilities from eighteen to three (with six sub-centres). This results in large gains from the exploitation of scale economies.

Another process innovation has been implemented in optimization of the postal outlet network. Between 2001 and 2005 was reduced the number of full postal outlets from 3 396 to 1 767. There were newly created 657 outlets with a reduced choice of services and 126 postal agencies. Households beyond the reach of a postal outlet are served with postal products at their doorstep by the postman during his mail delivery tour. Swiss Post claims that 600 outlets would be enough for full-area coverage. Further restructuring is restrained by tight regulation. [3]

4. Conclusion

Nowadays, postal operators have to confront three main factors – globalization, liberalization and development of ICT. In order to keep the position on the postal market and build up sustainable competitive advantage, they have to innovate. Because innovation can increase productivity and better fulfill growing customers´ expectations in changing postal environment.

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The Impact of Crisis to Automotive Industry in the Slovak Republic

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Abstract. The article shows the impact of global economic crisis on businesses operating in the automotive industry. It describes the key role of the automobile industry in the economy of the Slovak Republic and its interdependence with other sectors. It deals with the options to mitigate the negative impact of crisis on the industry through government action.

Keywords: economic crisis, GDP, contribution to the scrapping Introduction

1. Introduction

The automotive industry is constantly changing industry, the results are affected by economic developments, and especially customers. It is essential that every car manufacturer is constantly evolving, discover new technologies, while maintaining the claims raised by the quality, upgrade parts, bring to market new models, has worked with other car manufacturers and makes the customer with an offer that reflects their requirements.

Prerequisite for the functioning of the automotive industry is ability to purchase of population. Current adverse growing conditions for most financial impact of the motor industry, which is in decline and the most important task of all is involved, the earlier finding a fair solution that will lead to its revival. The greatest emphasis is on efficiency in the areas in which it is permissible for the cohesion of staff and the menu towards the current budget of customers. It depends only on them, what direction will have a curve of development marketing cars in Slovakia but also throughout the world.

2. Importance of the automotive industry in the Slovak Republic

The automotive industry is the central industry in the Slovak Republic. It is the main driver of growth, exports, innovation and jobs. For the total industrial production contributes more than 50%, is the engine, which caused that Slovakia is considered as an economic "tiger" of the European Union. It has a decisive share of the investments in the industry. More than one quarter of gross domestic product of Slovakia is created by automotive industry, and this sector creates one third of total export of Slovakia.

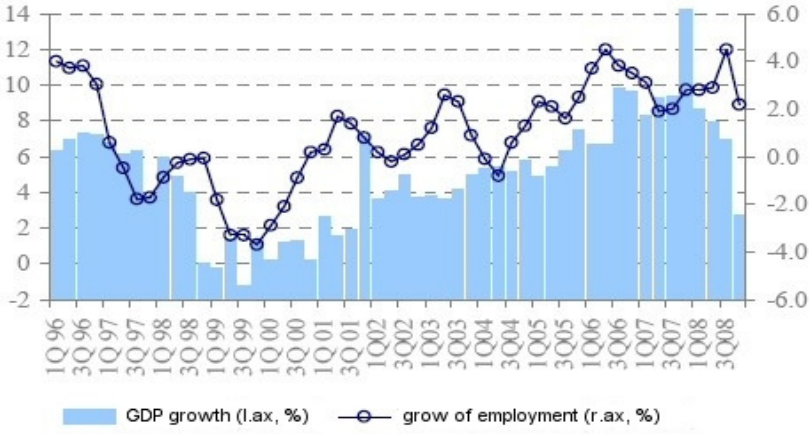

Fig. 1. GDP and employment in Slovak Republic
Source: www.patria.cz

The end of the year 2008 is characterized by decline in GDP and employment, which is a manifestation of a crisis given that the automotive industry to GDP and a quarter, the weakening in the industry has on the overall decline in influence.

In Slovakia, are three large foreign car - Volkswagen, PSA Peugeot and KIA. They are of great importance for the economic growth component, such as Johnson Controls, U.S. Steel Košice, a. s., and so on.

3. Consequences of the crisis in the automotive industry

The crisis, which originated in the U.S., at the beginning was the financial, which is related to the inability of people to repay the mortgage, but later to deepen the economic crisis. Precisely from the financial sector and in industry. And given that the automotive industry is the largest share of the overall industry, the first crisis struck this particular segment.

The crisis is a response to reduced demand for cars. In the early stages of the crisis has been the reduced demand for trucks, because due to financial crisis, there has been a reduction in construction activity, which are used mainly freight and other commercial vehicles. However, later the crisis hit the whole range of car manufacturers.

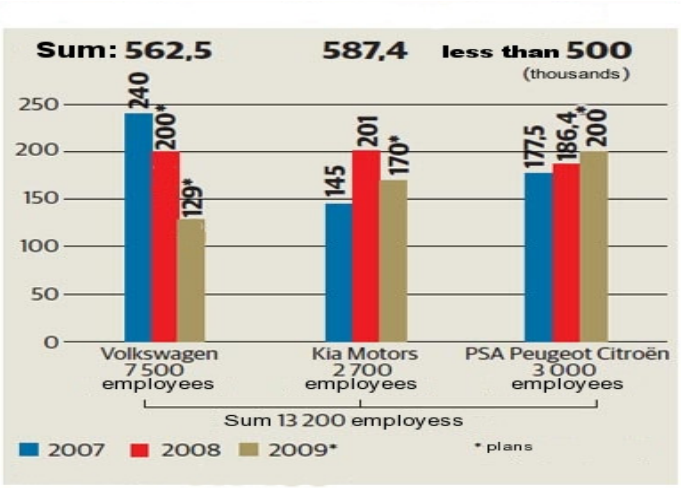

Fig. 1. Salability and employment in the automotive industry

Source: *www.pravda.sk*

The graph shows the amount of cars produced by automotive companies in the Slovak Republic in each year. The two companies manufacture visibly declined. Third company is in production planning optimistic. The decline in production and consumption caused by economic crisis.

Automotive companies are neither the problems caused by poor economic situation of th

eir employees to address layoffs yet. However, it must accede to solutions such as shortening working hours, reducing the number of shifts, to manufacture certain types of cars, etc. At present, focusing on the production of so-called "small" cars. These are the vehicles with low engine with low fuel consumption, and especially with a low price, thereby attracting the customer.

From that step, expected demand growth, increased marketability, growth in revenues, to boost the economy in an enterprise in the country.

Fig. 1. Decrease production in %

The biggest impact of the crisis is reflected in the corporate planning car. The situation is so unstable that it is not possible to make long term plans. Nobody knows how the crisis will evolve, and it is not possible to make predictions of sales of cars, then it is not possible to predict the accuracy of revenue and therefore can not be compiled nor accurate budgets.

The automotive industry is related to many sectors - even outside of engineering, such as electronics, steel, chemical industry, information and communication technologies, whether the textile industry. Therefore it is logical that when the economic crisis hit the automotive industry, has struck also all the other supplier and subcontracting firms. These companies are announcing mass layoffs, adjusting work schedules at the premises or eliminated to reduce production.

Name of the company	Description	Laying off (planned numbers)
INA Kysuce	production of bearings	125
Kinex Bytča	production of bearings	198
Sauer Danfoss	hydraulic equipment	100
Kongsberg Driveline Systems	management systems, spare parts	180
Connect Systems Slovakia	production of cables	130
Matador Automotive Vráble	production of components	100
Embraco	production of compressors and condensing units	140

Tab. 1. Planned numbers of reducing staff, *Source: custom processing*

4. The measures to alleviate the economic crisis in the automotive industry

Governments of the countries hit by the crisis addressed the deteriorating situation in the car different. The U.S. decided to subsidize directly failing car factory, which in our opinion it is not appropriate because the demand for cars does not increase. And demand growth is the only possible way out of crisis.

Some governments in Europe, such as France, Germany, Italy, and Slovakia have introduced the so-called. contribution to the scrapping, is the incentive of government, which has lead people to their older cars can scrap, and purchased new. The intention of the Government of this measure is to increase sales of new cars, and thus to "activate" the economy.

However, it is necessary to recognize the effect of such an incentive. In essence, this is nothing else but a modern version of "broken-window fallacy" French economist Frédéric Bastiat, which described in the essay "What is seen and what is not seen." This theory of "broken-window fallacy" says the little boy who accidentally broke the window and passing philosophy, whether it is not regarded as a happy event, because it can stimulate the economy. For the broken window is the work of glaziers, he earns money and spends them for example in the butcher, the baker, and the like. However, Bastiat argues that such thinking is flawed because it takes into account only the events that can be seen at a glance. Take into account the cost of the owner broken window, which must pay for glazing. This money could

otherwise exploit. Therefore, despite the broken window glaziers brought work and then other people, to increase the overall wealth there.

It is also necessary to think about whom they will purchase new economy car with the contribution to the scrapping support. Of the total number of new cars is only less than 10% produced in Slovakia. And therefore it is justified to reflect the fact that this incentive should not be accepted with certain restrictions. One possibility would be to provide this incentive only to cars manufactured in Slovakia, but it is contrary to EU legislation.

5. Conclusion

The automotive industry is a key of industrial sectors in Slovakia, will play an important role in the process of reviving the economy. It is therefore essential that the state aid and other appropriate measures aimed precisely in this sector. A view of the automotive industry to link with other sectors to help the automobile industry also indirectly reflected in these sectors.

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The Economic Cycle from the Perspective of the Labour Market – History and Prediction of Development by the End of 2010

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Abstract. These The intention of this analysis is point to new opportunities of the Phillips curve and the NAIRU in the condition of the global financial and economic crisis. For the estimation of the NAIRU´s development, the slope and the shift of the Phillips curve I applied the system of the methods which are commonly used at the international level. The comparison of the average value NAIRU with actual rate of unemployment I used for the specification of the economic cycle. The experience from estimation of the Phillips curve and NAIRU on the published dates I used for the medium-term prediction which is based on the macroeconomic analysis of the Czech National Bank by the end of the year 2010 too.

Keywords: Phillips curve, NAIRU, Kalman filter, Bargaining model and Economic cycle.

1. Introduction

Economists often try to estimate unobservable variables representing "balanced" or "expected" values of the variables examined. Their comparisons are often used as indicators of economic policy. The unemployment gap measured as the difference between the actual unemployment rate and NAIRU unemployment rate is usually used as a measure of excess demand, which is important in assessing inflationary pressures.

The unemployment rate, which is consistent with stable inflation rate (at zero degrees), represents an integral part of the monetary policy framework in most of industrially developed countries. Crucial in this case is whether the current unemployment rate lies above or below the level, which corresponds to the inflation stability. Unfortunately the unemployment rate corresponding to the stable inflation is not directly observable.

Deviations in the values resulting from individual methods are essential; they differ from one country to another in the course of time. Theoretical uncertainties together with vast problems in statistic measuring weaken the usability of NAIRU as a structural parameter at the macropolicy creation level. With regard to such uncertainties it is not surprising that NAIRU is increasingly seen as a zone rather than as a robust point estimate.

2. Conception framework development

Essential for mapping the relationship between unemployment and inflation was the experiment of A. W. Phillips [9]. In his study of 1958 Phillips anticipated that a (nominal) wage level in any period can be explained with preceding unemployment rate values. In 1970s, M. Friedman [3] and E. Phelps [8] introduced to the traditional PC analysis two key concepts, which are inflation expectations and a natural unemployment rate. Another

definition of the unemployment level no accelerating inflation, the so-called NAIRU, was made by J. Tobin [11].

In case of the Czech Republic also such analyses may be monitored, which have dealt with the trade off problem between inflation and unemployment. E.g. to give examples: V. Izák [6], M. Hájek and V. Bezděk [5], P. Sedláček [10], V. Flek [2] and R. Pavelka [7].

NAIRU anticipation methods may be divided into three main categories: structural methods, clearly statistic (direct) method and reduced form method.

The first group estimates NAIRU as a balanced output of a structural model. The NAIRU measurement is derived from an analysis of time series of unemployment, inflation and other relevant variables. One of the structural methods is the method of a single equation, the so-called Gordon's Triangle model [4], which postulates the dependence on the trio of factors – inflation expectations, demand conditions presented by the unemployment gap and offer shocks. Structural methods include the Bargaining model. Structural methods quantify NAIRU by means of an estimate of equations explaining the price and wage setting and behaviour.

The second NAIRU anticipation method uses various purely statistic methods, which directly divide the actual unemployment rate into cyclical and trend components, whereas the later are called NAIRU. In the contribution I am using the Hodrick Prescott filter method. The third group is a compromise between the two above mentioned approaches (I use the Kalman filter).

3. Empiric testing on published data

In my analysis of inflation measuring I am going to use the widest range of price impulses in the economy – deflator of household consumption (national accounts). Individual estimates respect NAIRU time logic, they do not reflect method classification in the preceding chapter.

The method of a single equation applied in the whole period shows the long-term NAIRU equalling to 9.7%. It is estimated in economically stable conditions after 2000, but considers no structural shifts after 2004, which I have identified in my work and therefore remains on these high values, which according to my analysis are no longer true.

The Bargaining model method offers the value of 7.9%, which is calculated from the PC slope equilibrium under the presumption of invariable structural characteristics. Even this estimate is considered as slightly overstated, though more credible.

On the basis of **a Break model analysis** the last structural period is from 2005/1, the NAIRU value is 8.0%. The period corresponds to the development of an actual inflation and as a short term prediction of NAIRU it seems to me most applicable.

In case of **a New Keynesian PC** I observe an increase in the NAIRU value between the first and the second period, which is in dispute with the preceding methods. That can be attributed to an otherwise specified creation of inflation expectations. Between 2003/04 and 2005/1 the NAIRU value is 8.2%. That implies a positive unemployment gap, which serves to the clarification of the recent inflation development. The unemployment gap is strongly subjected to the creation of expectations and is probably difficult to compare with the purely backward expectations.

I will also aim at the methods of a time variable NAIRU. I observed that in both the single PC and the New Keynesian PC. The qualitative course of the Kalman filter is identical, but amplitudes differ. All methods however show the negative gap of unemployment in the last part of the monitored period, although the size of the gap is inadequately large. However, intersection points of the TV NAIRU and the actual unemployment rate are probably specified

and generate correctly the period of boom and recession. Due to the short time series I classify these curves until 2002/2 (Kalman filter), as the case may be 2001/4 (NK TV). It is also valuable that these methods confirm the structural turn in the period of 2004 and 2005.

4. Medium-term prediction of NAIRU development in macroeconomic prediction

In this part I apply formerly presented methods and models to the prediction of the Czech National Bank, which is a part of the Report of Inflation IV/2008 (from 2008/4 to 2010/4) [1].

The prediction of development of this unobservable variable for the period between 2008/4 and 2010/4 (**Constant NAIRU**) oscillates in the interval from 6.3% to 9.8%. In comparison with the actual estimate (until 2008/3) it means that the model assumes an increase in NAIRU by 0.7 percentage point. **Long-term NAIRU** according to the Bargaining model after the entry of prediction reduced from 8.7% to 7.2%.

In the case of **the Arbitrary Method** the period from 2008/4 to 2010/4 has been divided into three more sub-periods. First, a lower value than the last NAIRU value calculated from the published facts was shown. Then a reversion to the originally educed value comes again. The period from 2008/3 to 2009/1 is characterized by a high negative PC slope which implies large substitutability of inflation by unemployment.

The Break Model detected a new breakpoint in the period 2009/1. In both new periods NAIRU was decreasing below the value educed from the actual data. Furthermore the strong negative PC slope in the period from 2008/3 to 2009/1 (-9.9), shown by the previous method, was confirmed. **The New Keynesian PC Method** added only one new period - 2008/3-2009/4.

After adding some new observations (Czech National Bank estimate) **the classical HP-Filter** keeps ranging in the intervals from 2.0 to 8.8 %. (Using) HP Filter in **the New Keynesian** (with hybrid expectations) did not virtually change either. Its higher negative PC slope is showing that the unemployment gap contributes to the understanding of the inflation.

The classical Kalman Filter showed that the NAIRU value educed for the period of the last actual data was the maximum (applies for both filtering) and that in the following period gradually dramatically reduced. Even according to **the New Keynesian PC NAIRU** is gradually dropping down from the 11.3 % in 2008/3 to 6.5 % in 2009/4.

5. Definition of the Economic Cycle Including the Medium-term Prediction of its Development

A natural conclusion of the NAIRU analysis is the definition of the economic cycle of the part of labour market. To estimate the unemployment gap and the economic cycle, I will make use of the averages of the NAIRU values which were estimated with the used methods. Then I derived the actual unemployment rate from the above mentioned calculated average NAIRU values for national economy, and got the unemployment gap for national economy. The analysis discovered that after inserting the data from the CNB macro-economic analysis there were slight corrections in the unemployment gaps calculated on the published actual data in both directions. It is also obvious that the top of the boom (unemployment gap made 3.7 points) was recorded in 2008/2. According to the prediction the value of the NAIRU excess compared with the actual unemployment rate will decrease to the value of 0.3 points in

2009/4. According to this scenario recession will last only one quarter in 2010/1. It will be followed by a slight boom (0.2 points) in the next period.

6. Conclusion

It is possible to conclude my research as follows:

1) The NAIRU value may be considered time-dependant during the examined period. This transitoriness is inevitable in transitive economies. The instrument of the permanent situation cannot disclose the whole history.
2) There are two periods of 1999/4 and 2000/1, during which the short-term PC may be considered positively sloping down.
3) In a time interval the methods identically estimate a high negative PC slope for the period from 2008/3 to 2009/1 which implies large ability to substitute the inflation by unemployment. The following periods are defined as unusual with positive PC slope.
4) A higher negative PC slope in the case of the New Keynesian PC shows that the unemployment gap contributes to the understanding of inflation more than in the case of backward expectation methods.
5) When comparing the average NAIRU value from the applied methods with the actual unemployment rate it is obvious that the top of the boom was recorded during the period 2008/2. The size of the unemployment gap will decrease down to 0.3 points in 2009/4. According to this scenario the recession will last only one quarter in 2010/1. The next period will be followed by a shallow boom (0.2 points).

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Application of Customer Satisfaction Research in Marketing Strategy of University

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Abstract. The paper deals with problems of customer satisfaction and possibilities of its application in marketing university strategies. There are defined customers, customer satisfaction in general and also in university conditions. There is accented the need of surveys focused on customer satisfaction. Together, there is described process of survey using the survey plan. At the end of the article, there are mentioned several current customer satisfaction surveys.

Key words: University, marketing strategy, customer satisfaction, quantitative research, qualitative research, questioning, plan of research, research sampling.

1. Customer satisfaction

Effective marketing university strategy must come from knowing customers, there needs and requests. It comes from the basic target of marketing, and that is to reach customer satisfaction. When customers are satisfied, they don't say anything, but instead they keep on returning or increase the amount of used services. Universities first goal is to know its customers. Many points of view exist, according to which universities can differentiate. In general we define:

- Customers within the frame external environment – often known as „stakeholders" – state and public services, population, economic experience, national and world institutions.
- Customer within the frame internal environment – often known as „actors" – university student applicants, students, graduates, university employees, suppliers, partner and cooperating science institutions.

The deciding factors for strategic orientation of the university are applying students, students, graduates and companies (experience). Satisfaction is a key factor for gaining new customers and also keeping them. If a university understands the needs of their customers and they are able to satisfy them better then their competition, then they are successful.

2. Research of customer satisfaction

If the university correctly identifies customers target groups for offered services, it can continue with next steps. It is a research about customer satisfaction and application of countermeasures to increase satisfaction. The research process can be divided into 2 basic phases – preparation phase and realisation phase. The base of the research is the preparation phase. Its goal is to prepare the research in detail in the form of a plan or project. Answers to the following questions:

- What is the survey task? (targets , hypothesis)

- What information resources should be used? (primary and secondary information sources)
- Who should be interviewed? (research sample)
- What should be measured? (research method)
- When should the interview be carried out? (timetable)
- How should data of survey worked and analysed? (data working and analyzing)

Realization phase means to realise the planned research, gather information and summarise it. A part of it is preparation of the final message. There it is possible to find the answer to the question, what do the measurement mean? [2]

3. Example of customer satisfaction research

The next part is aimed at an example of the research process application on the Faculty operation and economics of transport and communications (FPEDAS). The target is to prepare a customer satisfaction project of this faculty.

3.1. Research problems, targets and hypothesis

The research problem in this situation is realising the university customer satisfaction. Critical point of the planning phase of this research is establishing targets and formulation hypothesis. The other parts of the project are connected to this, such as choosing the research method, research sample, timetable etc.
Targets can be given like this:
T1*: Establishing key factors of PEDAS faculty student satisfaction.*
T2*: Realising the part satisfaction of PEDAS faculty students.*
T3*: Finding possibilities to increase PEDAS faculty university student satisfaction.*

Hypothesis show sayings, which are able to check via research. Examples of hypothesis may be these samples:
H1*: Between key factors of PEDAS faculty satisfaction are: teacher quality, class structure, classroom equipment and quality of food service.*
H2*: Half of PEDAS students are satisfied with the practical competencies of their teachers.*
H3*: There are no statistical large differences in perception of degrees of satisfaction in dependence on what year of study the student is.*

3.2. Research methods and information resources

The research method is chosen according to targets and research hypothesis. The chosen method closely relies on the choice of information sources. In case of target 1, is good a quality research. To find student satisfaction factors is used brainstorming. Group discussions enable choosing the most important of them. At the same time we can use secondary information sources. That means to research results of similar or earlier customer satisfaction researches, statistical data, magazine inserts, internet blogs with student opinions etc. Defining relevant factors of student customer satisfaction is a result of secondary and primary research (brainstorming in group discussions). In this case we are talking about explorative research.

Quantity methods of research are good to use on targets 2 and 3. We can think about questioning in this situation. It is possible to realise it in writing, electronically or by personal discussion. Each has its own advantages and disadvantages. Questioning is most often done in writing. Its advantages include high operation, directness, financial simplicity and enough time to reply. Main negative is that the respondent might not totally understand the questions; questioner will not be able to explain. Questioning is considered the primary research. It gains

new information directly from the customer – student. Tool used to gain information and save it is a questionnaire. This must have an exact structure [1]:

- *Beginning part* – includes the name, logo of faculty PEDAS and so called carriage note (in it the faculty gives information on, what use will the questionnaire have, motivates students to fill out and also gives instructions to fill out the questionnaire)
- *Body part* – includes questions about the research targets. There are identification questions at the end of questionnaire, too. They identify every respondent who filled in the questionnaire.
- *Thanks* – in the end the faculty thanks the students for filling out the questionnaire.

