

Application Effects of the Monitoring System in the Courier Service Business

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Abstract

The purpose of this article is to present the effects resulting from using the shipment tracking system in the courier branch. The article includes the construction of a tracking system which depending on the business needs may be based on different combinations of technical and technological solutions. Automatic identification systems in conjunction with other technologies creates for the courier industry an innovative solutions that help companies meet the needs of its customers. Usage of a tracking system in case of courier companies becomes a necessary solution that brings certain benefits for both the company and the customer. Companies reduce their costs resulting from reported claims, improve their work, increase the quality of services they provide, therefore gaining a competitive advantage over other companies. Customers through the monitoring system have a continuous access to information about their shipment saving time for the formal steps needed for placing an order which translates into an increase in their satisfaction with the service.

Key words: automatic identification, courier industry, shipments monitoring, system, shipping

1. INTRODUCTION

In the sector of courier services particularly important aspect is to deliver the shipping quickly and safely to the client so that the client was fully satisfied. New features such as automatic sorting in conjunction with automatic identification technologies significantly reduce the time of the delivery which is especially important to the client and also reduce transportation costs those are the most important part of logistics costs. (Kot S. Ślusarczyk B., 2013)

Tracking system allows tracking of shipments in real-time at every step of their way. This enables continuous control over shipments and at the event of any irregularities the monitoring system makes it easy to identify any problem and take appropriate corrective actions. This is possible due to technical and technological solutions that support the monitoring system.

2. THEORETICAL DEFINITION OF THE PROBLEM

Before the discussion about the tracking system and the main effects arising from its use we need to explain the key word monitoring.

Monitoring - this is a tracking of quantitative and qualitative changes of certain values, occurrences. (Sobol E.(ed.), 2002)

In relation to the courier industry monitoring service allows tracking the whole path during the supply using the various technical solutions and technologies.

The tracking also known as Track and Trace is primarily based on automatic identification. It depends on the traceability through the Internet or other services of successive stages of the delivery. This is possible by using marking systems and automatic identification of items at every step of the way by usage of a variety of technologies such as bar codes, RFID or GPS. (Rydzkowski W., 2007) (Dima I. C. Grabara J. Pachura, 2010)

Each automatic tracking system consists of the following components:

"Objects (materials and supplies, finished products - hereinafter referred to as goods or trade items / resources, logistic units, shipments, location of materials / goods / resources, documents and other objects) marked with bar codes or RFID tags;

Specialized equipment; it's mainly: barcode printers, readers (scanners) and recorders or portable terminals. In case of an additional radio technology ADC devices will also include RFID tags with appropriate parameters, transmitters and radio scanners equipped with a barcode reader, mainly EAN.UCC global codes;

Software for tracking purposes must ensure the transmission of information about the place and time of dispatch of shipping, passing through intermediate points and its delivery to the central database." (Szymonik A., 2010)

The monitoring system is primarily based on automatic identification, however for its proper operation it is necessary to use other technologies such as the Internet, EDI and EPC. The following technologies are included in the system.

Barcodes are one of the most popular forms of automatic identification used for the recognition of goods and logistics units. They are a graphical representation of information represented by the bars and the spacing between them. Codes allow encoding information for later quick and error-free reading. They are used to identify products in order to enable automatic reading and entering data into informatics systems using devices called barcode readers. (Matulewski M. Konecka S. Fajfer P. Wojciechowski A., 2008)

By assigning a unique shipping number, each package is quickly and accurately localized practically at every point of the way from the sender, via terminals up to the final recipient. Using barcode readers causes that shipment is scanned and recorded in the computer system of the company and later thanks to wireless connection of the scanning devices with the company's information system the information is send directly during the delivery process so that after a few minutes it is possible to establish the position of shipping.