3.3. Examples of questionnaire questions

Questionnaire questions can be divided into open and closed. If respondents respond in writing, its better to use closed questions, or semi closed. In customer satisfaction researches we find out personal experience, points of view. The information is quality type. That is why its inevitable to use scales. It enables us to quantify information. We are able to use more scales. We are giving concrete questions used on the FPEDAS example of question scales.

No. 1: ***Mark with an X, how you are satisfied with the further aspects of studies at FPEDAS:***

	very satisfied	*satisfied*	*unsatisfied*	*very unsatisfied*
Teaching experience of teachers	☐	☐	☐	☐
Teacher's practical experience	☐	☐	☐	☐
Class material equipment	☐	☐	☐	☐

No. 2: ***Please read the further argument and mark the area, which exactly expresses how you agree or disagree with it:***

Argument	*Totally agree*	*Agree*	*Disagree*	*Totally disagree*
PEDAS studies are easy for me.				
Class study structure at PEDAS is good for needed experience.				
To successfully pass most classes it was sufficient to have materials from lectures.				

No. 3: ***Please evaluate the importance of the following aspects of studying at PEDAS. Give 1 to 10 points to each while 10 = very important aspect, 1 = unimportant aspect:***

___ *Teacher proficiency* ___ *Canteen* ___ *Free time activity possibilities*

3.4. Research sample

One of the most difficult parts of research project is research sample specifying. It depends on so called basic group. The basic group is created by all the potential respondents. There are all the students of faculty PEDAS in our case study. It will be very difficult to carry out a research with all the students (difficult of time, organisation, finance). Therefore is sufficient to select a sample of students. We can use for selection a lot of techniques. The most frequent used is the *quota sampling*. It means to choose the quota signs according statistical characteristics of the basic group (such as demographics). In case of faculty PEDAS it can derive the quotas from the students shares in fields of study. The alternative is to discriminate between men and woman. The other technique for respondent selection is the *simple random sampling*. It procedure to ensure that each respondent has the same chance of being selected into the sample. Every tenth student would select from the name list of students. Other way is to select only students whose surname has initial "K" or to draw loss.

It is very important to specifying size of the research sample (***n***). We can use following mathematic pattern [2]:

$$n = \frac{z^2 * p * q}{H^2} \quad (1)$$

The letter ***p*** is likeliness that the respondents know the research problematic; ***q*** is calculated from difference ***1-p***. In case the dates are not available it is used the value 0,5. The letter ***H*** indicates the survey mistake (usually 2 – 5 %). The letter ***z*** goes from desired research reliability (usually 95 – 99 %) and it is critical value of standardized variable. It comes to following value in the case of faculty PEDAS:

$$n = \frac{1{,}96^2 * 0{,}7 * 0{,}3}{0{,}05^2} = 323 \text{ students}$$

It means: we are sure for 95 % that real student satisfaction will be 70 % +/- 5 % according research results of 323 respondents.

Calculation of research sample mentioned above refers to quantitative research by questioning. For qualitative research it is enough to request a small sample of respondents (several tens of respondents).

3.5. Time table of research

Time table have to be an important component of customer satisfaction research. It is suitable to use for example „Gantt-diagram“, which shows particular stages of research process. It makes so the plan as the confrontation with real state. Table No. 1 is an example of time table for student satisfaction research at faculty PEDAS.

Stage/activity	Week											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Establishing targets, formulation hypothesis												
Orientation analyse												
Creation of research plan/project												
Pilot research												
Data collection in field												
Data control and data analyzing												
Final report and its presentation												

Tab. 1. Example of research time table.

4. Conclusion

Satisfaction of students is one of the key aspects for universities. Students are satisfied when a university can fulfil his needs better then the competition. In that case student gives good references about the university to his friends and family. It is suitable to use the research plan for customer satisfaction survey. It has targets, methods, information sources, research samples and a timetable of research.

Faculty PEDAS carries out student satisfaction researches annual. It is one of the requirements of accreditation. These researches are important for implementation of several methods of quality management, too (e.g. EFQM or ISO norms). It can be mentioned European Student Barometer. It is the largest study of student's opinions on education and carrier in 22 countries of Europe. [3]

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Relationship between the Motivation and Motivating and their Impact on Performance and Achievement of the Objectives of Employees and the Organization as whole

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Abstract. This article discusses how to encourage motivation and deliberate acts to management staff, subordinate staff and colleagues, to carry out activities that contribute to the fulfilment of the vision, mission, aims and objectives and at the same time aspirations themselves.
The essential tasks of management of the human potential include so-called indemnify the positive behaviour of employees. In general, the positive behaviour of the work addresses to the behaviour of employees, which leads to the realization of business strategy and the efficient fulfilment of its objectives. Such effective functioning of the employees assumed their systematic motivation, in which play the role different motivational factors. Without adequate levels of motivated behaviour and its action it is not possible to set goals or require their implementation. How the motivation of the people is, same could be expected from the results of their work.

Keywords: Motivation, motivating, motivation process, work performance, goals, objectives, plans

1. Introduction

Experience and current trends in strategic management confirmed that the quality of human potential, his thorough understanding and wise management have the biggest impact on the overall prosperity. In today's global economy, human potential belongs to the greatest competitive advantage. Just people, their motivation, knowledge, skills, ability, creativity and flexibility are becoming the most important strategic resource of successful business operation. These are the people who work in companies, and who individually and collectively contribute to the achievement of defined objectives. The intention is that the whole system is managed optimally to fulfil its intended function, achieving objectives in the time and quality.

The answer to the question of what a man leads exactly to keep some of behaviour and its changes, to the election of certain goals or to leave them, to a strong response to certain stimuli, it offers the concept of **motivation**. We called it hypothetical motors of the mental life, which focused on very special activities of individual - human efforts to act in certain intensity, content and objective.

Motivation is goal-oriented. The objective of each motive is the achievement of a final psychological state - saturation, which generally form the internal satisfaction of achieving the objective of the motive. Effects of motive take as long as it is achieving its objectives. Behaviour of every human is aimed at achieving some aim, such behaviour is motivated. This understanding of motivation has special importance for the work process. Just within that human performs a series of activities aimed at achieving certain goals.

2. Relationship of Motivation and Motivating

The common denominator of the emergence of motives is survival of discrepancies between what is and what should be, both inside the organism, as well as external social environment of the individual. Surviving of these discrepancies and related motives are known by various terms, such as **effort, volition, request, interest, belief, expectation, tension, objective, passion, purpose, intent, intention**, and so on.

Motivation as one of the basic prerequisites of success and effective performance of people in work is an essential part of the theory and practice of management and psychological sciences. It is examined on the two levels, each of which has irreplaceable meaning in the management: in *subjective level*, it is sort of ´internal motor´ of movements of each person in the working and non-working environment and in *objective level* it is the ability to motivate others to action [1, p. 377].

In the first case, people motivate themselves by searching for, finding and performing work that meets their needs or at least led to expect from it to meet its objectives. In the latter case, people may be motivated by certain management approaches, methods or tools. The first of these types of motivation can also be described as **intrinsic motivation** (a set of motives, which represents the motivation and it is divided into two groups - the primary motives, for example needs, interests, ideals and values that an individual in its internal perception feels and the secondary, e.g. goals, desires, aspirations, ambitions and expectations, which adhere to the individual; these internal motives influenced people to behave in a certain way, or to issue a direction). The second type of motivation can be described as an **external motivation** (something what managers are held and provide for employees to motivate them) - motivating.

In this sense, to motivate individuals means to act on him with the aim to change his behaviour. In other words: to motivate means to act from outside of the certain stimuli on the internal motivation structure of the entity in which we want to achieve change in a certain type of behaviour (in our case working one) [2, p. 13]. There is interactive dependability between both motivation and motivating. Motivating represents the deliberate action on the motivation and can be successful only if it has a functional relationship to the actual and permanent motive of the entity, which is its subject.

This also reflects the relationship of motivation to the effectiveness of motivating + relationship of motivating to motivation. If the motivating is effective, the motivation is higher and if motivation is higher (motivating management and motivated employees), also motivating is more efficient.

3. The Motivating Process for Achieving the Objectives of Individuals and Organization

Effect of individual internal motivational processes of the employees and management staff can be seen as **a continuous and complicated process**, which consists of several phases and it is influenced by the relatively large number of different elements and moments (Figure 1). This process should be based on the set vision, mission, philosophy, the various strategic objectives and strategies, as well as strategy and management policy and the development of human potential of the organization. It is clear that the success of individual motivational processes, what means increase of internal motivation and performance of employees, equally feedback on the making dynamic re-scheduling of these business categories [3, p. 165].

Planning is an important group of activities, which sets out the objectives of the company and determine the means and ways how to reach them. Planning also requires the interests of various subjects - the interests of individual, group and community. Therefore,

based on the identification, assessment of individual needs, priorities, and opportunities, which the staff felt or recognized, or the management staff can cause in them, it is possible and appropriate to identify specific desires, goals and plans. Thus, goals are to show where the company is directed and what it wants to achieve, but goals are also a source of inspiration and motivation for employees.

The theory of the aims formulated by Latham and Locke (1979) argues that motivation and performance are higher when individuals have set out the specific objectives, challenging but feasible goals and there is respond (feedback) on performance. The aims inform the individual that has to achieve a particular level of performance that has to manage and evaluate their actions and overall conduct of reaching them. On the other hand, the feedback allows monitoring individual and evaluating his success and allows him to increase his efforts, direction and strategy of performance.

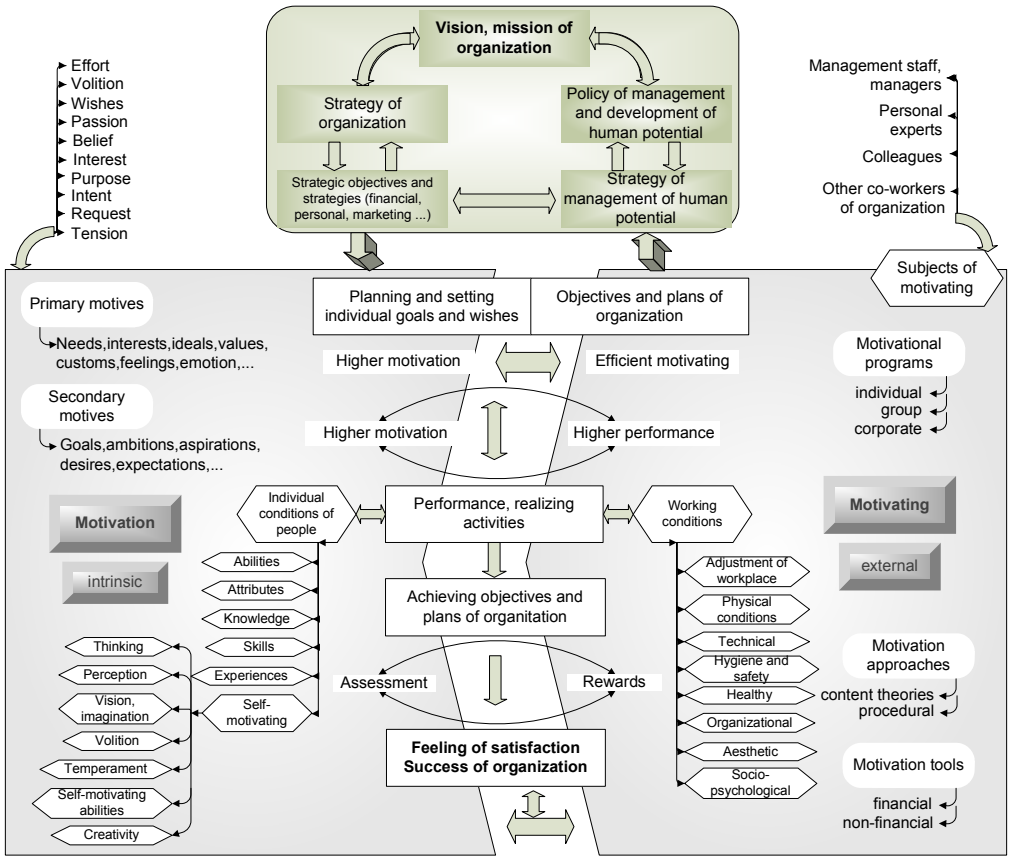

Fig. 1. Schema of motivational process **Source:** own

Performance refers to the fulfilment of the tasks forming the job of certain employee in the company. Performance is dependent on three components, which is that employee must have the necessary *skills* (must know how to perform the activity), there has to be created the *working condition*s by the employer, and he must be able to realize optimal performance and to be sufficiently motivated. Ironical is that the most important element includes the level of motivation and communication skills of participants in the motivation process, what means

that *ability to effectively motivate themselves and others, and also have the ability to be motivated by others*.

To start the process of self-motivating the man has to perceive, have some ideas, imagination, desire and ability to help him, and influenced and supported the process of **self-motivating**. Cognitive processes (perception, thinking, ideas determined the specific pattern of behaviour. These mean for self-motivating the "psychological reasons for behaviour."

Perception - is a natural human activity, subjective cognition of the reality and the active process. The greater experience and knowledge has human about the perceived objects the diverse and richer is the content of his perceptions, then the more he can motivate and engage himself in life and its processes.

Vision and imagination - they are the subject of human thought, feeling, want, and imaginational activities, as a dream or as a perceived object or process from the outside world. Human activity is often directed to purposefully change the facts. This requires to create a new picture of reality, and given to them to plan and focus its activities. Necessary prerequisite for such activity is fancy and fantasy. So a man through his vision and imagination can meet his dreams and desires, and he can drive them to particular real actions to achieve that satisfaction.

Thinking - is the psychological function providing improved learning of the environment around, etc., and thus improved adaptation to environmental conditions. Its importance lies in the fact that it allows the man's own and meaningful actions and long-term focus and planning. The man leads the conversation with himself, he is trying to understand the surrounding phenomenon, subject and the situation, he permeates in their depth, know them, he is are looking for goals and the means of achieving those goals, and thus himself, through the development of the higher functions of thinking, motivate himself to solve certain problems, to activities achieving the goals.

Volition - the ability to perform activities which man wanted, planned and scheduled, so called activity of volition. The will is the ability to control impulses and freely choose those, which man governs. The will is the inner strength of the human personality which allows knowingly managing and motivating its own behaviour towards the valuable aims. The will directs and motivates in all of its manifestations towards the recognized value.

Temperament - a set of dynamic features of personality displaying by the way of behaviour, reaction to stimuli and the dynamics of feeling. Through temperament man reacts to certain stimuli, motives, needs, etc. leading to their fulfilment, to the meeting and activity and on the other hand, it may influence the formation of motives, needs, interests and so on.

Self-motivating abilities - among other skills, which may affect our internal decision-making, internal motivation and activation belong characteristics and skills that man possesses, and help him to meet goals, needs, desires and satisfaction. These include for example resolution, perseverance, determination, consistency, diligence, self-assessment, self-recognition, self-control. Generally the ability of self-control is reflected not only in the suppression of undesirable tendencies, but also in efforts to overcome the obstacles and in achieving the objectives in time distance and in their formulation. Thus maintains the direction of human motivation, by which they prolong intentionality of the personality of man, especially in those cases where there into the way enters a variety of obstacles.

Creativity, Imagination - lies in finding and adopting non-traditional practices, new ideas, and original solutions. Therefore, if the man is a creative, he can motivate himself. Creativity itself is also a motivating factor, because it seeks to satisfy the higher needs, in particular, on the basis of the lower ones. It gives life and work to make sense it is a source of deep satisfaction.

Organization as a whole may provide an environment in which it is possible to achieve a high level of motivating through incentives and rewards, job satisfaction, opportunities to

education and growth, etc. But in particular they are **managers**, who play a major role in motivating other employees, who have a good use of incentives offered by the organization processes, what means they have to sound good and quality in preparing and implementing appropriate motivational processes for their employees. In order to effectively motivate, should managers develop and apply appropriate **motivational approaches** to elaborate **motivational programs** including the use of various **tools** and motivations to stimulate the job performance and conduct of employees towards the organization and personnel (personal) sought objectives, but also the objectives of the organization as a whole.

Motivation approaches represent a significant source of knowledge in the field of psycho-social characteristics of thought and human behaviour, from which managers can draw in motivating their employees. Generally, we distinguish two basic directions of motivation:

a) The first direction focuses on the knowledge of motivational reasons. Schools, which represent this direction, are based on Maslow, Alderfer, Herzberg and McClelland´s theory of needs. This is a content theory, which answers the question of what motivates people.

b) The second direction focuses on the conduct of the motivational process. Schools, which represent it, are based on the most important theories of this direction, and so are of Adams, Vroom, Porter and Lawler. These are the procedural theories to clarify how the incentives at work arise.

It can be noted that the range (spectrum) of *motivation tools*, which can managing staff benefit from is also very wide. Except the setting realistic and redeemable goals there belong a praise, the participation of employees, providing adequate authority, responsibility, feedback, efficient technology and equipment for the work, expression of positive personality of the management staff, the implementation of an appropriate style of leadership, respecting the fairness from the supervisor, the involvement of employees in solution of important work issues, providing relevant information, the possibility of building a career and promotion, personal development and so on.

On the performance of the employee has also a big impact the objective factors, **working conditions**, which may be individual to the bigger or smaller extent. That includes for example conditions: technological (the level of workplace equipment, machinery, manufacturing equipment, processes), the total adjustment of the layout and the workplace, the physical conditions (light, colour, sound, and microclimatic conditions), the level of hygiene and safety, organizational conditions (the allocation of work and its organization, ensuring the smooth work, working hours), the conditions of aesthetics (aesthetic solution to buildings, work spaces, tools, etc..), socio-psychological factors, work environment (the interaction of people to interact with people, working groups, communication, leadership styles etc.)..

To succeed in motivating, it is important for management staff to have the ability to vote, what means influencing and shaping motivation that correspond to particular situations, personalities and the relationship to the employee area and view of the business. Based on the brief characteristics of the overall performance of environment in the company, any identified deficiencies, the choice of incentives, can be addressed in the motivational program (a comprehensive treatment of the incentive system company), which is focused on the development of positive elements in the structure of motives. Based on the evaluation of the company and taking into account the most significant differences of individuals and groups it is appropriate, additionally to wide motivational program and also prepare individual and group (differentiated) **motivational programs** [4, p. 4]:

Individual motivational programs provide systems tailored to motivate specific individuals and they are shaped and adapted to individual needs, wishes and aspirations of a

particular employee. They also noted qualifications, striving for constant improvement and aspirations of the individual, as well as the influence of other individuals and group motivational programs.

Group motivational programs provide incentive programs of the working groups (teams), departments, units, sections, etc. They are fortified with the necessary incorporation of group needs, goals, values, norms, habits, ideas, etc. and may affect in the positive and negative direction individual and corporate motivational programs.

Corporate motivational program represents the most extensive form of its scope, it involves and reflects all - individual and group motivational programs which take place in the company. It seeks to direct their dynamism and efficiency in line with the vision and mission of the enterprise.

Clearly, the function of motivation is to focus and make energy behaviour, which is directed to achieve **the satisfaction**, what is usually seen simplistically as a reduction of the source of motivational state, need. The satisfaction is associated with the value of the objective, according to J. Reykowsky is determined by these factors [5, p. 85]: the size of reward, which objective offers (for each objective it is inter-individually different), the difficulty with achieving the objective (objectives to be achieved with difficulties and problems have greater value than the objectives and actions to be achieved simply and easily, although that applies only to the values of intermediate difficulty), while the value of the objective also depends on the strength of need (the strong need increases the attractiveness of the target).

According to Porter and Lawler model [6, p. 169] applies that, the strength of the motivational effort is crucial *how the employee assesses subjective attractiveness or unattractiveness of expected reward* in comparison with the anticipated effort to reach them. This theory assumes from the employees a sequence of values in the assessment process:

- Subjective assessment of the expected value of reward from the point of employee (the expected reward → its subjective evaluation),
- Assessment of the employee himself that he can fulfil required task (evaluation of the employee → acquired reward).

Actual results of the work (the performance of tasks or the achievement of the objectives) depend on principle of given efforts. The consequence of results is in the ***major rewards*** (such as a feeling of success or fulfilment), or ***additional rewards*** (such as working conditions and employment status). The rewards, which a person feels as a fair, lead to satisfaction.

Motivational process is concluded by the phase, which is an assessment of fulfilling the objectives and achieving the feeling of satisfaction. From the side of companies, it is important to evaluate the success of the individual motivational processes, what means whether the performance of complex work has increased and if the business needs and objectives were met. And from the perspective of the employees, whether is increased motivation felt and at the same time achieved the desired feeling of satisfaction.

4. Conclusion

The result of successful motivation on the one hand is achieving the desired **feeling of satisfaction** and fulfilment of the initial needs of the individuals and on the other hand, the strengthening of strategic competitiveness, image, **efficiency and profit of the organization**.

If you achieved the **objectives** and needs are met, it is likely that the proceedings which led to the aim, will be repeated again in the case with a similar need. We constantly discover new needs that must be met and set new goals to be attained. It is a continuous and

complicated **process of motivating with a feedback** to constantly emerging new needs and objectives, which can be achieved and satisfied by appropriate and effective motivating.

Motivation for desired performance, which includes a willingness to work actively together with the achieving objectives of the organization and can be made by using motivators, what means certain approaches and practices of directing the motivation, certain system of incentive tools as well as creating favourable working conditions, which act like physical and psychological consequences of working negotiations. The orientation of individual in his own motives is not negligible either, what is a prerequisite not only to a better picture of him, but also a more efficient operation, good adaptation and personal satisfaction.

It can be concluded that the quality of motivation of the employees and management staff, and permanent strengthening and directing the motivation by intended processes of motivating, create a continuous dynamic progress and mutually supportive motivational efforts, aimed to establish in the subordinate staff and colleagues an interest, the enthusiasm and willingness to engage processes and activities that contribute to the fulfilment of the vision, mission and aims, and simultaneously to goals and aspirations of themselves. This is a harmonized connection of individual will and effort of employees with the will and the needs of the organizational department throughout the organization and its relevant surroundings.

To conclude, it can be recommended from the point of the latest knowledge, that organizations should use specified approaches to strengthening the motivation of its employees and management, and create the necessary and desirable motivation programs in the environment of organization, which is a reflection of expectations, motivational preferences and objectives and specifically defined tasks, plans and activities in the field of motivation and motivating the human potential of the company, enhancing the comprehensive performance and ultimately achieving the success and effectiveness of the organization as a whole. By this way, it can be achieved, that motivational influences and efforts to attain the objectives of the organization are coordinated and harmonized.

Note:
Article is the output from the solution of the scientific project VEGA, No. 1/4647/07 Dynamic model of motivation of the human potential.

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Structural and Organizational Inefficiencies in Intermodal Transportation

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Abstract. The main objective of the paper is to describe the intermodal transport system in the European Union (EU), its existing inefficiencies related to outdated organizational structures and provide ways in which they can be eliminated. It is essential to analyze problems within the Trans-European Intermodal Network and provide solutions based on relations framework within the business. The measures such as the replacement of partial optimalization by the total reengineering of the system must be taken. New organizational structure stands for the key element of the required changes. Flexibility of raiway and inland waterways transportation based on organizational changes must be performed and redefinition of customer based interests has to proceed.

Keywords: Intermodal transport system, organizational structure, reengineering.

1. Introduction

One of the major problems of the European intermodal transport system is the absence of efficient utilization of rail-way cargo transportation mode. Outdated organizational structures of related companies such as rail freight operators or state agencies are considered to be one of the key issues. Similar to other processes, "a change process has an organization of its own" represents its very characteristics [1].

The railway operators are not able to compete with the truck operators due to their inability to respond to the changing market conditions and customers´ needs. The substitution of rail by truck results in the space concentration of international truck transport [2].

The effects of the current situation on the European intermodal transport market are devastating. The cooperation of intermodal units, line agencies, state authorities, carriers and operators based on the new interface and interoperability must change root and branch. On the other hand, number of state bodies involved in the decision making process must be reduced as not to create the obstacles to the private entities. Another problem is represented by lack of specific units within national transport organizations [3]. It is crucial to motivate all parties to become part of a learning organization. The required changes cannot be achieved in a short time.

Long-run strategies require organizations to continuously change and adapt to the markets of present and future. The companies must understand there is a necessity of change, determine these changes and define key and strategic goals for the organizational structure [4]. The intermodal transport units cannot be defined as divisions or function units anymore. It is essential to change and transform organisational arrangements from a functional to a process based system [5]. Process-oriented approach is needed and radical redesign of the business process is demanded. The respective companies should consider redesign into series of processes.

2. Structural and organizational inefficiencies

Key issue for the customer of a freight forwarder, carrier or transport operator is compliance with the delivery time and customer's individual needs. It is considered to be very difficult to achieve these requirements within the view of existing railway transportation. Further, the intermodal transportation system is also required to be cost-effective [6]. From a particular point of view, the mentioned goals can be in contradiction. It is essential to find the equilibrium point in every individual case as well.

The paper only proposes the areas and ways, in which the issues should be resolved. Moreover, the detailed multi-criteria analysis will be performed during the research linked to the private entities such as railway operators, carriers and their customers.

The most serious problems related to organizational and structural inefficiencies of the system are, i.e.:

- outdated and rigid legal framework of the linkage between national, EU authorities and private entities,
- limited structural change patterns [7],
- lack of incentives for cooperation between the modes,
- labor force and company management relations [8],
- different perspectives of consumers, shippers, logistic service providers, national government and EU authorities [9],
- organizational structure seen by most of the companies as a hierarchical concept,
- market-place, supply chain and ownership fragmentation [10].
-

To indicate the relevant problems within the Trans-European Intermodal Network, multi-criteria SWOT analysis will proceed and provide solutions based on the following three fundamentals:

- increase in flexibility of rail and inland waterways transportation based on organizational changes,
- detailed definition of customer based interests,
- updated relation framework among state authorities, transport providers and their customers.

Solutions based on free market cooperation considering problems mentioned above would be favourable. Nevertheless, a vast number of market imperfections and insufficiencies such as monopoly power given to state owned operators impacts the practicality of entire private solutions. A public and a private partnership will be required to enable implementation of efficient intermodal organizational structure. Efficiencies can be gained at both, the micro and macro levels. At the European level, there is a need for a more complex plan and authorities with the real power that oversee the implementation of the Trans-European Integrated Network being tailored to the needs of each particular EU member country.

The hierarchical organization by functions is typical for ship-owners. The structure is relevant only to the national level of the organization. The key issue is the slow reaction to market changes such as product portfolio, prices etc. The framework within the organization of freight carrier, rail or truck operators is quite the same.

To eliminate organizational and structure issues within the intermodal transportation market, measures in following areas must be taken:

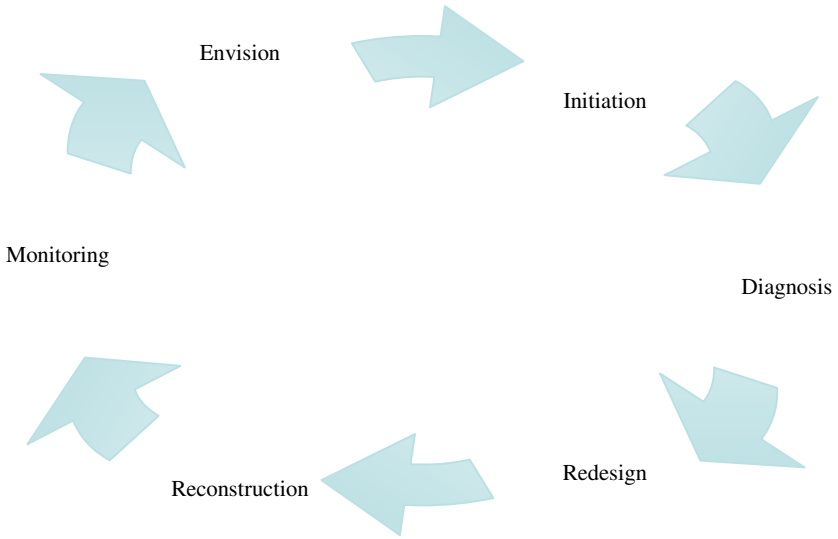
- replacement of partial optimalization by reengineering of the intermodal system,
- privatization of the state owned cargo operators, taxes and subsidies reduction,
- change of values, outward-oriented companies.

3. Managed by process, not by functions

Studies show the majority of transportation operators have not considered enough of the benefits implemented by the leaders in the field of intermodal transportation, “as the followers remain bogged down in preliminary levels of their supply chain effort or stuck with cultural imperatives that limits enterprise collaboration” [11].

The initial benefits confirm the potential of the supply chain effort, but lead to the need for the cross-organizational cooperation.

To perform the process of reengineering, to change functional organization to process-driven one, six steps should proceed [5]:



During the initial process of envision a new approach towards the organization is required. It is important to integrate and improve the key business of the company i.e. number of long-run term customers, profitability, cash flow etc. After the key areas of the company business are improved, business case focus can follow with initialling the changes followed with setting up the reengineering team and defining the performance aims. Current processes within the company and its business partners must be improved to be more efficient and effective. Existing processes are described and the problems in existing ones are uncovered. The company and its relevant economic environment can now see the weaknesses of system and its opportunities. During the redesign phase, alternative scenarios are developed and Information Technology (IT) platform selected. Finally, the strategic plan is presented, when process based reengineering of the system is seen as the key business objective. When the processes are reconstructed, the companies develop IT solutions and establish the changes. Furthermore, the monitoring processes are based on performance measurement. Finally, the management sets the link to the continuous development of the process based organization.

The initial structural and organizational change in the field of intermodal transportation can be limited. According to [7], “five inclusive ideal type reasons” can occur:

- position homeostasis keeping the existing networks and structure,
- lack of critical reflexiveness of organization members,
- the members anchor their evaluations on prior experience to reflect on change,
- pattern of initial dispersion of change,

- regulative, normative and cultural institutional pillars.

In the process of change, the reengineering team must take into consideration the above mentioned factors and propose the ways in which they can be eliminated. The process of their identification can be highly endangered if all team members are the part of the original rigid management structures.

4. Conclusion

All things considered, the above mentioned measures and reforms based on three fundamentals should ensure high efficiency of the European intermodal transport system in future. It is essential to fully integrate the existing European railway network into the Trans-European Intermodal Network. In brief, higher degree of liberalization in the railway transport market must be achieved because the market is very rigid so far. On this basis, it can be concluded that new organization structure within the business, state and EU authorities stands for one of the key factors of the required changes.

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Market Research as a Source of Information for Management

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Abstract: The globalization of the economy, the globalization of the world - a shift from national to global economy, global connectivity and interdependence bring many rapid changes in the marketing environment.
Consumers require higher quality products at a lower, or at least the same prices, higher consumer value and product individualization. Organizations, in order to succeed in this dynamic environment, must have sufficient information. Currently, there is no problem to get a large amount of information from various sources. To select timely and relevant information inevitable for a good marketing decision is an art.

Keywords: information, process of market research, marketing information system, market research, service.

1. Marketing information system

Marketing information system is a sustained, organized set of procedures and methods for generation, analysis, dissemination, storage and restoration of information for marketing decision making. MIS should provide selection of information, but also their effective distribution to managers to help them in marketing decisions. Marketing managers, however, should know which problem do they want to solve, and what information they need.

1.1. Information resources for MIS

Marketing information system should involve at least three groups of information sources - Internal information system,

- Marketing intelligence,
- Marketing research.

1.1.1. Internal information system

Information can be obtained from internal, statistical sources. This information is generally less financially demanding and time available. The system records, selects and provides information on the realization of corporate production and usage of corporate resources in the previous financial years.

1.1.2. Marketing intelligence

It is also necessary to have information about the external company environment and about current development in the business sector. This information can be gathered from multiple sources, the rule is on secondary sources. For example newsletters, magazines, newspapers, internet, legal decrees and standards of local authorities, statistical yearbooks, reports of economic chambers and independent evaluators and so on.

1.1.3. Marketing research

Marketing managers can not constantly wait for information that freely comes from marketing intelligence. They have often to solve specific marketing situations that are unique and original. In these situations, they often turn to marketing research with their specific information requirements. Its importance in the current period increases. Generally it can be defined as a systematic process to ensure certain specific information, which can not be obtained from the previous parts of marketing information system. Marketing research is an important source of information for every company that wants to maintain its position in the market and be successful in a competitive battle in the market economy. Overall, we can divide marketing research to:

- Market Research
- Competition Research
- Research of components of marketing mix
- Research of sales
- Image research
- Research of foreign markets
- Etc.

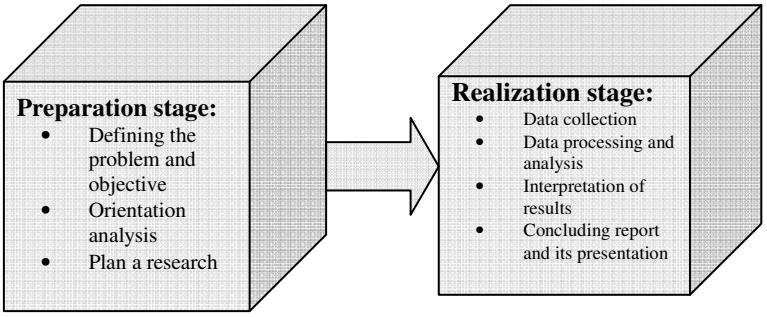
2. Methodology of market research

When launching a new product or service (also transport service) on the market, marketing managers have to have the necessary data on the target market. The problem is that the perception of value is subjective category. What customers appreciate on products and services today, may not correspond to the future.

Any information has its price. And that is the reason, why marketing managers and researchers seek to minimize the erroneous decisions. Market research is applied, when the information gap on the target market occurred. Managers have to decide whether to use their own research capacities or to designate a specialized agency. Researchers seek information on the nature of the market (market potential, market capacity, market share and the degree of market saturation), the customers in this market (market segmentation is performed and assigned to the characteristic features of individual groups of participants) and also finds the strength and potential impact of competition as well as other variables that may affect the development of the market and the associated opportunities and threats. The process of market research is very complicated matter and therefore it is necessary to comply with certain, specified in advance, steps and rules. Any deviation from the correct process increases the cost of research and thus reduces the profitability of entered company.

2.1. Process of market research

Market research is part of marketing research. Therefore, it is possible to identify specific tools and processes with certain limitations. The process of market research has two main stages, which consist of a number of connected actions.



Picture 1: Process of market research
(Source: KOZEL, J.: Moderní marketingový výzkum)

Defining the problem and research objective

In the initial stage of research, researcher should correctly define the problem. Problem should express the reason, the purpose of carrying out research. This is sometimes very difficult and time consuming. Last step in this phase is formulation of working hypotheses addressing the problem. They provide us with possible answers to the questions of research. Hypothesis is not a question but an answer.

Orientation analysis

This is an informal survey what information is currently available for addressing the problem of research. This helps to define the problem better and determine the necessary information that researcher need.

Plan a research project

The final part of the preparation stage. The plan of research, in fact, is a plan of implementation and monitoring of research. All upcoming steps of research must be contained. If the management decides to enter a project in order to external agency, the plan serves as a substrate and a binding offer for customer research.

Data Collection

It is the beginning of the realization stage of market research. This is the most challenging part of research process. Head of market research should accurately allocate tasks among the observers, moderators, operators and so on. And also choose the appropriate method of valuation of these people, because the success of research at this stage is in their competence. Method and nature of data collection depends on the chosen method of data acquisition. Of course, firstly the secondary data are obtained and then the primary.

Most used data collection methods include:

- Observation
- Interviewing
- Experiment

Data Processing

The task of this action of research is to control and adjust the data. In literature and also in practice, this action is sometimes pushed into background, but at the time of modern technology, it should be noted that, properly processed and well prepared data can in the action of data analysis save time and money. In the initial stage data validity (accuracy) and data reliability are being checked.

The next step is a review of neutral responses. If questionnaire is correctly set up, approximately 10% of neutral responses can occur. These can significantly distort the results in the analysis and consequently lead to erroneous decisions of company management.

Data Analysis

In this action, the basic statistical concepts are being calculated, as a way of description of obtained data. Their mutual relations are taken into account.

The basic statistical parameters are:

- Frequency
- Levels of variability and distribution
- Addictions

Currently, at this stage various statistical programs are being used. They simplify data analysis and increase effectiveness of researchers.

Results interpretation and concluding report

Before the interpretation it is necessary to verify the validity of data. This is a comparison of the results of analysis with the submission of research problem and objective. Appropriate step is to check preliminary hypotheses. Their confirmation or refutation must be justified and factors that caused the situation must be determined. The aim of interpretation is to give some suggestions that solve the research problem. Even the best results of market research may be ineffective unless they are properly presented and justified. The final (concluding) report is substantiation of research results. It should be clear, formal and attractive content.

3. Conclusions

To understand the essence of market research is not easy because of the complexity and difficulty of the problem. Managers should be aware of what problem they want to solve and what information they need. Similar is the situation in Slovakia. Managers are aware of information necessity, but many times they do not know what problem they should solve on the basis of information. They require from market research "problem definition", but not information that is needed to "tackle and solve the problem."

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Foreign Trade Policy and its Impact on Competitiveness of National Economies

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Abstract: Contents of this essay deals with growing importance of competitiveness of nations, industrial sectors and companies in era of globalization of world economy, taking into account the role of foreign trade policy to establish suitable environment for competitiveness growth.
The main goal of this essay was to prepare detailed analysis of foreign trade policy role and its status in international trade, in conjunction with competitiveness of Slovak economy in era of world economy globalization. This target was achieved thanks to large spectrum of theoretical publications and opinions as well as according to empirical results and results of own research and investigation.
The motivation for the theme of this essay upraised from increasing importance of competitiveness, which becomes an important factor of long-term success in world economy, which is even more and even quicker influenced by changes of economical environment, and significant effects of globalisation.

Keywords: Competitiveness, Globalization, Productivity, Foreign Direct Investment, Integration

1. Introduction

The World Economic Forum has been studying the competitiveness of nations for nearly three decades. Since 1979, annual Global Competitiveness Reports have examined the factors enabling national economies to achieve sustained economic growth and long-term prosperity. Over the years our reports have served as benchmarking tools for business leaders and policymakers to identify obstacles to improved competitiveness, with the goal of stimulating discussion on strategies to overcome them. The methodology used to assess national competitiveness has necessarily evolved over time as we have taken into account the latest thinking on the factors driving competitiveness and growth. It was in this context that in 2004 the World Economic Forum introduced the global Competitiveness Index (GCI), a highly comprehensive index for measuring national competitiveness, taking into account the microeconomic and macroeconomic foundations of national competitiveness.

We define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy. In other words, more competitive economies tend to be able to produce higher levels of income for their citizens. The productivity level also determines the rates of return obtained by investments in an economy. Because the rates of return are the fundamental determinants of the growth rates of the economy, a more competitive economy is one that is likely to grow faster over the medium to long run.

The concept of competitiveness thus involves static and dynamic components: although the productivity of a country clearly determines its ability to sustain a high level of income, it

is also one of the central determinants of the returns to investment, which is one of the central factors explaining an economy's growth potential.

2. Pillars of competitiveness

Our experience in studying competitiveness has made it clear that the determinants of competitiveness are many and complex. Some of the best economic minds of the last 200 years have tried to address the question of what determines the wealth of nations.

Adam Smith argued that specialization and the division of labor lead to dramatic improvements in productivity. Thomas Malthus, David Ricardo, and many other economists of the 19th century believed that the law of diminishing returns would reduce the potential for expanding the level of prosperity.

The neoclassical economists of the 20th century emphasized investment in physical capital and infrastructure. The failure of many developing countries to grow despite huge investments in infrastructure proved that investing in physical capital was not enough to generate aggregate wealth. Economists, then, looked for other mechanisms: education and training (or *human capital*, as modern economists call it), technological progress.

The GCI captures this open-endedness by providing a weighted average of many different components, each of which reflects one aspect of the complex reality that we call competitiveness. We group all these components in different pillars that we call the *pillars of competitiveness*. These pillars are:

2.1. Pillar - infrastructure

The existence of high-quality infrastructure is critical for ensuring the efficient functioning of the economy, as it is an important factor determining the location of economic activity and the kinds of activities or sectors that can develop in an economy. High-quality infrastructure reduces the effect of distance between regions, with the result of truly integrating the national market and connecting it to markets in other countries and regions.

Extensive and high-quality infrastructure is an essential driver of competitiveness, significantly impacting economic growth and reducing income inequalities and poverty in a variety of ways. In this regard, a well-developed transport and communications infrastructure network is a prerequisite for the efficient functioning of markets and for export growth, as well as for poor ommunities' ability to connect to core economic activities and schools.

Effective modes of transport for goods, people, and services—such as quality roads, railroads, ports, and air transport—enable entrepreneurs to get their goods to market in a secure and timely manner, and facilitate the movement of workers around the country to the most suitable jobs.

Economies also depend on electricity supplies that are free of interruptions and shortages, to ensure that businesses and factories can work unimpeded. Finally, a solid and extensive telecommunications network allows for a rapid and free flow of information, which increases overall economic efficiency.

2.2. Pillar - macroeconomy

The stability of the macroeconomic environment is important for business and, therefore, is important for the overall competitiveness of a country. Although it is certainly true that macroeconomic stability alone cannot increase the productivity of a nation, it is not less true that macroeconomic disarray harms the economy. Firms cannot make informed decisions when the inflation rate is in the hundreds (typically as a result of public finances being out of

control).The financial sector cannot function if the government runs gigantic deficits (especially if, as a result, it represses banks and forces them to lend it money at below-market interest rates).The government cannot provide services efficiently if it has to make enormous interest payments on its past debts. In sum, the economy cannot grow unless the macro environment

3. Pillar – financial market sophistication

An efficient financial sector is needed to allocate the resources saved by a nation's citizens to its most productive uses. A proficient financial sector channels resources to the best entrepreneurs or investment projects rather than to the politically connected. A thorough assessment of risk is therefore a key ingredient.

A modern financial sector develops products and methods so that small innovators with good ideas can implement them. A well-functioning financial sector needs to provide risk capital and loans and be trustworthy and transparent.

Most critical to productivity is business investment. Therefore economies require sophisticated financial markets that can make capital available for private-sector investment from such sources as loans from a sound banking sector, well-regulated securities exchanges.

3.1. Pillar – innovation

The last pillar of competitiveness is technological innovation. Although substantial gains can be obtained by improving institutions, building infrastructure, reducing macroeconomic instability, or improving the human capital of the population, all these factors eventually seem to run into diminishing returns. The same is true for the efficiency of the labor, financial, and goods markets.

In the long run, therefore, when all the other factors run into diminishing returns, standards of living can be expanded only by technological innovation. Innovation is particularly important for economies as they approach the frontiers of knowledge and the possibility of integrating and adapting exogenous technologies tend to disappear. Although less-advanced countries can still improve their productivity by adopting existing technologies or making incremental improvements in other areas, for countries that have reached the innovation stage of development, this is no longer sufficient to increase productivity. Firms in these countries must design and develop cutting-edge products and processes to maintain a competitive edge.

This requires an environment that is conducive to innovative activity, supported by both the public and the private sectors. In particular, this means sufficient investment in research and development especially by private, high-quality scientific research institutions, collaboration in research between universities and industry, and protection of intellectual property.

4. Conclusion

Although we describe the 4 pillars of competitiveness separately, we do so only for expository purposes. This should not obscure the fact that they are not independent: not only they are related to each other, but they tend to reinforce each other. For example, innovation is not possible in a world without institutions that guarantee intellectual property rights, cannot be performed in countries with a poorly educated and poorly trained labor force , and will

never take place in economies with inefficient markets or without extensive and efficient infrastructure. Although the actual construction of the Index will involve the aggregation of the 4 pillars separately because offering a more disaggregated analysis can be more useful to countries and practitioners: such an analysis gets closer to the actual areas in which a particular country needs to improve.