RFID is a radio frequency identification system. The idea behind it is based on the storage of data on the transceiver devices as tags, after which they are read in an automated radio way by the readers. An RFID system consists essentially of two elements which are:

marker placed on an identified object;

reader whose role is to read the data contained in the tag. (Technologie RFID i EPC, 2014)

RFID tracking system is mainly used for the identification and location of items or bulk cargoes on the entire delivery road. At each scan tag which is placed on the shipping, with usage of the reader, the information about the shipment is being read automatically and using radio waves transmitted to the local network of RFID, then it goes to the Central Monitoring System where it is processed and stored. The big advantage of this technology is the ability to scan a group of shipments in a non-contact way. For this purpose at the entrance of cars to the terminal or the sorting gate a RFID reader is placed so that after the car travels through the gate all the items found in the vehicle are automatically scanned and this information is send to the company's system. (Kisielnicki J., 2008)

Nowadays, the Internet, or wide area network, which is based on TCP / IP protocol, is commonly applied in different areas of life, including in the courier industry. (Nowicki A. (ed.), 2006) Using the web or e-mail it is now possible to track shipments, information about where it is now, at what time it left the particular points and who is responsible for its delivery. Internet is also used for data exchange within the company and it is used to communicate with enterprise customers.

EPC - or Electronic Product Code, is a 96-bit identifier of the package containing the goods which can be individual/collective and logistics, stored in the chip of the tag. EPC is also called "radio barcode". This identifier is stored in the electronic version instead of the paper one and electromagnetic waves at high frequencies are used for reading such information. (Technologie RFID i EPC, 2014)

In the monitoring system EPC code has the same uses as bar codes that is to identify shipments. In this concept, the standard "paper" barcode has been replaced with an electronic tag, which when scanned with the reader is identified with information about the shipment and this information is placed on the Internet and the access to it is possible thanks to the ONS service.

In order to achieve some certain effects management of the logistic chain the chain of processes itself has to be supported by tools from information technology both in terms of individual elements of the chain (information systems), as well as the exchange of information between them (EDI). EDI or Electronic Data Interchange is the flow of data in electronic form between information systems of contract partners in formats described in international standards with minimal human intervention. The data can be automatically processed by a computer, regardless of what kind of software is used. Documentation in EDI maps the traditional commercial documents which may include: invoices, purchase orders, production schedules, etc. (Kot S. (ed.), 2008) (Electronic Data Interchange, 2014)

Thanks to the combination of Electronic Data Interchange with Internet and automatic identification technologies it is possible to have a wireless exchange of documents. Documents such as invoice can be issued on the basis of data

from the shipping, which after reading by the scanner are automatically send by EDI to the recipient. Electronic Exchange of Documentation is integral technology that supports tracking system, because with it in an automatic way both the company and the client are kept informed about the status of the order.

GPS, or Global Positioning System is a satellite navigation system, which was created by the U.S. Department of Defense, it covers the entire globe. (Portal geoinformacyjny, 2014) The system allows the location of mobile objects in the world with an accuracy of a few meters. (Golembaska E. (ed.), 2006)

In the shipment tracking system GPS is used primarily for tracking (in real time) of vehicle location and the information about it can be displayed in the form of text or graphics. The vehicle carrying the shipping shall determine its position using the on-board receiver and data about the current position is transmitted via satellite links (or in the case of being within range of mobile networks - GSM links) to the traffic control center which is the company. By equipping the vehicle with on-board computer with detectors and motion sensors and its integration with GPS receiver it is also possible to monitor some additional data besides the basic ones. The additional data are: the state of shipping or the temperature inside the vehicle. This allows more precise control over the state of the shipments during transport. (Mendyk E., 2009)

GSM is the most popular standard for mobile telephony. Networks based on this system offer services in the field of voice, data and text message or multimedia message transmission. (Krawczyk S. (ed.), 2011) In the shipment tracking system GSM is mainly used for data transmission from the terminal to the company's information system. Information about shipment goes immediately into the system through wireless communication, so it is possible to systematically track the movement of the shipping. The GSM system can also be used for communication in the GPS system between a moving object and the control center. This is realized by usage of GSM links. When the vehicle moves along the arterial roads

in the range of GSM network. Also thanks to this technology information about location, temperature inside the transport vehicles etc. are immediately transmitted to the company's system. GSM network is also used for communication between the user and the company by calling on the hotline or sending/receiving text messages regarding information about the shipping itself.