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Poznámka:
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The Comparison of Financial Liquidity between Companies Producing Starches and Starch Products

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Abstract: The purpose of this article is to introduce and provide an overview of most common liquidity measures. The article focuses on three ratios: the current ratio, the quick ratio and the cash ratio. The research is carried out on the basis of five companies producing starches and starch products what are classified in class 15.62 EKD (statistical classification of economic activities in the European community). The analysis includes companies that were running their business continuously in years 2000-2004. Each of these three ratios is separately analysed thoroughly mainly in comparison to industry average and after that they are compared with the same ratios that have been calculated for different companies.

Keywords: Financial liquidity, current ratio, quick ratio, cash ratio.

1. Introduction

Liquidity means that the company either has sufficient cash to meet its short-term obligations or is capable of raising funds on short notice when necessary. Maintaining sufficient liquidity is an important issue for all companies [1].

Liquidity ratios are used to indicate company's short-term debt-paying ability. Thus, these ratios are designed to show interested parties the company's capacity to meet current liabilities [2]. The most common ratios are:

- The current ratio. This ratio is computed by dividing current assets by current liabilities. The current ratio indicates the ability of a company to pay its current liabilities from current assets and, in this way, shows the strength of the company's working capital position [2] (working capital is the difference between assets that are likely to be converted to cash in the coming year and liabilities that must be satisfied in the same time frame [1]). Short-term creditors are particularly interested in the current ratio since the conversion of inventories and accounts receivable into cash is the primary source from which company obtains the cash to pay short-term creditors. Long-term creditors are also interested in the current ratio because a company that is unable to pay short-term debts may be forced into bankruptcy. For this reason, many bond indentures, or contracts, contain a provision requiring that the borrower maintain at least a certain minimum current ratio [2]. According to the literature [3] this acceptable lever for this ratio should be between 1.2 and 2.
- The quick ratio is the ratio of quick assets to current liabilities. Inventories and prepaid expenses are excluded from current assets to compute quick assets because they might not be readily convertible into cash [2]. The financial manager has to steer the ratios along a route determined partly by the accepted lower limit below which suppliers may be unwilling to grant credit and banks to lend. It is considered bad financial management to allow the ratio to become too high. On the one side this would make a

company a very sound client for anyone thinking of giving it credit, but on the other side the company's shareholders might reasonably be less happy with the situation, because it could mean that the company has not made the best use of its borrowing possibilities or that too many resources are tied up in current assets [4]. It is said in the literature that satisfactory lever of the ratio is 1 [3].

- The cash ratio. This ratio compares the cash and marketable securities with the level of current liabilities. It indicates whether a firm has enough liquid resources on hand or nearly on hand to meet its current liabilities. It is concerned with the immediate payment of creditors [4]. Satisfactory range accepted for this ratio is from 0.1 to 0.2 [5].

The financial manager must watch these ratios because any noticeable movement from one annual report to the next can encourage observers to draw conclusions about the liquidity position and creditworthiness of the company [4].

2. An Analysis of Liquidity Ratios

Liquidity ratios were calculated basing on financial statements of 5 companies. Separately they were calculated for industry average. The results are shown in Tab. 1 and Fig. 1, 2 and 3.

Company / Ratio \ Year		2000	2001	2002	2003	2004	2005	2006	2007
Current ratio									
1	Przedsiębiorstwo Przemysłu Spożywczego „Pepees" S.A.	1.24	1.29	1.35	1.50	1.41	1.57	1.64	1.46
2	Przedsiębiorstwo Przemysłu Ziemniaczanego „Nowamyl" S.A.	2.17	2.55	2.96	3.86	4.04	5.89	6.79	7.13
3	Przedsiębiorstwo Przemysłu Ziemniaczanego S.A. w Niechlowie	1.65	1.66	1.42	1.48	1.87	1.87	3.32	3.31
4	Zakłady Przemysłu Ziemniaczanego „Lublin" Sp. z o.o.	1.12	1.13	1.09	0.90	0.84	0.85	0.87	0.96
5	Zakłady Przemysłu Ziemniaczanego w Pile „Zetpezet" Sp. z o.o.	1.02	1.01	1.04	1.07	1.19	1.13	0.91	1.11
	Industry average	1.09	1.16	1.05	1.05	1.09	1.30	1.31	1.15
Quick ratio									
1	Przedsiębiorstwo Przemysłu Spożywczego „Pepees" S.A.	0.55	0.56	0.70	0.68	0.55	0.80	1.05	0.87
2	Przedsiębiorstwo Przemysłu Ziemniaczanego „Nowamyl" S.A.	1.15	1.31	1.88	1.80	3.26	2.72	4.78	3.85
3	Przedsiębiorstwo Przemysłu Ziemniaczanego S.A. w Niechlowie	0.67	0.78	0.57	0.52	0.67	0.66	1.11	0.71
4	Zakłady Przemysłu Ziemniaczanego „Lublin" Sp. z o.o.	0.68	0.65	0.64	0.50	0.43	0.36	0.42	0.44
5	Zakłady Przemysłu Ziemniaczanego w Pile „Zetpezet" Sp. z o.o.	0.28	0.26	0.31	0.38	0.37	0.37	0.29	0.26
	Industry average	0.65	0.72	0.66	0.66	0.67	0.82	0.83	0.71
Cash ratio									
1	Przedsiębiorstwo Przemysłu Spożywczego „Pepees" S.A.	0.01	0.07	0.17	0.06	0.12	0.18	2.30	0.56
2	Przedsiębiorstwo Przemysłu Ziemniaczanego „Nowamyl" S.A.	0.53	0.61	0.91	0.72	1.78	1.74	3.84	2.99
3	Przedsiębiorstwo Przemysłu Ziemniaczanego S.A. w Niechlowie	0.30	0.32	0.09	0.10	0.10	0.17	0.43	0.25
4	Zakłady Przemysłu Ziemniaczanego „Lublin" Sp. z o.o.	0.01	0.002	0.001	0.001	0.01	0.003	0.01	0.001
5	Zakłady Przemysłu Ziemniaczanego w Pile „Zetpezet" Sp. z o.o.	0.001	0.002	0.004	0.01	0.001	0.002	0.01	0.0004
	Industry average	0.10	0.12	0.12	0.13	0.14	0.14	0.16	0.14

Tab. 1. Liquidity measures.

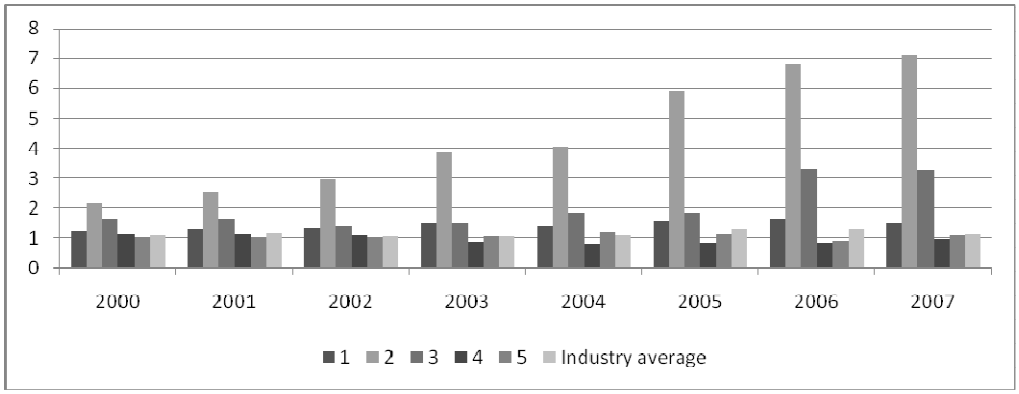

Fig. 1. The current ratio.

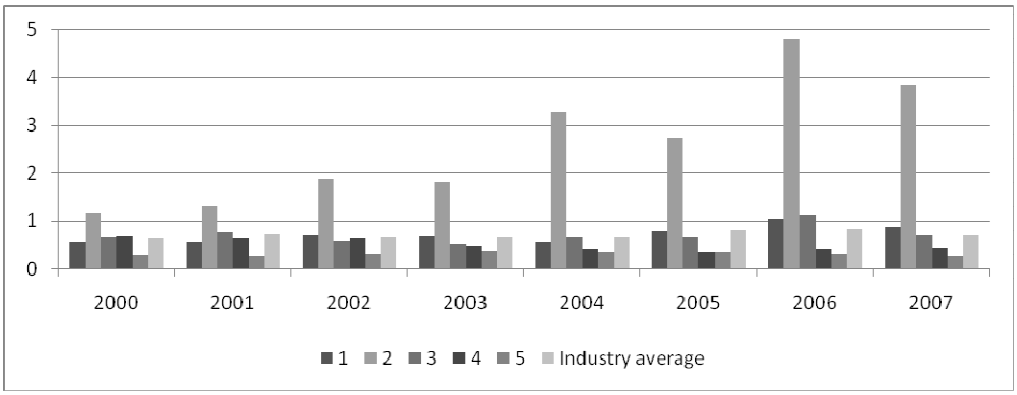

Fig. 2. The quick ratio.

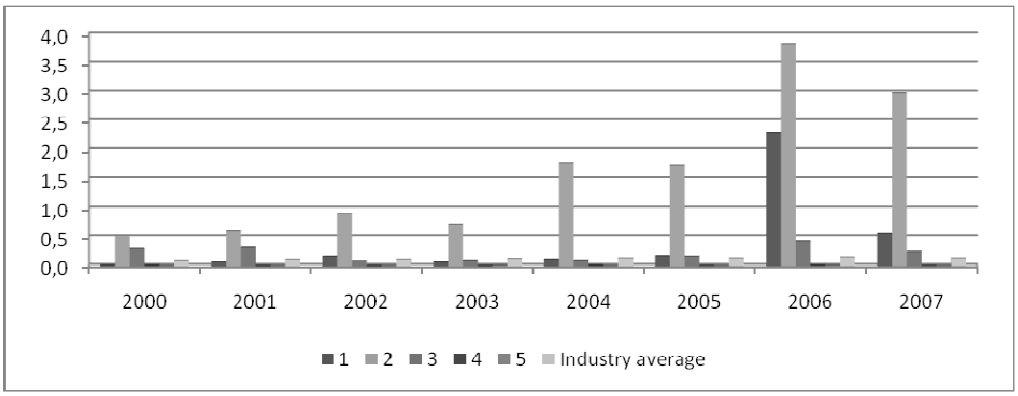

Fig. 3. The cash ratio.

Analyzing Tab. 1 and Fig. we can see that:

- The current ratio is well over the industry average in companies 1, 2 and 3 in all analyzed years, while in company 4 it is below it in years 2001-2007 and in company 5 in years 2000-2002 and 2005-2007. Moreover, in company 4 there are fewer current assets than current liabilities in years 2003-2007, so all current debts cannot be paid off. The same situation is seen in company 5 in year 2006. Furthermore, only company 1 had this ratio at acceptable range in all years, while in company 2 this ratio was

extremely high with a good trend. In the same time, basing on the satisfactory range, in companies 4 and 5 the current ratio was too low.

- The quick ratio is well below the industry average in company 5 in all analyzed years and in company 4 in years 2001-2007. Much more current liabilities than quick assets are also in companies 1 and 3 in years 2000-2005 and in year 2007. In these four companies all current liabilities cannot be paid off by quick assets. The only company in which this ratio was over the industry average was company 2.
- The cash ratio is below the industry average in companies 4 and 5 in all analyzed years. The same situation occurred in company 3 in years 2002-2004 and in company 1 in years 2000-2001and 2003-2004. Only in company 2 this ratio was well over the industry average every year. Taking the accepted range of this ratio into consideration it seen that only in company 1 in years 2002 and 2004-2005 and in company 3 in years 2003-2005 it was achieved. Moreover, in companies 4 and 5 the cash ratio was well below this range and in company 2 this ratio was well over it.

3. Conclusion

The ability to pay current liabilities from current assets in all analyzed years had only one company. Moreover, the same company had enough quick assets to pay current liabilities in each year. Furthermore, this company could pay off all its current liabilities using cash and marketable securities in years 2004-2007. This situation shows that too much capital that could be used profitably elsewhere is tied up in current assets. What is more, two companies had also more current assets than current liabilities, but in the same time they had less quick assets than current liabilities. It indicates that these companies had too many inventories that might not be quickly sold and converted into cash. On the other hand, the worst financial liquidity situation occurred in two other companies. This situation also compares unfavourably with other firms in the industry. These results show that companies from the same industry might have different liquidity situation. While one has enough current assets to pay off current liabilities the other have problems to fulfil this condition. Thus, the financial liquidity situation depends on how the company is managed.

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State Support Policy of Small and Medium-Size Enterprises

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Abstract. The main focus of this paper is on the small and medium-size enterprises (SMEs) and its support by central state bodies whose tasks concentrate on the policy creation as well as the acquisition of resources. In the beginning, there is some information about criteria for business subject classification and about SME´s categories.

Keywords: small and medium-size enterprises, SMEs, state support, ministry, development.

1. Introduction

The main condition of the convenient economic development is dynamic development of all business subjects includes small and medium-size enterprises (SMEs). National economy creates business subjects which are focused on different branches. There are some criteria for business subject classification, mainly:

- final result's character of the business activity (producing enterprises, enterprises provide services),
- economy branch (agriculture, forestry, trade, building industry, banking industry, …),
- a type of production (mass production, series production, piece production),
- size of enterprise (micro, small, medium and large enterprises),
- ownership of the enterprise (private, social, mixed ownership),
- legal form of enterprise (single proprietorship, corporation, limited company, …).

European and Slovak legislation exactly define SMEs as we can see in Tab.1. According to the Act on the state support that is harmonised with European Commission's recommendation Nr. 96/280/ES is definition of SMEs by following criteria: headcount, annual turnover, or annual balance sheet total and autonomous.

Enterprise category	Headcount	Annual turnover	or	Annual balance sheet total
medium-sized	< 250	≤ € 50 million	or	≤ € 43 million
small	< 50	≤ € 10 million	or	≤ € 10 million
micro	< 10	≤ € 2 million	or	≤ € 2 million

Tab. 1. The new SMEs definition [1].

2. State Support Policy of SMEs

The existing support system for SMEs in Slovak republic is not very transparent, includes many supporters who deal with the question of the SMEs support. Moreover, it is

characterised by very complicated relations. Central state bodies, which are interested in SMEs support, are Ministry of Economy, Ministry of Construction and Regional Development, Ministry of Finance, Ministry of Labour, Social Affairs and Family, Ministry of Transport, Posts and Telecommunications, Ministry of Agriculture and Ministry of Environment [2].

2.1. Ministry of Economy of the Slovak Republic

The most important institutional support body for SMEs is the Ministry of Economy of the Slovak Republic which is a coordinator of many activities in this sphere and focuses on the industry, commerce and tourism. The state support through the Ministry takes place in the following areas:

- **Strategy and development of SMEs** through the proposal for financial tools and support programmes for SMEs.
- **Creation of institutional environment for the support of SMEs**. The Ministry coordinates and methodically regulates the activities of National Agency for Development of Small and Medium Enterprises (NADMSE), including the development of regional advisory and information centres network (RAIC), business innovation centres (BIC) designed to help SMEs.
- **Co-operation between international institutions**. The Ministry acts as a main partner from the Slovak side. It secures the co-operation with international organisations in the sphere of SMEs, especially OECD, SEI, UNIDO and EHK UNO.
- **Legislation and regulatory measures for the support of business environment**. The initiation of the Act on the support of the establishment of industrial parks and the Act on the investment stimuli were important steps in the area of the legislation creation and regulatory measures. Since they came into the effect, the amount of the foreign investment has risen significantly.
- **Acquisition of financial resources for SMEs.** Financial resources which are annually claimed for the support of SMEs by the Ministry from the State budget are used to fund the State aid programs for SMEs under the patronage of the Ministry. The programs are implemented by National Agency for Development of Small and Medium Enterprises, Slovak Guarantee and Development bank and Slovak Investment and Trade Development Agency.
- **Support and development of SMEs at a regional level in Slovakia**. The projects are approved by an inter-sector commission including representatives from the Ministry.

2.2. Ministry of Construction and Regional Development of the Slovak Republic

The Ministry was created out of the former Ministry of construction and public works of the Slovak Republic by a take-over of the original competence and by adding the competence of the regional development at the end of 1999. The main tool of the regional development is the policy of regional development that uses its own sources with the logical accent on the development of SMEs. This is the reason, why the Ministry acts as an institutional representative in this area. The Ministry competences are in these fields:

- Support of the **Regional development agencies** (RDA). Their certain activities are similar to the activities of regional advisory and information centres (RAIC).
- Under the **Program of the housing development**, the Ministry provides support to villages and non profit organizations, that are in charge of generally beneficial services, to secure housing, management, maintenance and reconstruction of housing, with subsidies to acquire rent houses, prepare land and secure infrastructure as well as to get rid of system problems of housing estates.

- The Ministry provides the state aid to the community of flat owners as well as to management companies of housing estates under the **Program of the state support of the housing fund renovation** which is carried out via the provision of bank guarantees for loans. The implementation body of the program is Slovak Guarantee and Development bank.
- The Ministry has been appointed the Managing Authority of the **Operational Program Basic Infrastructure** which enables to get the support also from the Structural funds of the EU.
- The Ministry elaborated a document **National strategic referential framework of the Slovak republic for 2007 – 2013.** It represents a referential tool for the preparation of the funds programming and sets out national priorities, which will be co-financed from Structural funds and Cohesive fund in the program period of 2007 – 2013.

2.3. Ministry of Finance of the Slovak Republic

Support function of the Ministry in relation to the development of SMEs is very important. In practice, it is usually applied in form of allowances, exceptions and other financial and economic tools in the area of entrepreneurship. Such allowances were mainly:

- Tax allowances and tax exempt according to the Act nr. 595/2003 Coll. on the Income tax as amended by the Act.
- Allowing for customs credits according to the Act nr. 199/2004 Coll., Customs Act as amended by the Act.
- Tax allowances according to the Act nr. 582/2004 Coll. on Local taxes as amended by the Act.

2.4. Ministry of Labour, Social Affairs and Family of the Slovak Republic

The Ministry does not directly deal with the support of SMEs. It supports SMEs indirectly via the Central office of labour, social affairs and family in the area of social affairs and employment services and via its executive bodies, i.e. Offices of labour, social affairs and family – as one of the tools of active politics at the labour market. Concerning the SMEs, it is specifically **non-returnable mostly purposefully bound contribution to employers** to cover the costs connected with salaries as well as contributions for the self-employment. Contributions to employers are provided on monthly basis and they are conditioned by newly created job positions. The offices can support SMEs indirectly, by **counselling for employers**, especially on labour relations including possibilities of retraining.

2.5. Ministry of Transport, Posts and Telecommunications of the Slovak Republic

In the past, the Ministry in cooperation with Slovak Guarantee and Development bank carried out two contribution programmes, i.e. **Program of combined transport development in Slovak Republic and Program of vehicles fleet recovery of the Slovak bus transport**. Currently, the Ministry provides the submission in system of combined transport by its budget. The Ministry issues the permission of the EU for the international goods transport. It issues also certificates of EU for international transport of those travelling by bus. Both are considered as entrepreneurship.

2.6. Ministry of Agriculture of the Slovak Republic

The support of entrepreneurs in the sphere of agriculture represents, in fact, the support of SMEs since almost 97 % of businesses operating in this area are characterized as SMEs. From the point of financial support, the agricultural basic industry is the most preferred.

In co-operation with the Intervening agency of the Ministry of Agriculture, the **National programme of domestic agricultural goods and food support** has been implemented since 2004. In practice, the support program has been realised by branding of domestic goods with the logo Quality Brand, which should be the guarantee of healthy and quality product for all consumers. In co-operation with Slovak Guarantee and Development bank, the Ministry provides **specialised guarantee programs** for entrepreneurs in agriculture. The SMEs support is realised, except the financial aid, also by **counselling and training**.

2.7. Ministry of Environment of the Slovak Republic

The following activities are organised in the area of environment which contribute to the support of SMEs and in which SMEs can take part:

- **Environmental fund** can supports SMEs by subsidy and loan. Subsidy is used for research and development aimed at monitoring and improvement of the state environment, environmental education, training and promotion. Loan is used for activities aimed at achieving the state environmental goals at national, regional or local level.
- **Counselling services in the field of the nature protection**, especially with the accent on the coherent European system of protected areas Natura 2000. Counselling services are provided also to entrepreneurs by the State Protection of Nature.
- **Recycling fund** is a non-public purpose fund in which financial sources are concentrated for the support of the collection, reusability and processing of waste.
- **Environmental management and audit.**
- **Environmental marking of products** - products with features that enable them to significantly contribute to the environment improvement during their whole life cycle might be marked by “Environmentally friendly product” or by “European flower”.

3. Conclusion

Micro, small and medium-sized enterprises are socially and economically important, since they represent 99 % of all enterprises in the EU and provide around 65 million jobs and contribute to entrepreneurship and innovation. However, they face particular difficulties which the EU and national legislation try to compensate by granting various advantages to SMEs. A legally secure and user-friendly definition is necessary in order to avoid distortions in the Single Market. The revision ensures that enterprises which are part of a larger grouping and could therefore benefit from a stronger economic backing than genuine SMEs do not benefit from SMEs support schemes. Except as central state bodies there are specialised agencies, banks, funds, interest, professional and corporative associations in Slovak republic through which policies are implemented in spite of the fact that the initiators and founders are usually central state bodies.

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Control During Project Execution on the Base of the Project Elevating the Language Skills of Employed People in the Lubuskie Voivodeship

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Abstract. The main point of interest in the hereby presented article is the projects duration between the years 2006-2008 at the University of Zielona Gróra – "Podnoszenie kwalifikacji językowych w województwie lubuskim" financed form the European Union Social Founds and the budget of the government within the scope of the Strategy for integrated development of regional areas. The purpose of the project was to create the ability to use a foreign language within the target group of beneficiaries at the level enabling them to communicate, read and understand information that originates from foreign sources. The classes took place in 27 chosen places of lubuskie voivodeship. Altogether 528 teaching hours were conducted per one participant. The classes were held three times a week for 2 teaching hours and were conducted during the time free of work at the place of gminas' offices (administrative districts) and counties' offices. The participants were all adults coming form different environments, social groups and were varied in ages.

Keywords: control, project, management.

1. Introduction

Considering the above quantitative characteristic one need to have a closer look at the notion of the "project" so as to be able to describe its general qualities more accurately. In the professional literature and in the business environment one can observe the growing popularity of the notion project. Currently one can distinguish many types of projects for example: construction projects, engineering projects, research projects, production projects[1] etc. At the beginning in the Polish writings from the area of organization and management the notion project meant a sort of a plan[2], however as the English literature and terminology gained in popularity the description, project, extended its meaning over the area of execution, control and ongoing correction of the planned action. In such understanding the best synonym of the project is the notion of the undertaking[3]. Currently in the literature many definitions of the project can be found, that is why in the here presented paper under the definition of project

[1] D. Lock, *Podstawy zarządzania projektami,* PWE, Warszawa 2003, s. 16-17.

[2] Examples of using the terms: program, project as synonym of notion plan cites T. Kotarbiński (Kotarbiński T.: *Traktat o dobrej robocie,* Wyd. im. Ossolińskich Wrocław, Warszawa, Kraków, Gdańsk, Łódź 1982, s. 74.).

[3] T. Kotarbiński defines the notion of undertaking in the following way: according to definition as science of effective actions, undertaking is a complex action, multithreaded, conducted according to the plan which due to its complexity can be constructed by the help of special methods

for the PMI (Process Management Institute)[4] is understood that *a project is a temporal undertaking undertaken with the aim to produce a unique product or to provide a unique service. By temporality one needs to understand that every project has its beginning and end*[5].

This definition points out directly towards the most features of this project, that is:

- goal orientation,
- coordinated undertaking of interconnect with each other actions (complexity),
- finished time of duration (the project has its beginning and the end),
- Uniqueness (unrepeatability).

One more important factor in the terminology aspect of the project is the need of time-cost synchronization of the actions compiling the composition (scope) of the undertaking within the general outlines of time and budget restrictions concerning the project as a whole. The relative autonomy of the project is also worth pointing out, in other words their partial independence form other actions. The above presented characteristics of the project indicate the elevated difficulty of any performed actions connected with the project execution and connected with this the high risk of failure[6].

The project subject matter as a characterized action being a sublime collection of factors that determine it is an element of special interest of many researchers; hence the subject of further deliberation will be the problem of control in the project. Looking at the literature of control it can be noticed that the majority of researchers focus on control as a function of management. Of course it is so not without a reason, however this causes that some theoretical aspects of control are left in the shadow of the main streams. Control of the project (also the described project) can be ascribed to one of those "shadowed" aspects. One needs however to point out that in the view of the author the execution of the above mentioned project is understood as a service performance. That is why doing the elementary assessment and control analysis will be compared to the control of traditionally understood services. The result of the above statement is the assumption, that the project control (service) can not be treated in the same manner as the control of other forms of service performance for example: in companies, where control requires uniqueness in implementation and the approach when being used. This is the result, among other things, of specific and not met before formalization of the beginning of planning, execution, control and ending of the project (service). Due to this the project control (service) should be treated differently, since the differences arise due to the nature of the project (service) itself.

So it is important to point out the differences between the traditional services and the control resulting from the project execution. The control of the traditional services, as a fourth element of the general adopted division of management functions H. Fayola, precedes each of the previous functions. It is similar in the case of projects control. Nevertheless the control process of the project (service) for instance: a language project, contrary to other control processes of services forms allows to conduct a measurable assessment of the service based on equal criteria, which is not always possible in the case of traditionally understood services. In the approach towards the traditional services there is a serious obstruction for the process of control in which the controller compares the research state with the desired one, being the second one the aimed model. The basic problem is the indication of the value of a useful result gained as a result of the service being conducted and comparing it to the original assumptions which often are not parameterised values. This is manly due to the unrepaetability of the

[4] *Kompendium wiedzy o zarządzqniu projektami* (A Guide to the Project Management Body of Knowledge) MBOK Guide 2000 Edition Tłum.: Marek Dąbrowski Wydawnictwo Management Training & Development Center, Warszawa 2003, s. 5.

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[6] Trocki M., Grucza B., Ogonek K.: *Zarządzanie projektami,* PWE, Warszawa 2003, s. 18.

services resulting from individual expectations and the grades iincommensurability gained during the control (for instance: feelings can not be quantificated).

In the context of the above illustrated phenomenon it is easy to notice that specification of the service has an essential influence on the execution of the process of control. Providing services requires a special form of conducting the control. Therefore the control should incorporate the total of the project's process duration, enabling foremost in this way greater security of its correct execution. The earlier quoted statement, that control of services precedes each of the management functions, results directly form the dependence which exists between each phase and the project.

Therefore planning in the project, due to its character is crucial at the stage of actions aiming at gaining a customer (beneficiary) for a given project (service). The common problem of planning in the projects is the issue of balancing the demand and supply in the conditions of their greater temporal variance. The task of the control within the project (service) at this stage is, among other things, the ability to provide measurable and unequivocal output data concerned with, for instance: the social requirement for a given type of a project (service). The data gained from the control can aid the later stages of project execution for example: by preventing the growth of the risk of failure of the project execution, resulting from overestimating the demand for a given type of service being provided within the scope of the project in the given time period.

Similar, the control exists in the stage of the project (service) execution. It supports the realization of plans and the established programs. At this stage control in the vast majority has a rutine nature. It functions based on the precisely established tasks and procedures in both, the simple actions as well as in the more complex structural tasks. With the exception of the matrix structures, that exists in bigger projects that function on a higher technical-organizational level. In this case the control is to eliminate the organizational difficulties that result due to the scale of the undertaking in time and space, or to eliminate the interferences of the schedule resulting form random factor.

So the basic discrepancy between performing the control in the project (service) and the traditional control execution of a service is that, in the traditional service the controlling focuses on the influence on the worker from the top in order to maximize the productivity of work. In the project control process a member of a team needs to be more independent, competent and flexible in meeting the varying needs of the beneficiary (customer), therefore the control has a different form from the one generally accepted as the function of organizing[7].

In connection with the above, the control in the project in the process of its execution stays in direct contact with the other function of management, deciding on the range of the project execution. Of course for such control to be possible, it is required form the members of the team implementing the project (service) a certain level of independence and individuality in the assessment of the beneficiaries needs without the need of consulting with the, for example, head project coordinator.

However the control in the earlier named stages does not constitute the basic element of the project control. Still the project control is the strongest stressed in the penultimate function of the project management which is the control function. Owing to that the analysis of the control function should incorporate the earlier presented outline of the project (service) characteristics as well as the stages of the project (service) execution.

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[7] Z. Traczyk, *Kontrola w działalności usługowej,* w: *Kontrola, kontroling i audyt w zarządzania,* pod red.
B. R. Kuc, Wyższa Szkoła Zarządzania i Prawa w Warszawie, Warszawa 2006, s. 75.

In the case of traditional control services the first – already mentioned earlier – feature of the process of implementing the function of control in the service is the immateriality of the creation that results form it. Although during the scientific development many methods and measures of standardization of service deeds that are of immateriality character were

established, the practical implementations of them are often restricted. The services of which the creations are immaterial are difficult to assess as productive actions, since the immateriality of the service causes, to large extent, that from the beginning of their implementation one can not be entirely sure of what is the subject of expectation in the context of the executed service.

Thus, the control in the traditional services is performed manly in the form of self-control of the employee (the doer of the service), whereas the role of the superior is the general assessment in the longer time frame, and this assessment constitutes the ground for making the decision whether to entrust this person with certain tasks.

Execution of the services control will also meet analogous problems in relation to such characteristics of services as changeability and individuality of services. These distinguishing features function in similar conditions (such as: immateriality), what is more they can exist in mutual conditioned dependency. Individualisation of the customer needs will influence the changeability of settling, projecting and executing. The immateriality in turn will be strengthening more the effect of changeability when the service receiver and the service provider will relate to different models, when they will have different experiences and will use different systems of notions[8].

In the case of the project (service) control execution of the above listed problems do not occur. This is manly the result of a tightly organised stage structure of the project in the form of precisely defined, detailed information about the aim of the action in the application form, and by defining the managing, implementing, and validating institution also responsible for execution of the project. Furthermore, the above documents have to precisely determine the grading parameters of each single task as well as the methods for acquiring the results.

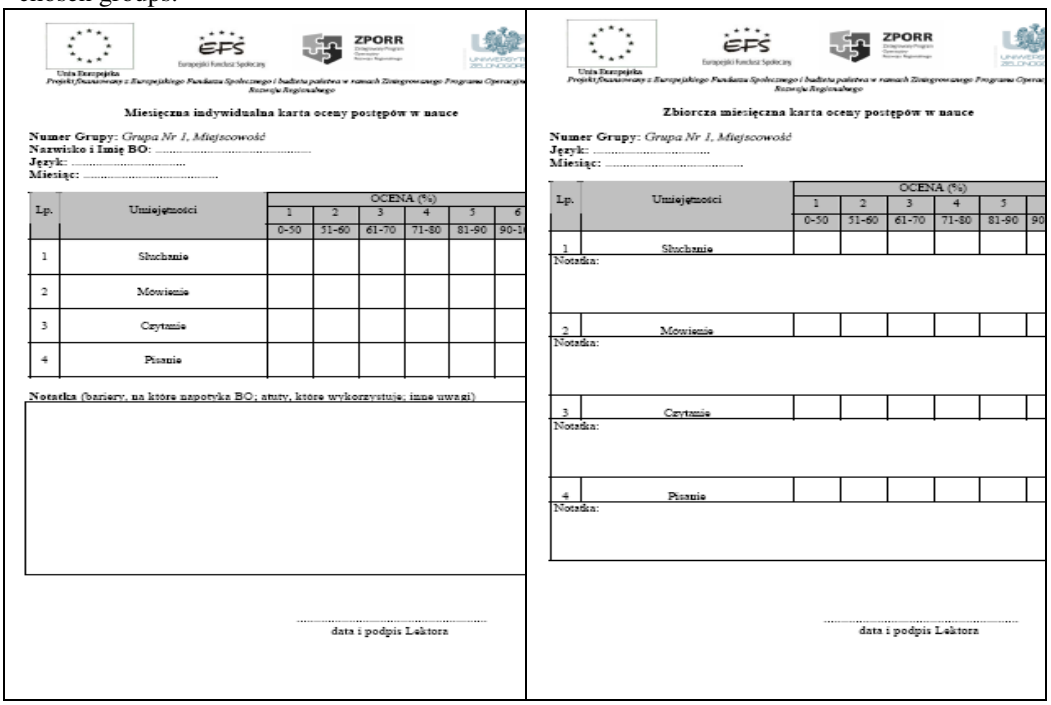
As a result the application documents constructed by the applicant in the form of a application placed in the proper evaluating body, inflict and define precisely the criteria of a model assessment in the context of future controls (proper defining of the result indicators), as well the very methods and techniques of this control. What is more, many of the aspects connected with the control within the project have their origin in the legislation (for instance: the act about public orders, act about VAT etc). Hence, the control action are in principle identical in all the project financed from the UE founds.

But in the frame of the conducted language project at the University of Zielona Góra besides the already presented forms of control the commencing team enriched the form of control by an additional mechanism. This mechanism was the establishment of an up to date form of control by the use of parameterised grading of the learning process of each beneficiary and the whole group. This control was conducted periodically during the duration of the whole project by the language lectors of each group on the earlier prepared grading sheet. The lectures' grading was a result of an earlier established method of grading of the participants based on prepared for this purpose methodology. The set of grades was then entered by the lecturers into the computer environment which communicated with the surroundings by the use of the Internet pages.

As a result the full scope of the progress in learning in particular periods was available and visible for the beneficiaries of the project as well as for the coordinators. In addition on the base of the information stored in the described system one could control the accuracy of the project in terms of deadlines, regularity and effectiveness of the classes conducted. This in

[8] Z. Traczyk, *Kontrola w działalności...,* op. cit., s. 75.

turn helped greatly to control for instance: money flow or financial settlements with the lecturers. The periodic grading sheets and group progress sheets which were filled by the lecturers are presented below on figure 1. Table number 1 presents a part of the Internet page generated by the above described computer system with the learning progress of randomly chosen groups.



Miesięczna indywidualna karta oceny postępów w nauce

Numer Grupy: *Grupa Nr 1, Miejscowość*
Nazwisko i Imię BO: .....
Język: .....
Miesiąc: .....

Lp.	Umiejętności	OCENA (%)					
		1	2	3	4	5	6
		0-50	51-60	61-70	71-80	81-90	90-1
1	Słuchanie						
2	Mówienie						
3	Czytanie						
4	Pisanie						

Notatka (bariery, na które napotyka BO; atuty, które wykorzystuje; inne uwagi)

.....
data i podpis Lektora

Zbiorcza miesięczna karta oceny postępów w nauce

Numer Grupy: *Grupa Nr 1, Miejscowość*
Język: .....
Miesiąc: .....

Lp.	Umiejętności	OCENA (%)					
		1	2	3	4	5	
		0-50	51-60	61-70	71-80	81-90	90
1	Słuchanie						
Notatka:							
2	Mówienie						
Notatka:							
3	Czytanie						
Notatka:							
4	Pisanie						
Notatka:							

.....
data i podpis Lektora

Fig. 1. Monthly collective sheet of learning progress
Source: Own elaboration

Group	Time of control				
	VIII 2007	IX 2007	X 2007	XI 2007	XII 2007
Gr. 1	82	83	83	79	00
Gr. 2	67	64	71	66	00
Gr. 3	84	80	72	77	80
Gr. 4	89	88	88	87	00
Gr. 5	76	75	75	74	74
Gr. 6	81	79	79	74	00
Gr. 7	82	84	82	85	82
Gr. 8	79	78	78	76	00
Gr. 9	82	81	80	80	00

Table 1. The results of learning process in the chore groups
Source: Own elaboration

Taking into account earlier deliberations about the control within the project with the presented example of solutions extending beyond certain frames inflicted by the formal requirements one can state that because of significantly greater formalization of the UE projects (services) from the traditional forms of providing services by different subject forms it is possible to implement definitely greater amount of control techniques which because of their nature are being used most often in the control of production processes rather than service processes I have here in mind computer control systems based in their assumption on the concept of periodicity and repetitiveness of actions – in addition to actions which can be precisely parameterised. As a result the control of projects (services) can be in greater amount based on computer methods of execution conversely to the traditional control of services.

In conclusion, firstly taking into account qualities the stages of traditional service one needs to state that the technical devices have great applications in executing control function,

since they extend the capabilities of executing control function in time and space. In result the control function run by for example: manager of the project can be only of supporting nature.

Secondly, due to the variety of the projects, some of them for instance: language projects can undergo a constant process of control on the level of the direct contact of the provider's employees with the beneficiaries, what is more also the process of project (service) execution can also undergo the same constant process of control. In addition due to regions of high risk of certain stages of the project (service), especially those taking place in the presence of the beneficiary, the institutionalized system controls are of little use. They rather serve to check the services' quality to be at the level of generally established norms, than influence the execution of individual tasks.

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Net Present Value and Economic Value Added Application in Investment Decision-Making Process

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Abstract: This article illustrates how NPV and EVA method can be used when evaluating company's investments. The basic ideas of these models are explained and their application in investment decision-making process is presented. Both methods are compared and the preferred one is identified.

Keywords: Net Present Value, Economic Value Added, project evaluation, project appraisal techniques.

1. Introduction

The selection between various investments can be considered as a heart of decision-making process in a company because it drives its future economic growth. The correctness of decisions in this area is essential also due to the nature of investments. They usually require huge amounts of money to be invested but the returns from them can be expected somewhere in the future. Their long term duration also indicates the need to lock-up lot of capital in them. The capital, which could has been allocated somewhere else. That is why it is critical for a company to make right decision when choosing what project to invest into.

2. Project Appraisal Techniques

When determining which projects (investments) are the best for a company, number of so called project appraisal techniques are used. "Project appraisal technique helps to compare benefits against costs so as to determine acceptability and to set priority among feasible and competing projects."[1]

These appraisal techniques can be grouped into two categories: the Standard Investment Appraisal Techniques and Modern Methods (Value-based Management Models). From the group of the standard techniques the net present value (NPV) method is widely known and preferred. This method is to be discussed in this article and compared to one of the modern methods, concretely Economic Value Added (EVA).

2.1. Net Present Value

"Net present value is a capital budgeting tool that is used in the investment decision process to determine which investment yields the highest return for the investor. In a project the NPV can help decision makers choose which of the projects presented to them has the greatest potential for yielding the highest return."[2]

This method is the most widely applied discounted cash flow technique as well as the most recommended one, when talking about standard techniques. To support this statement the following key features of the NPV rule are presented in literature [3]:

1. *The NPV rule recognizes that a dollar today is worth more than a dollar tomorrow.* Money can be invested today to start earning interest immediately. Any other rule which does not take into consideration the time value of money can not be sensible.
2. *NPV depends solely on the forecasted cash flows from the project and the opportunity cost of capital.* If investment rule is affected by the manager's tastes, the company's choice of accounting method, profitability of the company's existing business etc. the decisions done by using such a rule will be inferior.
3. *Because present values are all measured in today's dollars, they can be added up.* So if there are two projects A and B, the net present value of the combined investment is:

$$\text{NPV (A+B)} = \text{NPV (A)} + \text{NPV (B)} \tag{1}$$

This adding-up property has important implications. It enables not to mislead into accepting a poor project with negative NPV only because it is packaged with a good one.

Mathematically, the NPV can be computed using following equation (2):

$$NPV = \sum_{t=1}^{T} \frac{CF_t}{(1+r)^t} - \sum_{t=1}^{T} \frac{I_t}{(1+r)^t} . \tag{2}$$

where $\boldsymbol{CF_t}$ is net cash flow, future expected cash flow from project, which can vary in time (it can increase, decrease or to be constant during the project life time), $\boldsymbol{I_t}$ is investment needed for implementation of the project, $\boldsymbol{r}$ is discount factor, cost of capital and $\boldsymbol{t, T}$ is project life.

2.2. Problems of the NPV Technique

There are numerous problems investigated by various scholars when talking about Standard Investment Appraisal Techniques in general [1]. In relation to NPV the following issues have been picked up to demonstrate this:

- NPV measures only part of firm's economic value creation.
- The central idea in investment decision-making is the principle of economic value maximization. Firm's value is created from a number of sources, such as unprofitable projects on which the future growth is based or investments that are made for competitive reasons. The NPV is not capable to measure values created from such sources.
- NPV can result under valuation of a project.
- This method tends to place strong emphasis on short-term benefits by heavily discounting the cash flows and can result under valuation and eventual rejection of profitable projects. For example an investment in R&D is carried out with strong expectation of long-term development, which might result negative cash flow in the short-term.
- NPV is sensitive to forecasting errors.

2.3. Economic Value Added

There have been number of alternatives to the standard investment appraisal methods proposed in purpose to cure the problems mentioned above. One of these modern methods is Economic value Added (EVA). It is Value-based management model launched by Stern Stewart & Company in 1989.

EVA can be defined "as net operating profit after tax (NOPAT) less a capital charge that reflects a firm's cost of capital" [4].

The basic formula for EVA calculation is as follows:

$$EVA = NOPAT - WACC \times I \quad (3)$$

where ***NOPAT*** is net operating profit after tax. First, a number of adjustments to conventional earnings are made in order to eliminate accounting anomalies and bring them closer to true economic results. For example [5], EVA may capitalize investment in R&D in contrast to the standard practice of writing it off. ***WACC*** is Weighted Average Cost of Capital, in the other words, it is an opportunity cost. ***I*** is invested capital.

In general, EVA is used as a measurement for company performance. In this way it is known in business practice, mainly abroad it is used quite often for a firm evaluation. In Slovakia this approach has not been established so much.

On the other hand, in the neighboring Czech Republic is this method very popular. Every year company performance is rated by using EVA and top ten successful firms are announced. [6] But EVA can be also used as a tool for project evaluation. For example in German speaking countries this is very popular.

When evaluating projects by using this method the expected EVA is forecasted and consequently discounted with weight average cost of capital. Basic rule is to accept the project with positive present value as they generate future EVA of whole company.

2.4. EVA vs NPV in Projects Evaluation Process

Let us assume that a company intends to invest into the project, where investment of 1000 kEUR is needed. Weighted average cost of capital is 10% p.a. The company is using constant depreciation method and expected return from investment is presented in Table 1 by using EBIT (earnings before interest and taxes).

Amounts in kEUR	Year 1	Year 2	Year 3	Year 4	Year 5
Invested capital	1000	800	600	400	200
EBIT	150	200	250	300	300
Tax (19%)	28.5	38	47.5	57	57
NOPAT	122	162	203	243	243

Tab. 1.

The project evaluation by using EVA:

Amounts in kEUR	Year 1	Year 2	Year 3	Year 4	Year 5
NOPAT	122	162	203	243	243
- Cost of capital	100	80	60	40	20
EVA	22	82	143	203	203
Discounted EVA	20	68	107	139	138
∑ discounted EVA	**471**				

Tab. 2.

The project evaluation by using NPV:

Amounts in kEUR	Year 1	Year 2	Year 3	Year 4	Year 5
NOPAT	122	162	203	243	243
+depreciation	200	200	200	200	200
FCF	322	362	403	443	443
Discounted FCF	292	299	302	303	275
NPV (∑discounted FCF – investment)	**471**				

Tab. 3.

Theoretically, these methods should lead to equivalent results. The project in example above is worth 471kEUR no matter if it is evaluated by using NPV or EVA.

Then why should be one of these methods preferred?