As you can see tracking system can be based on different solutions and depends only on the individual needs of the company.

3. EFFECTS OF APPLICATION A SHIPMENT TRACKING SYSTEM IN THE COURIER INDUSTRY

Effects of application a shipment tracking system in the courier industry from the point of view of the company

Reduction of costs: Firms by implementing a system for shipments monitoring have decreased costs associated with compensation fees paid to customers for lost or damaged shipments. The system is allowing the supervision of what is happening at any given time of the delivery, and if a problem occurs it is possible to make an immediate intervention and corrective actions. Through this approach the number of complaints reported by customers was reduced which resulted in decreasing the number of claims and compensations. (Dima I.C. Man M. Vlăduțescu Ș., 2012)

Gaining competitive advantage: Companies wishing to meet the demands of customers in addition to extra services or monitoring capabilities offer newer and newer solutions that improve the whole process of delivery and thereby increase customer satisfaction. The introduction of a monitoring system in companies related to the courier industry helped with extension of the range of provided services and by that distinguishes this industry among the others. This resulted in the acquisition of new customers and thus increased the revenue of the companies.

Increased security of shipments: With the introduction of this system the company gained full control over what happens with the shipping during the delivery. Tracking process allowed full access to the data about the shipment during the following steps: receiving a shipping from a customer, delivery to the terminal, leaving it, providing it to the sorting area where in addition to logistics services sorting items into regions is done and ultimately delivery to the customer. Thanks to modern technologies in the system also additional information such as the date and time of particular steps of the delivery as well as the signature of the person receiving the shipment is visible. In case of any abnormality such as damage or loss of shipping the company can easily locate the place of the event and who is responsible for it and can quickly take the appropriate corrective actions.

Improving the company's work: With the introduction of automatic identification technology which shipping tracking system is based on we can witness a significant acceleration of operations such as data entry into the system or the localization of the shipping. The system allowed the company in addition to proper security of items also the ability to coordinate activities within the company. Access to information about shipments allows employees to efficiently plan the transport routes and its correct delivery.

Eliminate errors: Thanks to monitoring system we can see decreased percentage of undelivered shipments. Through continuous control over the fate of the shipping it is possible to have an immediate

intervention in the event of any irregularities. An important role in the monitoring system also plays an automatic sorting in which human labor is reduced to a minimum so that errors arising therefrom are practically eliminated in hundred percent.

Improving the quality of provided services: With this solution which is the monitoring system the company cares of continuous improvement of the quality of offered services. Through the constant access to information about shipments and statistics about them company can eliminate any arising problems and apply solutions in order to achieve certain and intended goals.

Effects of application a shipment tracking system in the courier industry from the point of view of the client

Increased customer satisfaction: Companies provide a variety of solutions adapted to individual customer needs starting from a simple shipment status check e.g. via the company's website through more advanced methods such as special applications which in addition to the normal tracking also make possible to manage shipments, orders, etc.

Time saving: With the implementation of tracking system companies have significantly reduced the formal steps associated with placing an orders, information about the status of orders, etc.

Meeting the information needs: Firms thanks to the tracking system ensured both themselves and their customers a full access to the data about shipments, what is happening with it and if necessary at any given time can effectively intervene. The data in the monitoring system about the shipment are related to the general process of its delivery from the moment of reception by the courier via terminals and sorting to its delivery. With this solution the customer knows when he can expect a courier and doesn't waste time waiting for him.