3. Conclusion

The following arguments are presented in purpose to illustrate and explain why EVA should be preferred when evaluating projects and choosing between NPV and EVA:

- EVA enables to create one consistent management system that works with singular high quality indicator (resolving dualism in a company when overall performance is evaluated by using EVA and investments by using NPV)
- EVA enables to simplify regular analyses and reporting as using the identical indicators when planning and measuring performance
- By using EVA the quality of calculation is higher due to better quality of input data. This is due to the fact that forecasted values of EVA are not subjects to such a variation as forecasted cash flows (used in NPV). The basic formula for EVA calculation can be adjusted to following forms:

$$EVA = (ROE-WACC) * I \quad (4)$$

where ROE can be computed:

$$ROE = profit/sales * sales/assets * assets/equity \quad (5)$$

Empirical studies showed that these figures can be forecasted more accurately then cash flows [7].

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Method of Cost Calculation Based on Activities

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Abstract. ABC method studies costs need for concrete outputs in connection with individual parts of enterprise. Main idea of ABC method is that base of cost origin cause are activities not individual outputs. Solution of problems with ABC calculation method requires knowledge and information about course of concrete activities, procedures and process inside of enterprise. Based principle of this method is mapping of spend sources for activities, grouping operations into activities and subsequently mapping activities for cost objects.

Keywords: Activity based Costing method, ABC method, Costs, Activities.

1. Introduction

Due to global competition in 80 years (that caused increasing request of more accurate and more objective cost calculations) was worked new method of assorting overhead cost to outputs and cost calculation. This method was published in the year 1988 by Robin Cooper and Robert Kaplan and they named the method as Activity Based Costing method (method ABC).

Causes that induce need of new method of cost assorting into outputs, were conditioned by significant change of conditions (conditions of production and enterprise management).

These changes were induced by:

- globalization of world economy and growing pressure from competition,
- automation of production and activities,
- innovation of products and technological changes,
- change of cost structure induced by growth of indirect costs,
- customer orientation,
- others.

ABC method studies cost need for concrete outputs in connection with individual operations in enterprise. Main idea of this method is that base of cause of cost formation are activities not individual outputs.

2. Characteristic of ABC method

We can describe ABC method as a method of costs and efficiency measure of activities, products and customers. It allows to assort costs on products according go current expend of activities and sources. Activities and cost objects are base of concept of ABC method.

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and information about course of concrete activities, procedures and process inside of enterprise.

Based principle of this method is mapping of spend sources for activities, grouping operations into activities and subsequently mapping activities for cost objects.

We can characterize ABC method by 3 innovations:

- **First innovation** – mapping cost to activities. This mapping is based on measure of source consumption. Knowledge of cost activities is important source for identification of activities with high potential to cost activities reduction.
- **Second innovation** - mapping costs to cost objects. ABC method assorts cost activities to cost objects based on activity drivers that exactly evaluate consumption of this activities. Activity driver is measure of activities consumption by cost objects. ABC method amonds nonaccuracy of traditional calculation systems by choice of activity drivers. By this we can accurately measure cost consumption of every product. In this meaning ABC method is superordinate by traditional calculation. It became because this method uses more cost drivers and more types of activity drivers.
- **Third innovation** – improving of quality information about activities by extending of nonfinantial information about running activities. Factors, which determine, how large extend of output it demands for activities realization, are called cost drivers. So it is important to know how in high quality are activities excated. Indicators of adjusted results of activities are called indicators of functioning. In this way ABC method combines nonfinancial and cost information for marks of enterprise management with aim to elevate enterprise efficiency.

3. Identification of main activities of enterprise

Identification of activities in enterprise is pursuing by conversations with owners of enterprise, skilled management, by analysis of accounting records and supporting documents. There is assembled scheme of production procedures, which indicate relation of each activity to the rest of activities and products and so on. ABC method requires identification of outputs measure for each of activities. By the activity we understand base, elementarity and concrete operations in enterprise, which we cannot separate more detailed. Individual operations are connected into the activity. Activity comprise logically and productional self-contained units, that can be arbitrary operation or assemblage activities running in enterprise. By the fact, we can operate high number of operations, it is necessary to group activities.

Activities are classified by categories, which determine expenses on products grade:

a. **unit activities** – they are operated, when every unit of given product is produced and consumed directly proportionally with quantity produced units.

Activities: mechanical operations, montage, product cultivation.

Sources: direct salary, direct material, energy consumption.

Driver: hours of direct work, machine hours, direct costs of production.

b. **batch activities** – they are formed, when some batch of goods is made.

Activities: batch change, change of sets number, material preparation, order equipping.

Sources: pay costs for batch change, number of machine sets, costs for order equipping, working costs for preparation of production.

Driver: number of butches, number of process changes, number of equipped orders, number of sets.

c. **product activities** – are operated to support production of various products in given group of products.

Activities: production planning, documentation creation, product creation, testing of prototype.
Sources: work costs for production creation, documentation costs, costs for number of prototypes
Driver: number of products, number of components, documentation quantity, number of new products, store stock.

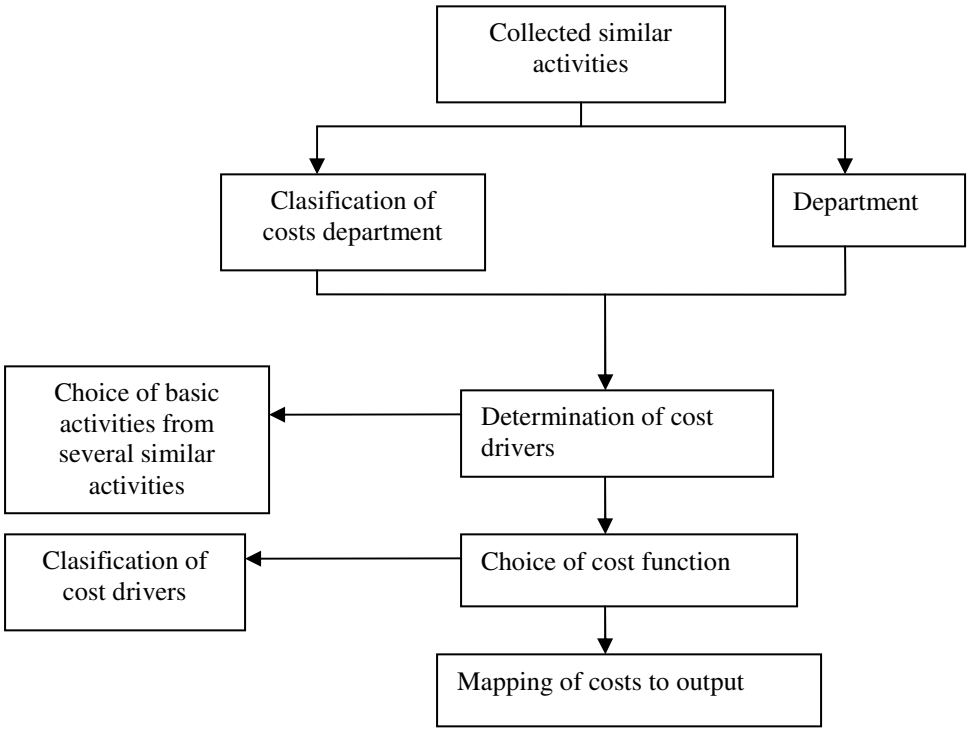
d. **activities to preserve devices** – they are additional category of expences, that cannot be directly assorted to individual products.

Activities: administration, management, accounting.
Sources: depreciation of administration devices, taxes, insurance, rent
Driver – number of working in production centre, direct costs of production, production volume.

3.1. Advance of ABC method can be separated on this basic steps:

a. aggregate similar activities into departments,
b. cost separation according to type and their accumulation to center,
c. choice of basic cost drivers,
d. determination of cost function between cost and hi driver of data,
e. mapping of costs to output calculation.

This advance we can express graphically:



4. Classification of costs by ABC method

ABC method classifies costs as:

1. direct,
2. short-term variable,
3. long-term variable,
4. fixed costs.

Direct costs comprise base of output and we can count them per unit

Short-term variable costs – they are changing with volume of production. ABC method (like traditional methods) count them for output through relational quantity dependent for production volume.

Long-term variable costs – overhead costs, that are changed with production volume, but with other measurement of operation. They are short-term fixed, but long-term they are changing with range and outputs. For counting on outputs we can use operations, which are called as cost drivers.

Fixed costs – in given period are not changing according to any indicator of operation.

5. Conclusion

Among main contributions of this method belongs detailed separation and mapping of overhead, acquire exact information about costs of partial operation in enterprises, improving a method of overhead cost mapping, fulfill of cause connection, increase of attention into direction of helping and attendant a processes and operations.

Contrariwise method deficiency is operoseness and time demands of set up this method, high financial costs, new manner of register, choice and complicatedness of costs drivers, cost quantification.

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Transport User as an Instrument of Economic Growth, Efficiency and Effectiveness[1]

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Abstract. An efficient and effective transport system can significantly support the economic growth. Industry expects an effective and efficient transport system to support sustainable economic growth and enable it to compete in state, national and global markets. It expects an interconnected system of roads, rail, pipelines, ports and airports to ensure products reach markets quickly, efficiently and in good condition. People are important economic agents from this point of view. Because people are creators of markets, are inputs to production and consumers of goods and services. The transport task in relation to people is therefore complex. Transport user is so very important part of the transportation planning process. This article will try to resume basic aspects and important areas influenced by the force of transport user. The progress and success of the planning exercise should be reviewed regularly to determine if each step has achieved what it set out to do and if adjustments are needed. The success of implementation should also be reviewed regularly to determine if adjustments are needed – including the success of outputs. The transport user and his needs should be taken into account on all levels of transport planning and decision-making.

Keywords: Transport User, Transport User Value, Transport Behavior, Economic Growth, Efficiency.

1. Introduction

An efficient and effective transport system can significantly support the economic growth. Industry expects an effective and efficient transport system to support sustainable economic growth and enable it to compete in state, national and global markets. It expects an interconnected system of roads, rail, pipelines, ports and airports to ensure products reach markets quickly, efficiently and in good condition.

People are important economic agents from this point of view. Because people are creators of markets, are inputs to production and consumers of goods and services. The transport task in relation to people is therefore complex. Transport user is so very important part of the transportation planning process. This article will try to resume basic aspects and important areas influenced by the force of transport user.

2. The transport task

As mentioned above, transport is a very important part of socio-economic system. And the efficient and effective transport system can significantly support the economic growth.

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Transport enables people to access places of employment and consumption points, serves as an intermediate good by enabling transactions, it facilitates various social objectives. Last but not least, it is a consumption good itself, for example, when people drive for pleasure or consider the journey as part of an experience.

So transport must meet the requirements from many areas and subjects. Transport is often a catalyst for economic growth, employment and social development in regional centres and remote communities. The high costs of providing transport means that tailored approach is needed to meet the transport needs of communities with available resources.

The transport system also supports economic growth by connecting people to goods and services. It also connects people to places of employment, education and training and creates jobs in infrastructure delivery and transport services. Industry also expects effective connections between areas of economic activity now and in the future. It sees an integrated approach to planning for economic land uses and transport as an important part of securing long-term economic growth.

The availability, costs, travel time and reliability of the transport system impact on industry competitiveness. It is also an important factor in attracting industry investment to chosen areas, which increases economic activity, jobs and revenue. The transport tasks are nowadays quickly changing. The ongoing challenge is to make best use of resources and look for innovative ways of financing and securing more funding.

2.1. Transport user and E-business

Nowadays the E-business is changing the transport task. The trend towards increased e-business has important consequences for the transport system. As a result of e-business, companies are beginning to operate with reduced inventories, more orders, smaller order sizes and more customisation. Transport logistics will change to delivering smaller quantities of goods more often-in just-in-time processes. Transport decision makers need to respond to this challenge by gaining an understanding of the commodity flows in the freight task and identifying and managing the transport impacts on the community. E-business changed also the transport user behaviour. It is not necessary to travel anymore, when you can just “click” and the good will come to you. But it also generates new transport journeys, means of transport and transportation ways. The more the user use E-business, the more he use also transport, but it generates differences between passenger and freight transport. Transport market changes and also the competition. Not only individual transport but also freight transport is the competitor to public passenger transport. And the transport system is not flexible enough to react on such changes.

2.2. Health, safety and security

A transport system that maintains and enhances the health, safety and security of users and the wider community is exactly what transport users require. The community and visitors expect a safe and secure transport network. They want a network that reduces transport-related injuries and deaths on the road and rail network, on waterways and in the air and they do not esteem it a privilege to travel safety and secure, but as the platitude. People want to feel safe, and want the transport system and its surroundings designed in a way that enhances safety and security for people and their property. This is particularly important for those who use public transport, walk, cycling or have restricted mobility. People also want streets to be safe places for children to walk and cycle. The safe transport of bulk and dangerous goods, and the safe operation of freight vehicles, is also very important not only to the user, but also to the whole community. The community also wants the transport system protected from security risks,

such as terrorism and the distribution of terrorist materials. Transport users realized that the choices they make about transport can affect their health and by choosing active modes of transport, people can improve their personal health and fitness. Transport users are nowadays also concerned about the impacts of vehicle emissions on air quality and human health.

2.3. Environmental responsibility

The environment is not just something to be protected anymore, but also an economic asset. It is also one of aspect taken into account during the transport user decision-making process. It may play even play title role in transport behaviour. Integrating transport with the environment can achieve broader goals. For example, transport access can enhance the value of specific environmental features, such as a tourist drive through an area of natural beauty. This becomes the more problematic, the more tourists are travelling. The increasing role of tourism in economy system will increase demand for safe and convenient access to regional attractions. The bulk of visitor travel occurs by car, which increases the need for good signage, rest stops and access to attractions. These are also important in cycling or travelling area. International tourists can face additional challenges – particularly if they are unfamiliar with the language, road rules, road conditions (for example, sharing with road trains) and vast distances between towns in remote areas of the state. This may raise awareness and appreciation of a feature, which can help make it easier to protect.

2.4. Alternatives to transport solutions

It is necessary to consider alternatives to transport solutions. Non-transport solutions can be equally effective in providing access. By understanding the nature of people's accessibility needs, planners can make sure they engage the right stakeholders in finding the most cost-effective solution – and this may not be a transport solution. For example, providing access to essential services, such as doctors, emergency services and education in rural and remote locations, can be achieved by non-mobile means of access (for example, video links to specialist doctors). Alternatively, communities can be designed in ways that make it easy for people to walk, cycle or catch public transport to fulfil their daily needs and interact with other community members.

2.5. The many costs of transport...

There are many costs of the transport system, including:

- the costs of providing the transport system – such as capital, operating and maintenance costs or the costs of funding services under public transport contracts
- the costs of using the transport system – such as fares and operating costs
- the costs the transport system imposes on the economy, society and environment – such as congestion, safety, amenity, cultural heritage, noise, emissions, health and erosion
- the costs of an inadequate transport system – such as impacts on industry competitiveness, the cost of goods and services, and liveability

2.6. Liveability, connectivity and amenity

Transport users have a strong interest in improving residential amenity, aesthetics and local connectivity. People want to avoid the negative impacts of the transport system on community livability. For example, they do not want transport infrastructure to cut communities off from each other and from basic goods and services. Interconnected streets and transport systems make it easy for people to get around and connect with others in the

community. The built environment (including transport infrastructure) can also foster a sense of place within communities. People want communities designed in a way that creates a strong local identity and values and respects different cultures and cultural heritage. The use of materials, landscaping, construction methods and design should be compatible with the culture, climate and character of communities. Communities also use the transport system for recreational purposes. They use transport facilities like cycling routes and walking paths for recreation, and use the transport system to get to open space and recreational areas. People expect to have a say in transport planning and decision making to achieve better outcomes. By engaging the community, decision makers can gain a better understanding of community needs, priorities and expectations. And the community can gain a better understanding of transport options, their real costs, and the constraints in meeting the community's needs. The things that comprise a livable community can vary from person to person and community to community, and may change considerably over time. This presents a challenge for transport planning to be responsive to changing community values over time.

2.7. Cultural heritage

Cultural heritage is about what people value in society and what makes groups and communities distinctive. It includes Indigenous, shared and natural cultural heritage. Some of the ways cultural heritage matters can be identified include assessing existing records and reports, undertaking field investigations and consulting with stakeholders. Transport planners should work with native title stakeholders when undertaking transport planning.

3. The target

The aim of transport planners is to support good economic, social and environmental outcomes for current and future generations. They must take into account all above mentioned, if they want to have the user friendly, effective and an efficient transport system. Above mentioned conditions and areas highlights the relationship between transport and good economic, environmental and social outcomes for the community. While tradeoffs across economic, social and environmental factors are an inevitable part of the decision-making process, inappropriate tradeoffs can result in unsustainable outcomes. In making choices, decision makers need to consider:

- how to trade-off economic, social and environmental benefits, costs, risks and opportunities in a balanced way
- how to best contribute to good short- and long-term outcomes
- how to avoid, mitigate or offset negative impacts
- how to make it financially responsible.

4. How to meet the target

4.1. Consider transport-system performance

To consider transport-system performance and the whole-of-life economic, social and environmental consequences of options by assessing the performance of the current transport system and matching this against future needs and desired outcomes, decision makers can assess the ability of the system to respond to these needs. They can then look for ways to improve the performance of the transport system. Good decision making relies on understanding the implications of doing nothing compared with taking alternative courses of

action. It is important to identify all impacts and evaluate them as well as possible. These impacts should be considered on a whole-of-life basis (delivery, operation, maintenance, rehabilitation, disposal etc.) and include economic, environmental and social benefits and costs.

4.2. Meeting government, industry and community

Basic steps to adopt a holistic perspective to meeting government, industry and community needs and values are ground in understanding the needs and values of governments, industry and the community is at the core of good transport planning. These needs and values are not just transport related. It is about finding the balance that best meets the needs of the transport system and the broader system that transport affects or is affected by – for example, land use, industry growth, community liveability. It will not always be feasible to account for all of the impacts that particular actions may have, but it is about planning from a position of knowledge. A good knowledge base allows decision makers to make informed choices at every stage and on all fronts, not just from a transport perspective.

4.3. Make financially responsible planning decisions

You can find a number of aspects to financial responsibility – achieving best value for money, ensuring financial sustainability of the organisation and its funding partners, and ensuring the accountable and transparent management of financial resources.

Financial responsibility is about directing resources to the areas of greatest need and greatest benefit. This means selecting the most cost-effective way of achieving the desired outcomes and priorities.

Solutions also need to be financially sustainable for the organisation and its funding partners. Financial sustainability is frequently achieved by matching solutions to available or predicted funding, reallocating existing funding to better match priorities and the greatest areas of need and securing additional funding or finding innovative ways to deliver solutions – for example, through public-private partnerships. Any funding assumptions, constraints and opportunities that could influence the planning exercise or its outcomes should be explained to stakeholders. In addition those stakeholders who potentially have a funding role should be engaged early in the process.

4.4. Share the benefits and costs of the transport system

It is necessary to recognize whether transport users should have relatively easy and safe access to the essential services they need. The benefits and costs of the transport system should be shared equitably within and across current and future generations. The costs of a transport system that provides this should be shared fairly across society – it should be affordable and equitable.

Affordability is also important to industry and business investment, viability, productivity and growth.

The concept of sustainability recognises that the needs of the current generation should be met without compromising the ability of future generations to meet their own needs. Even when a program or piece of infrastructure has a relatively short life span, it is important to consider the long-term impacts and opportunities that result – for example, over 30 to 50 years. In this way, the benefits and costs of transport can be shared equitably across generations.

4.5. Make best use of existing transport infrastructure and services first

More of infrastructure may not be the solution. Problems caused by peak period congestion in urban areas often lead to calls for more road capacity. However, there may be more effective ways to respond. For example, a major source of traffic can be parents driving children to school. One solution would be to expand road capacity. Another would be to ensure children have safe access to school through a series of smaller measures that may be more cost effective. This could include improving walking and cycling access to schools, promoting car pooling, and educating parents and children about travel choices. New infrastructure and services are often seen as a solution to existing problems. However, existing infrastructure and services should operate as efficiently as possible before new infrastructure or services are provided. When new infrastructure or services are necessary, they should complement the existing network. There are many ways to optimise operational efficiency, extend the life of existing infrastructure and reduce the need for additional investment, including:

- managing the demand for travel
- applying new technologies – for example, real-time travel information, traffic management, freight and fleet management, and electronic toll collection
- managing the use of infrastructure and services – for example, controlling local access points to freight routes and providing priority for vehicles such as public transport
- managing land uses

Making best use of existing infrastructure and services first does not mean planning for only short-term needs. Early planning for future land uses and transport corridors can help to make best use of infrastructure and services in the long term. By preserving strategic transport corridors and protecting them from incompatible uses and development, future generations will also be well placed to make best use of infrastructure and services.

4.6. Manage demand and influence travel choices for people and goods

Simply responding to the growing demands on the transport system is not a sustainable long-term solution. An important part of transport planning is finding ways to influence and manage demands on the transport system to make best use of the system, reduce the need to continually expand capacity and limit the negative impacts of transport. A key way of achieving this is to influence land use. Efforts to manage demand and influence travel choices can lead to fewer trips, shorter trips and more trips by public transport, walking and cycling. It can also help to make best use of existing infrastructure and services. Take public transport for example. Public transport offers a choice of mode for many people, including those without regular access to a car. If more people use these services, a greater cost recovery can be achieved. In addition, public transport can offer the most cost-effective way of moving large numbers of people to key destinations – for example, to get people to work in major centres or to service major events.

4.7. Choices about the mode for freight are equally important

Businesses transporting freight will usually make a commercial decision on the mode they use based on the direct costs they face. These direct costs exclude external costs such as effects on the safety, health or amenity of communities, effects on other transport system users, or effects on other industries. Sometimes these external costs are high. For example, in some cases the external costs of a road-freight solution may be higher than the difference in

direct freight costs between road and rail. In these cases, a change in mode from road to rail would result in a net reduction in total costs to the community.

4.8. Planning across "Public-private partnerships"

The state government has guidelines for public-private partnerships (PPP). Benefits for the public sector include a transfer of risk to the private sector and adoption of private sector management skills, innovation and efficiencies through a long term and output-based contractual arrangement. The infrastructure and service delivery methodology used to obtain a value-for-money outcome is based on the assessment of cost, affordability and priority, tested to ensure the public interest is fully protected. By pursuing PPPs, the state government aims to optimise the level of infrastructure expenditure through the responsible use of the resources of the public and private sectors. There is a strong link between PPPs and integrated transport planning. Integrated transport plans will be an essential resource in prioritising candidate PPP projects, while PPPs may be an appropriate delivery mechanism for major projects identified in plans.

5. Conclusion

Many factors influence the transport users needs and behaviour. But these factors design the planning steps and they need to be flexible enough to respond to and deal with these factors. Some of the key issues influencing the nature, design and timeframes of the planning exercise are discussed briefly here. Because of their influential nature, they also appear, in different forms, in each of the separate steps. Data and information collection should be linked to the nature and level of decision to be made. Strategic decisions may not have intensive data needs. However, if a decision is needed to proceed with construction of a major road proposal, comprehensive data and analysis is required. The availability, quality and scope of data and information required will influence the length of the planning process and the confidence in its findings. Managing risks and opportunities is a very important part of transportation decision-making process. Risks and opportunities need to be managed throughout the entire planning process, as well as during implementation.

For each risk and opportunity, decision makers need to understand the likelihood of it occurring, its consequences and any measures to mitigate the risks or capitalise on the opportunities. Where decisions depend on assumptions that cannot be verified, they should be tested using different weights and values for these assumptions. Where there are fundamental differences on aims, preferred solutions or implementation, it may be necessary to review the planning process or seek a political decision. This situation can arise, for example, where there are different regional and local priorities or objectives. Good planning is iterative by nature. The progress and success of the planning exercise should be reviewed regularly to determine if each step has achieved what it set out to do and if adjustments are needed. The success of implementation should also be reviewed regularly to determine if adjustments are needed – including the success of outputs. The transport user and his needs should be taken into account on all levels of transport planning and decision-making.

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Augmented Assembly

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Abstract. Industrial assembly is nowadays subject to quick product changes, increasing numbers of variants and short planning spans of the customer. Because of the relatively high percentage of manual work the cost pressures from low wage countries is especially high. These challenges can be effectively met, however, through a comprehensive rationalization approach to the assembly, like augmented reality technique and qualified personnel.

Keywords: Augmented Reality (AR), Virtual Reality (VR), Augmented Assembly.

1. Introduction

Today's enterprises are trying to continually increase their efficiency and productivity in order to ensure their competitiveness and survival. They want to product quicker and with lower costs. This can be achieved with new approaches like virtual reality, augmented reality, and augmented assembly. Using these technologies can help enterprises to be more effective and competitive even in these times of crisis.

2. Augmented Reality (AR)

The development of Augmented Reality (AR) technology initiated in the 1990's as a parallel technology from Virtual Reality (VR). In Augmented Reality, virtual objects are combined with the real surroundings seen with the human eye. The augmented view is for example projected to computer screen or a miniature PC, or seen through data glasses or head mounted display (HMD).

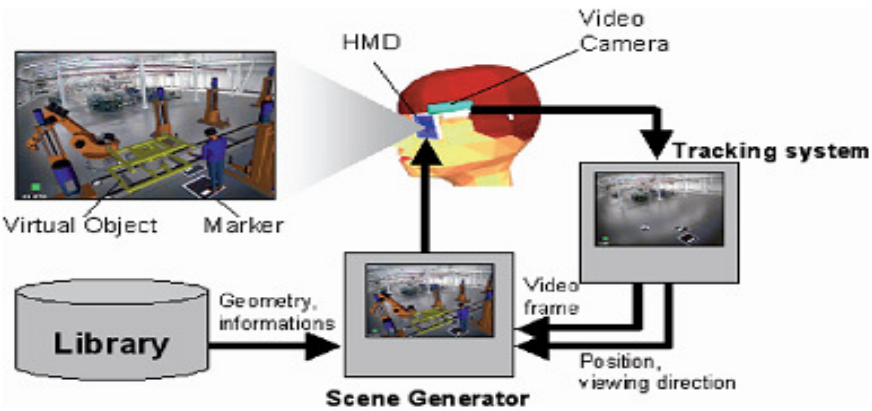

Fig. 1 Principal layout of AR application

Technological ingredients of Augmented Reality applications are normally:

- Optical tracking system
- Video camera
- Interface, e.g. optical flystick
- Video-see-through display
- AR software

The term mixed reality is often used to describe the whole spectrum that ranges from AR, where the emphasis is on the real image, to augmented virtuality, where the virtual scene dominates and the real elements appear as add-ons. AR and Mixed Mock-Up's on fig. 2 are the logical evolutionary steps of VR. Automotive and aerospace industry contributed heavily to the success of these projects. After commercialization of software and partly of hardware first results have been obtained for the daily work. These applications do not deal so much with latest findings but with more simple techniques like superpositions and comparisons real/virtual. On the fig. 2 you can see the differences between reality, augmented reality and virtual reality.

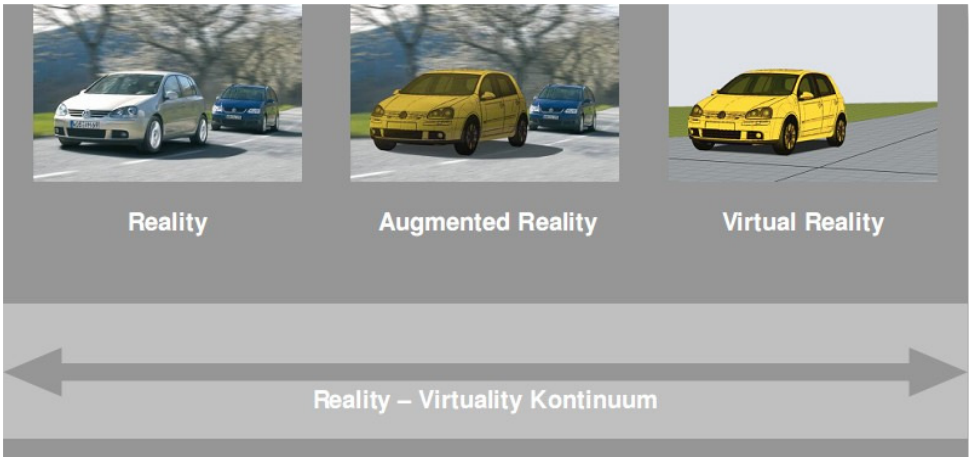

Fig. 2 Reality – Virtuality Continuum

3. Augmented Assembly

Customer specific and individualised products, small batch sizes, as well as increasing product complexity set higher demands for assembly work. Augmented Assembly is used among many enterprises, where AR technology is applied to increase assembly efficiency. In augmenting assembly work, the assembly worker is guided by virtual objects of components and assembly tools, and visual assembly instructions. The worker sees the augmented view through light weight head mounted devices (e.g. data glasses), and sensors provide feedback from the performed operations. On the fig. 3 you can see how it works and the connections between various departments.

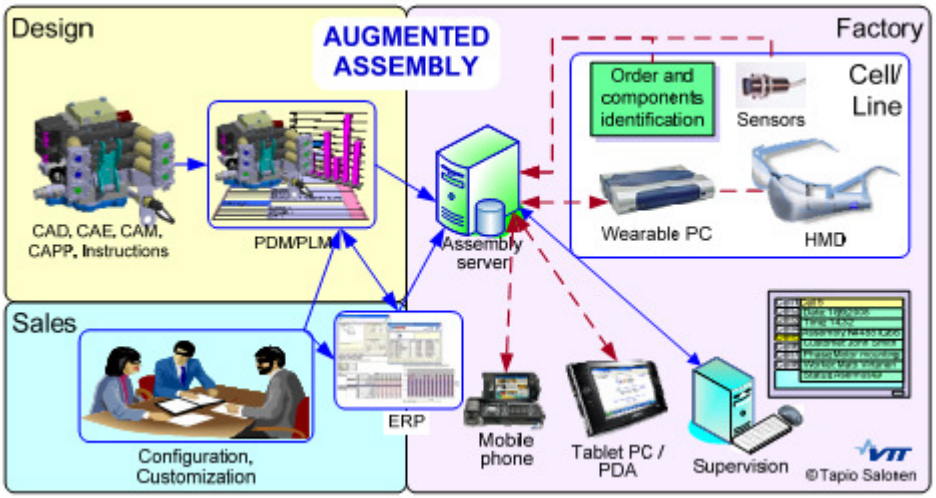

Fig. 3 Connections between various departments by Augmented Assembly

The goal is to the generate concepts for a human worker to operate in complex, short manufacturing series or in a customized production factory environment. Each individual product may have a slightly different configuration: the order of assembling parts may vary for different products and/or the number of phases in the assembly line may be large. The traditional approach is to use assembly drawings (blueprints) and possibly instruction manuals with guiding pictures to describe the content of each work task. The new approach is to use dynamic and visual assembly instruction. Experimental results show that the augmented reality assembly system can have a high effectiveness ratio. The AR system can also reduce assembly times, accelerate learning of the assembly tasks and provide more quality assurance to the factory floor.

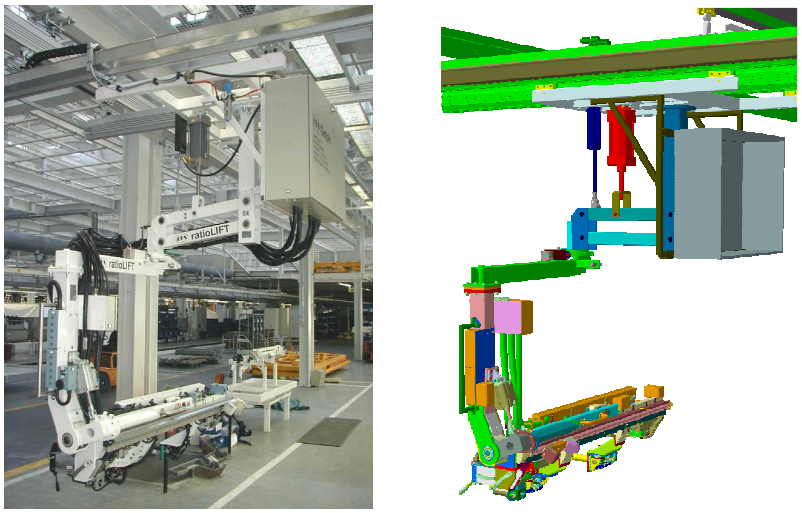

Fig. 4 Cockpit manipulator used by assembly in real factory and its 3D model

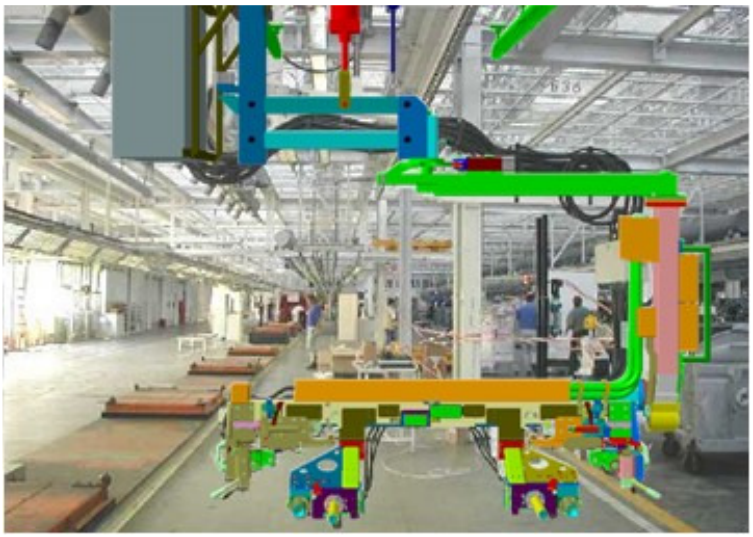

Fig.5 Example of using Augmented Assembly in praxis

On the fig. 4 you can see an example of cockpit manipulator used in praxis and in real factory and next to it is a 3D model of it. On the fig. 5 is this 3D model in real hall and this all from a worker`s point of view. To apply AR technology generally in real and different production environments, the related product and assembly information should be produced from 3D CAD systems into forms suitable for AR display as automatically as possible. Besides finding suitable 3D data representations and conversion methods for AR use, automated procedures are required to include the assembly related guidance information (annotations, animations etc.) into the AR visualizations, independently from the user's orientation/view. After analysis of the current information creation processes and with the extended product model for augmented reality purposes, our aim is to develop new content creation techniques in industrial settings.

4. Conclusions

Nowadays is AR one of approaches which are very popular and more and more enterprises are interested in this kind of solution. Although initial investments into these techniques are high, at the end it helps by solving wide range of problems with production and assembly.

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Economically authorized costs connected with realizing performances in transport in public interest

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Abstract. Public notice of Ministry of Transport, Posts and Telecommunications of the Slovak Republic no. 151/2003 from statute-book about prove estimated loss from offering performances in public interest in regular bus transportation is important legal regulation being immediately deal with regular bus transportation. Based on this regulation is given value of donation being paid by VÚC (superior territorial area or district in Slovak republic) to concrete carrier on estimated loss.
For assumption loss is based on this public notice different between calculated economical authorized costs for offering performance including adequate profit and revenues from regulated travelling expenses and other revenues achieved by full-filling responsibility to offer performances.
Economically authorized costs (EAC) are costs creating to carrier in consequence of guarantee performance of transport services by contract of performance in public interest being concluded by client (estate or VÚC) and carrier.
The aim is in determining obligatory methods by calculating EAC on basis of calculated premises. His goal is to show requirement of carrier for payment of loss of realizing of transport service performances.

Keywords: estimated loss, economical authorized costs, calculation, transport in public interest, economic ratios, cost items, own performance costs.

1. Responsibility of EAC calculation

EAC calculation for each kind of regular public transportation of persons and its reporting is connected to operational responsibility of carrier to realize transportation performance in public interest, in aim of contract. The results of calculation are processed by structure of calculation equation. These are specific for each segments of person public transportation.

2. Specification of influences to calculation of EAC cost items

On final value of costs (performance price) have different ratio each cost items, respect to their character and nature. It enable classified them by:

a) character on:
- costs influencing value of purchasing prices (fuel, direct material, repairs performing by external supplier, ...),
- depreciations having not financial character and they are basically determine for creation next investment,
- costs of previous,

b) relation to performance to:
- fixed,

- variable.

EAC calculation it's managed by law no. 18/1996 from statute-book [3] about prices, amend by law no. 196/2000 from statute-book and by notice of Ministry of Finance of Slovak Republic no. 87/1996 from statute-book. Base on EAC calculation for following (contract) period are results or preliminary results of previous year, changes of price rise, taxation legislation, assumption of performance changes, number of employee etc.

In concrete calculation items are changes shown as follow:

- Fuel, tractional energy, motor oil and greases – amount of costs is dependent on changes of petroleum price on world-market and also on capacity and structure of calculated performances.
- Direct material, tyres, else direct material – is necessary segregate to detail inputs of materials. Making calculation on these inputs on dependence of supply extent and calculated price.
- Direct wages, obligatory deliveries from wages – amount is dependent on given carrier payment policy and on calculatedly quantity and structure of employees on relation to performances.
- Direct depreciations, depreciations of basic resources (conveyances) – foundation for calculation is capacity of material and immaterial capital possession of carrier in previous year in view of strategy charge investments and eliminate of capital possession.
- Repairs and services of basic resources (conveyances), direct repairs and services – carrier determine (on foundation of calculated performances extent in public interest) capacity and structure of necessary repairs and services on material and immaterial capital possession, to which he apply calculated supplier unitarily prices.
- Travelling expenses – calculating on base of calculated capacity of business trips carrier employees with take account to supposed adjustment of rate of travelling expenses.
- Insurance of automobiles – carrier calculating amount of insurance in dependence on extent and structure of car pool (used for purpose performances in transport in public interest) and presumptive amount of insurances rate.
- Additional direct costs – item include primal costs, which aren't presented up. For purpose calculation is necessary specify this item to detail of each partial items. Making calculation on these items in dependence of supply extent and calculated price.
- Operation overheads – basis for calculation are indirect EAC, which relate to operation and which are achieved in previous year.
- Management overheads – basis for calculation are indirect EAC, which relate to management and administration, which are achieved in previous year.
- Financial costs – calculation must come out of credits, which installments been amortized in period of contract maturity, calculatedly bank payments and costs of exchange rate risks.

EAC calculated in this way with including average profit create planning price for performances in public interest in personal transportation for following contract period.

- Carrier is obligatory present planning EAC calculation of transport performance requirement for them whole period. This is included in contract of performance in public interest.

3. Economic ratios of each VÚC for year 2005 in thousand of Slovak crown (Sk)

VÚC	Own performance costs (in thousand Sk)	Revenues from transportation (in thousand Sk)	Difference: Revenues – own costs (in thousand Sk)
Trnava	552187	412176	-140011
Bratislava	543378	469638	-73740
Trenčín	779932	617138	-162794
Banská Bystrica	1039718	864236	-175482
Žilina	680748	509177	-171571
Nitra	753337	567507	-185830
Košice	946832	766226	-180606
Prešov	997653	750918	-246735

Tab. 1 Economic ratios of each VÚC for year 2005 in thousand of Slovak crown (Sk) [1, 2]

As was presented in previous table 1, it is clear, that in no one VÚC was revenues of carrier preserve of suburban transportation in summary value of cost level, what means the loss for them from economic point of view. This result should be followed with correction of sum being given to carrier by VÚC as compensation of estimated loss.

4. Portion of cost items in own performance costs

Costs	2005 (Sk/km)	%
Fuel	7,18	27,92
Costs to tyres	0,27	1,06
Additional direct material	1,29	5,06
Direct wages	4,35	16,91
Conveyances – depreciations	2,48	9,64
Conveyances – rental	0,11	0,44
Costs to repairs and services of conveyances	3,08	11,98
Travelling expenses	0,5	1,94
Costs to obligatory deliveries from wages	1,53	5,95
Additional direct costs	2,07	8,05
Operation overheads	1,7	6,62
Management overheads	1,14	4,43
Own costs of performance	**25,72**	**100,00**

Tab. 2 Portion of cost items in own performance costs in Slovak republic for year 2005 [1]

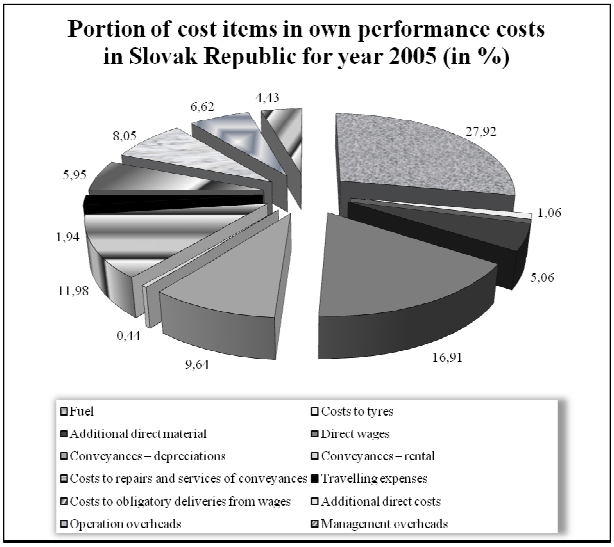

Fig. 1 Portion of cost items in own performance costs in Slovak Republic for year 2005

From the table 2 and the picture 1 it is clear, that the most portion up to 27,92% in own performance cost are the costs spend for fuel. Price of fuel is changing continuously during the year being reason for carrier to present higher economical authorized costs as was signed in the contract of performances in public interest instead of fact, which by determining of performance price is in aimed of contract take in account also possibility of rise of fuel and grease prices.

The level of fuel price is changing during the year. It is difficult for both side of contract to find adequate price being influencing it. The next higher costs are wages -16,91% and the costs of reparation and maintenance creating 11,98% from own performance costs.

By calculation of economical authorized costs but in the praxis may to occur situation in which the carriers being providing more kinds of transportation (MHD, suburban and etc.) take in calculation equation cost items in the whole value for the whole company and not only a part connected to suburban bus transportation. In this way the economical authorised costs and amount of money should be paid by VUC to carrier is gross up. It is necessary for carriers and VUC to find agreement of rules in calculation of economical authorized costs.

Public notice of Ministry of transport, post and telecommunication of Slovak republic no. 151/2003 from statute-book of presenting estimate loss of offering performance in public interest in regular bus transportation determine in “Statement of costs and revenues of transportation activity” general classification of cost items as was shown above. But it is not determine concrete content of each items. It deals to creation of non equal conditions by providing suburban bus transportation and showing EAC.

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State Budgets of Russia and Germany: a Comparative Analysis

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Abstract. The first portion article contains a comparative analysis of the state budgets of Russian Federation and the Federal Republic of Germany, made on the basis of official documents. The second part of the article comprises the similar analysis made for the Russian federal budget and the budget of the St. Petersburg city with some conclusions.

Keywords: State, Budget, Russian Federation, Russia, Germany, St. Petersburg.

1. Analysis of the Russian and German federal budgets' expenditures

The basic idea of this part of the article was to make a comparison of the Russian state expenditures pattern with the matching Western one. The United States could be the obvious choice, however the differences in population, geographic location and social security policies appeared to be unnecessary side influence factors. Therefore the Federal Republic of Germany was chosen as the counterpart. Russian population is estimated at 140,7 million (July 2008), and the German population is estimated at 82,4 million (July 2008) or approximately 59% of Russia's [1]. This is a closer gap than between Russia and the US, the former only 46% of the latter (July 2008) [2]. Russian population is 1,71 times Germany's, and the US population is 2,16 times Russia's. Both Russia's and Germany's main productive assets are located in Europe, and with some stretching both countries are what Edmund Phelps calls "Continental economies" – described by comparatively low economic dynamism [3]. Put into metaphorical form, the author understands it is not convenient to compare apples versus oranges, and hopes his choice of the counterparts could be more like comparing apples versus pears.

The very probable presence of the significant differences in budget procedures and calculations should be taken into consideration, and the author is not familiar with the said procedures and calculations closely enough to make strong statements and straight conclusions. Also the different state structure (Russia is defined as federation [4] and Germany is defined as federal republic [5], some observations could be made concerning the different level of the independence from the federal center of German "federal lands" and Russian "federation subjects") provides for different proportions in budgetary structure. The author encourages the readers and critics to express their comments concerning the above mentioned and other discrepancies, so the means to measure and minimize their impact could be developed.

As Russian Ministry of Finance would not disclose the federal budget incomings for 2008 on its web page [6], the corresponding comparison could not be made. Only 2008 expenditures data were compared in Tab. 1. The data on German budget spending were provided in much more aggregated form (22 data lines) [7] than the Russian data (more than 3000 data lines), which probably effected in subjective discrepancies. Also the complex structure of the Russian data was a hindrance for objective analysis. For example, the

expenditures for the Sochi Winter Olympics could be classified either as the element of social policy, or the element of federal subsidies for the provinces, or the element of international relations and cooperation (the author took the second approach). The author will provide raw data for peer review by request.

Germany	1000 €	Share	Russia	1000 RUB	Share
Federal President and Chancellor, including executive personnel	1774286	0,627%	President and Government	20604061	0,356%
Bundestag and Bundesrat	654201	0,231%	Legislative branch, elections and referendums	15737664	0,272%
Ministry of foreign affairs	2858926	1,010%	International relations and cooperation	91805847	1,588%
Ministry of the interior	5065755	1,789%	Interior bodies, national security and drug control	546108871	9,447%
Ministry of justice, Constitutional court	490079	0,173%	Justice bodies, court system, public prosecution and penitentiary bodies	110162341	1,906%
Ministry of finance, Chamber of accounts, general financial management	15625511	5,517%	Provisions for financial, tax, customs and supervision bodies	144754040	2,504%
Ministry of economy and technologies	6191874	2,186%	Research & development (civil, military, space), support for the national economy	401122729	6,939%
Ministry of food, agriculture and customer protection; Ministry of nature protection and reactor safety	6127273	2,164%	Agriculture, water resources, forestry, replenishment of the raw material base, nature protection	160936812	2,784%
Ministry of labor and social security; Ministry of family, elderly, women and youth	130250574	45,992%	Social policy, youth policy, housing and communal services, migratory policy	1856715122	32,117%
Ministry of transport, building and state development	24390574	8,612%	Transport (air, water, railroad), road construction	327925516	5,672%
Ministry of defense	29450466	10,399%	National defense, border control bodies	525287277	9,086%
Ministry of health	2898602	1,024%	Health protection and sport	271149066	4,690%
Ministry of economic cooperation and development	5134590	1,813%	International economic and humanitarian aid	171000	0,003%
Ministry of education and scientific research	9350636	3,302%	Education (not including youth policy, not including research and development)	324032565	5,605%
State debt	42936653	15,161%	Servicing of the state and municipal debt	187854960	3,249%
			Culture	90242841	1,561%
			Federal subsidies for the provinces	559650224	9,681%
			Other expenses	146784061	2,539%
Total	283200000	100,0%	Total	5781044998	100,0%

Tab. 1. Russian and German budget expenditures in 2008, compared

A number of the expenditure types have similar weights in Russian and German budgets: provisions for government and parliament, international relations, agriculture and nature protection, transport, social policy, defense and education. The most striking difference is in

the sphere of culture and federal subsidies for the provinces (the latter share is even bigger in the original raw data sheet, where it equals 2281558097 thousands of rubles, or 39,5%).

2. Analysis of the Russian federal budget and the St.Petersburg city budget

Contrary to the analysis of the different countries' budgets, the comparative analysis of the Russian federal budget and the St.Petersburg city budget is generally a more simple task, as it is possible to find data arranged in the similar fashion and therefore to avoid discrepancies.

However the most recent best comparable data (the data arranged in functional expenditure groups) as per our knowledge are not available on the government websites for the year of 2008, so the data for the year 2007 were used instead in Tab. 2 and Tab 3 [8] [9].

St.Petersburg	1000 RUB	Share	Share	1000 RUB	Russian Federation
Total incomings	234 351 587,20	100,00%	100,00%	6 965 317 200,00	Total incomings
Profit/income taxes	142 419 955,20	60,772%	8,333%	580 408 800,00	Profit/income taxes
Social security tax	0,00	0,000%	5,294%	368 773 900,00	Social security tax
Excise tax only	10 510 320,20	4,485%	21,321%	1 485 042 900,00	Excise and VAT
Import taxes	0,00	0,000%	10,243%	713 432 800,00	Import taxes
Entrance/export duties	0,00	0,000%	35,247%	2 455 079 800,00	Entrance/export duties
United small business tax	3 128 750,80	1,335%	0,000%	0,00	United small business tax
Property, transport and gambling taxes	18 455 525,00	7,875%	0,000%	0,00	Property, transport and gambling taxes
Mining operations tax	7 182,20	0,003%	15,347%	1 068 990 200,00	Mining operations tax
State dues	316 821,60	0,135%	0,378%	26 314 400,00	State dues
Property tax debt and recalculation	150 000,00	0,064%	0,000%	0,00	Property tax debt and recalculation
Incomes from the use of the state property	21 495 798,90	9,172%	1,433%	99 780 600,00	Incomes from the use of state property
Payments for the impact on nature	340 000,00	0,145%	0,537%	37 373 200,00	Payments for the impact on nature
Licenses and government services	1 137 180,60	0,485%	1,704%	118 694 600,00	Licenses and government services
Tangible and intangible asset sales (privatization)	3 078 032,10	1,313%	0,032%	2 231 300,00	Tangible and intangible asset sales (privatization)
Administrative fees	277 241,90	0,118%	0,054%	3 782 200,00	Administrative fees
Penalties and sanctions	219 039,60	0,093%	0,031%	2 172 100,00	Penalties/sanctions
Other non-tax incomings	364 974,10	0,156%	0,040%	2 758 400,00	Other non-tax incomings
Federal subsidies for the provinces	13 438 694,50	5,734%			
Incomings from government enterprises	19 012 070,50	8,113%	0,000%	0,00	Incomings from government enterprises
Lottery charges	0,00	0,000%	0,007%	482000	Lottery charges

Tab 2. Budget incomings of Russian Federation federal budget and St.Petersburg city budget in 2007, selected lines, compared

As we see, the city relies much more on the profit and income taxes, also on the use of the state property, whereas the federal state receives much more incomes from excise, mining operations and import/export duties, which are to the large extent oil-and-gas based.

Expenditure type, enlarged	St.Petersburg, 1000 RUB	Share	Russian Federation, 1000 RUB	Share
State expenditures	19 552 271,90	7,343%	808 196 478,20	14,793%
National defense	93 765,00	0,035%	822 035 929,60	15,046%
National security and law enforcement	6 499 214,00	2,441%	662 867 227,20	12,133%
National economy	34 028 693,80	12,780%	497 229 532,40	9,101%
Housing and communal services	85 085 258,20	31,954%	53 024 456,10	0,971%
Environment (nature) protection	1 199 230,80	0,450%	8 096 534,30	0,148%
Education	40 191 682,30	15,094%	277 939 330,10	5,087%
Culture, cinematography and media	9 066 089,30	3,405%	67 804 673,00	1,241%
Health care and sport	44 141 897,40	16,578%	206 373 527,50	3,777%
Social security	25 606 504,20	9,617%	215 565 757,40	3,946%
Subsidies for the provinces	807 265,00	0,303%	1 844 346 454,20	33,758%
Total:	266 271 871,90	100,00%	5463479900,0	100,00%

Tab 3. Budget expenditures of Russian Federation federal budget and St.Petersburg city budget in 2007, enlarged measures, compared

The bigger share of defense spending in the federal budget is understandable. However the heavy burden of housing and communal services could possibly be the source of social tension, since the said services are significantly affected by the energy prices – which are set by big monopolies.

3. Conclusion

Although there are many obstacles to a proper assessment, the state budgets of the Federal Republic of Germany and Russian Federation can be compared, and a number similarities can be found.

The comparative analysis of the federal and city budgets within the Russian Federation itself leads to the interesting observation, that Russia's political system is strongly bound by the financial flows.

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The CRM Value Chain – Model of Development and Implementation of CRM Strategy

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Abstract. CRM value chain identifies five key steps in the development and implementation of a CRM strategy: customer portfolio analysis, customer intimacy, network development, value proposition development, and manage customer life cycle. These five primary stages of the CRM value chain represent three main sequential phases of CRM strategy: analysis, resource development and implementation. This article deals with CRM value chain and diagnostics of the level of Slovak companies in the CRM area.

Keywords: CRM, CRM Value Chain, implementation, customer.

1. Introduction

Customer relationship management (CRM) is simply a bridge between marketing and information technologies. CRM decisions impact on marketing, operations, sales, customer service, human resources and information technologies [1].

The rapid convergence of CRM and e-commerce has changed the face of enterprise customer relationship management and marketing. Today we can observe a boom of new services on the Internet. They have become very popular in a short time and they are used by millions of people all over the world [6].

Customer Relationship Management is a business strategy designed to reduce costs and increase profitability by solidifying customer loyalty. CRM brings together information from all data sources within an organization to give one, view of each customer in real time. There are three key elements to a successful CRM initiative: people, process, and technology [5].

2. The CRM Value Chain

The CRM value chain is a proven model which businesses can follow when developing and implementing their CRM strategies (Fig. 1). It has been five years in development and has been piloted in a number of business-to-business and business-to-consumer settings, with both large companies and small, medium enterprises: IT, software, telecoms, financial services, retail, media, manufacturing, and construction. The model is grounded on strong theoretical principles and the practical requirements of business [1].

The ultimate purpose of the CRM value chain process is to ensure that the company builds long-term mutually-beneficial relationships with it's strategically - significant customers. Not all customers are strategically significant [1].

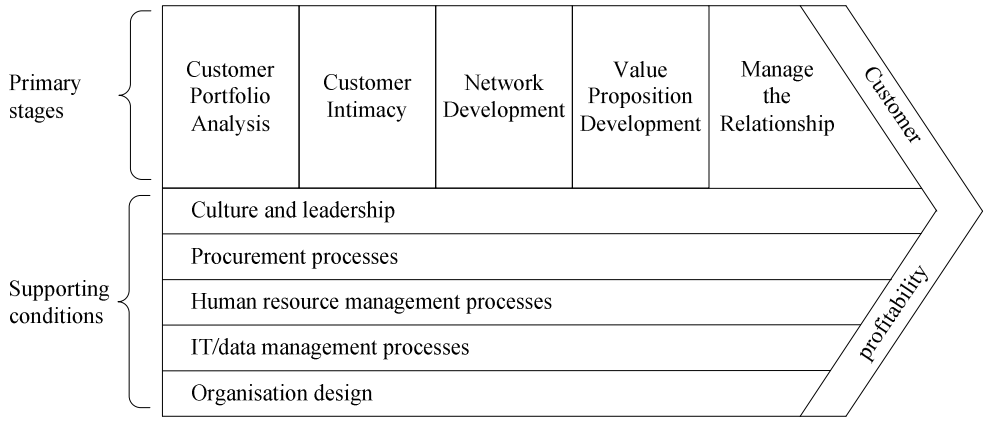

Fig. 1. The CRM value chain [1]

The CRM value chain has the five steps (Tab. 1). There are customer portfolio analysis (CPA), customer intimacy, network development, value proposition development and managing the relationship. At each stage of the value chain there are concepts, tools and processes to help create and implement successful strategy.

Customer Portfolio Analysis	**Customer Intimacy**	**Network Development**	**Value Proposition Development**	**Manage The Relationship**
– Market segmentation – Sales forecasting – ABC – Life-time value – Customer analysis toolkit	– Customer database development – Internal data – Data enhancement – Data warehousing – Data mining – Benchmarking – Privacy – Database technology and software	– Network management – Internal buy-in – External network – Network position – E-commerce – EDI/Extranets/ Portals	– Sources of customer value – Customer experience – Process reengineering – People issues – Technology enablement	– Customer acquisition – Customer retention – Customer development – Organisation design – Metrics

Tab. 1. Five stages of the CRM Value Chain [4]

The CPA step analyses the customer base to identify customers to target with different value propositions [1]. CPA involves using customer and market data to decide which customers to serve. The companies are looking for groups of customers. They want to segment customer base. They want to determine which groups of customers are most profitable. Which customers spend the most on their goods and services? The result that the companies are looking for is their target customer base. They rate and segment their clients into groups that are most desirable to do business with because they meet their criteria for what a desirable customer is [2].

The second step involves the business in getting to know the selected customers as segments or individuals and building a customer data-base which is accessible to all those whose decisions or activities impact upon customer attitude and behaviour [1]. This stage looks at the individual customer. Having found the segment(s) that the companies want to pursue, they want to get to know the people in that segment very well. They want to know them better than their competition knows them [2]. Customer intimacy involves getting to understand customers and their requirements.

Step three involves building a strong network of relationships with employees, suppliers, partners and investors who understand the requirements of the chosen customers [1].

Step four involves developing, with the network's compliance, propositions which create value jointly for the customer and company [2]. Network development and value proposition development are focused on building or acquiring resources to create and deliver value to customers [3].

The fifth and final stage is to manage the customer relationship. Managing the customer relationship is about implementing CRM by acquiring and retaining customers, and developing their value.

These steps are iterative and reflexive. They are iterative in the sense that the five-step process is repetitive and continuous. It is not a one-time process that leads to a strategy that is serviceable for ever. For example, in a dynamic environment in which competitors keep improving their value proposition it is important to review periodically which customers to serve, what to serve them and how to deliver the value [3]. Data are used across all 5 stages of the CRM Value Chain.

3. Situation in Slovak enterprises

From March 2008 to February 2009 was realized the research, which was specialized at the diagnostics of the level of Slovak companies in the CRM area. For better understanding value of the research medium and large businesses had been addressed. 221 top managers of Slovak medium (78 %) and large (22 %) businesses participated in the research.

The purpose of the research was finding and analyzing current level of CRM area on base of identifying main factors that affect the level of using CRM information system and process of implementation in the company. Current situation of CRM application based on results of research is figured in the Figure 2.

Almost one fourth of respondents (Fig. 2) did not deal with this problem. In phase of study is 11 percent of the respondents, 7 percent is in decision-making of the importance of CRM application for the company. 12 percent of the respondents implement of CRM in the company's practice. Almost half respondents (46 percent) said that CRM is in full operation in the company.

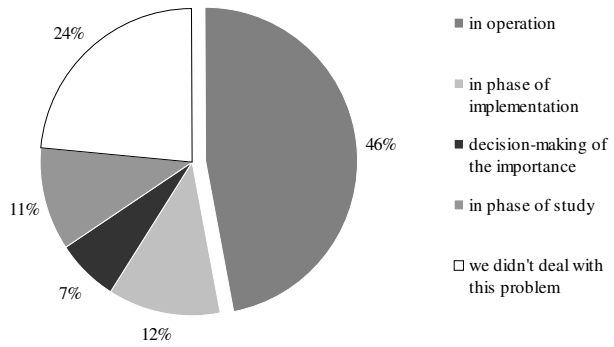

Fig. 2. Status of CRM in Slovakia

68 percent of the respondents said that conception is the most important phase of process of CRM implementation in the company (Fig. 3). This phase informs about necessity of exactly defined criteria and conditions. 5 percent said that phase of selection is the most

important. 17 percent said that phase of implementation. Principal aim of this phase is successful adaptation of software and organizational structure. The phase of implementation finishes with testing and realisation of system in the company. 10 percent said that phase of realisation is the most important. For successful implementation of CRM information system is necessary to have skilled employees. Assurance of regular communication is most important in this phase.

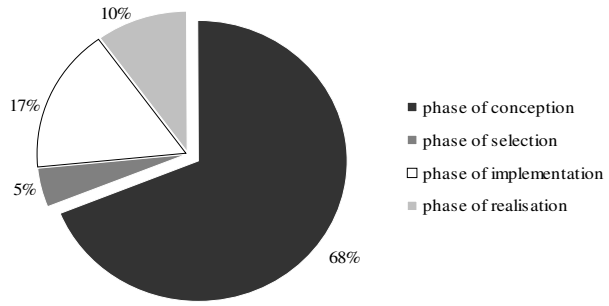

Fig. 3. Most important phase of process of CRM implementation in company's opinion

52 % asked companies consider application of CRM into company as continuous process. 12 % of respondents quoted that process of CRM implementation into company lasted more than 12 months. In case of 12 % of asked companies the process lasted from 8 to 12 months, in case of 16 % it lasted from 4 to 8 months and for about 8 % of respondents said the whole process of implementation lasted less than 4 months.

4. Conclusion

For CRM to be truly effective, an organization must convince its staff that change is good and that CRM will benefit them. Then it must analyze its business processes to decide which need to be reengineered. Next is to decide what kind of customer information is relevant and how it will be used. Responsible team or top management must choose the right CRM solution. This process, depending upon the size of the company and the breadth of data, can take anywhere from a few weeks to a year or more.

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Globalization and Intercultural Issues

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Abstract. These days capital, goods and labor move freely across borders. During the last forty years international trade has increased by 1500% as tariffs have fallen from 50% to less than 5%. That is why multinational companies like Exxon do two-thirds of their business outside the US and components for the new Ford come form fifteen different countries. The management of global companies as well as the management of brands internationally has partly become a cross-cultural issue.

Keywords: globalization, management, multinationals, culture, cross-cultural issues.

1. Introduction

While thinking of currently happening globalization processes *The Economist* [11] has identified these key contributors to globalization:

- **free movement of capital** "at the touch of a button" which is the fuel of investment in all its forms,
- **trade liberalization** with lowering of trade barriers,
- lowering of **shipping costs** thanks to the efficiency of containerization. (The shipping charge for a whole container of goods crossing the Pacific can be as little as $50. The transport cost for each "Japanese" TV, probably made in Malaysia or elsewhere, sold in the US or Europe is negligible.),
- reduction in **telecommunications** and **computing** cost. (The cost of a 3-minute phone call form New York to London in 1930 was $300 in today's money. There is more computing power in the average wrist watch today than there was in all world's computers in 1950.)

Organizations with the **resources** and expertise to exploit the information on their networks on a worldwide scale will have a key competitive advantage in many industries. Operating in and producing for not only one country, or even one continent, allows a company to reduce costs and benefit from **economies of scales**.

Some implications of this for managers have been suggested by points raised in a series in the *Financial Times* [14]. Even in a company that operates within one country, there is often resistance to ideas from outside, the **not invented here syndrome**; and with **subsidiaries** in many countries, this becomes more of a problem, because it is compounded by **cross-cultural issues** and potential misunderstandings. Resistance to the way of doing things elsewhere may be even stronger if the subsidiary was previously a local company taken over by a multinational, perhaps with loss of jobs and loss of sense of security among those that remain. The management of global companies (as well as the management of brands internationally) is partly a cross-cultural issue. Developing international teams of managers working in a multicultural environment has become a challenge.

2. Managing across cultures

As the world gets smaller, we need to learn more about each other's values, beliefs, habits and expectations. Culture is, in the famous phrase, **the way we do things around here.** The "here" in question may be a country, a region, a social class, a company, a university. Clearly, we each live in a set of **cultures** and **subcultures** that interlock in complex ways, and, to make a generalization, one of the most dangerous thing is to generalize about them. **Stereotypes** are, of course, to be handled with caution. The stereotype may represent the middle of a range of different behaviors, it may be at one extreme, or it may just not be true. And there may be more variety in behavior within a culture than between one culture and another.

Neighboring countries or regions, or two companies in the same industry, tend to see themselves as very different to each other, but that difference is hard for the outsider to grasp at first glance. A few years working in one of the two places will make seem more apparent, as one gets "involved" in one of the cultures. One can also think of promoting the same corporate policy at a global level, fostering diagonal promotions as well as geographical relocation of managers three or four times in their first dozen years which can help a multinational corporation to become global, cultural aware and sensitive.[5]

Here (in no particular order) are some **cross-cultural issues**, areas where there are variations in behavior across different cultures, and some examples of the ways they relate to the business world:

- **Religion**: is it expected of people or a matter of individual choice: Does it play a role in business life?
- **Roles of men and women**: are women often found at the highest levels of business and society?
- **Hierarchy**: what is the distance between managers and people who work for them?
- **Levels of formality** in language and behavior: is there an elaborate system of levels of deference in addressing different people?
- **Conversation**: settings (formal and informal meetings, social situations, etc.) turn-taking, periods of silence, proximity, body language, eye contact, showing emotions, saving face, using first names, role of humor, small talk, etc.
- **Dress** for different settings and occasions: is the business suit essential?
- **The relation of work to private life**: are spouses expected to attend certain types of company event? Do business people invite colleagues and contacts to their houses, or is everything done in the office and restaurant? What about working extra hours, giving gifts, exchanging business cards, taking shoes off, etc.
- **Time**: time scale of the activity/organization, planning the working day/week/year, meals, recreation, holidays, etc. Do meetings start on time? Is the summer break sacrosanct? etc.

Let us now illustrate a scene based on **cultural differences**:

"…They are so arrogant… They think that every meeting is a chance to show off, to dominate everyone else. They always try to score points…But as soon as the boss puts his foot down they hardly say anything, except "Yes, sir". There's a rigid hierarchy, the boss takes all the decisions…"

Was this said by a Dutchman working with Germans or a German working with Frenchman?

"…They are so inefficient. It is hard to get them to do things... Here, there are always problems, reasons why it cannot be done the way I want it… You have to follow up much more here. Set deadlines… Punctuality? …Meetings never start on time. And they always go on and on…"

Was this said by a Danish manager working with British employees or by a British manager working with Italians?

The answer to the questions is **"both"**: Danes and Germans think the British are inefficient and unpunctual, while the British think the same about Italians and Greeks. The Dutch think Germans are authoritarian and Germans think the same about the French. There are no absolute standards of behavior. Germans are untidy and unpunctual (when in Switzerland or on holiday!). There are countries where Greece is regarded as a model of efficiency and in which French bosses would seem far to egalitarian and others where Italian company life would seem excessively regulated, etc. [8]

3. Conclusion

The above mentioned phenomena are all interesting areas for discussion, bearing in mind that one should not be judging whether other ways of doing are right or wrong, but that one should be aware of the differences, and not see his/her own culture as the "only good" one. Categories such as respect, understanding, genuine interest in people of other cultures, as well as the attempt to be open-minded, adaptable and sensitive towards them, are the paths to be followed. We are convinced that the above mentioned principles do not apply only for "doing business abroad" but what is more help to promote the win-win strategy in many areas of life.

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