4. SUMMARY

Increase in the popularity of e-business has forced companies to use newer and newer and more flexible solutions in the field of shipments. Customers want their shipment to reach in a quick and safe way the destination place which is why more and more companies decide to apply a system for shipments monitoring.

The study shows that the usage of shipping tracking system in the company brings many benefits to both companies in courier services sector as well as to the customers.

Implementation of the system in the researched companies has brought certain effects such as:

Reducing the costs that arise from paid compensation for complaints reported by customers;

Gaining competitive advantage in the market of logistics services through the introduction of innovative solutions shipping tracking system;

Improving the functioning of companies which is done by continuous access to information about shipments and making it possible to efficiently coordinate the activities within enterprises;

Elimination of errors in the shipments delivery making the whole process faster and more efficient.

On the basis of the above benefits the conclusion is that, although the audited companies had to cover extra costs for introduction of the shipments monitoring system it was in fact a profitable choice, because with this solution overall costs has been decreased and the service of shipments has been improved which is beneficial for the development of companies.

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Conceptualization and overview of current researches on employee engagement

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Abstract

Increasing the level of employee engagement should be the goal of any organization since engaged and committed employee is satisfied, motivated, loyal, dedicated and productive. The performance and quality work of such an employee contributes to a better performance of the organization and its chances in the market. A basis of a strong involvement and engagement of employees is appropriate environment that provides them what they need. This paper has the character of a descriptive overview study and aims to summarize and synthesize the theoretical assumptions and present results of current research studies on the subject. The paper presents variety of views and opinions on various aspects of the employees' engagement.

Key words: engagement, employee, organization

Introduction

Organizations spend a lot of effort and money to create a high performance work environment. Part of this process is the fostering of employees' work commitment and engagement. Committed and engaged workforce is more productive and loyal. Moreover, engaged employees exhibit attentiveness and mental absorption in their work (Saks 2006, in Shuck et al. 2011) and display a deep, emotional connection toward their workplace (Wagner & Harter 2006; Kahn 1990, in Shuck et al. 2011).

As states Millar (2012) people behave according to how they feel. No amount of employee-engagement activity is going to change this fundamentally. An organization can have the best reward system, training and development and human resource policies, but if people do not feel good about themselves then neither can behaviour change, nor training be effective (Millar 202). There is a clear connection between employee satisfaction, engagement, commitment, involvement, devotion and loyalty and thus employees' engagement issue should be seen in the broader context - as part of overall organizations retention strategy.

1.1 Work engagement – explanation of the concept

Employee engagement has been defined from different perspectives and in many different ways. One of the most famous authors in this field William A. Kahn (1990, p. 700) define personal engagement as “the simultaneous employment and expression of a person’s “preferred self” in task behaviours that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and

active, full role performances". Author states that "in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (Kahn 1990, p. 694). Kahn's (1990, 1992, in Xu & Thomas 2011) engagement concept is based on psychological conditions of engagement, where the employee needs to have sufficiently meaningful work, have the personal resources available to do the work, and feel psychologically safe in investing himself/herself in that work in order to become engaged in his/her work.

Engagement is according Maslach et al. (2001, in Saks 2006) characterized by energy, involvement, and efficacy – this symptoms represent the counterpart to the three burnout dimensions of exhaustion, cynicism, and inefficacy. Work engagement is defined by Schaufeli and Bakker (2004, in Bal et al. 2013) as a positive, fulfilling, work-related state of mind characterized by vigour and dedication to the job. Explanation of the employee engagement concept provide also Shuck and Wollard (2010, in Shuck et al. 2011) who define it as an "individual employee's cognitive, emotional and behavioral state directed toward desired organizational outcomes".

Concept of engagement is often confused with other terms. For example, May et al. (2004, in Saks 2006) distinguish between *engagement* and *involvement*: job involvement is the result of a cognitive judgment about the need satisfying abilities of the job and is tied to one's self-image. The prestigious magazine Forbes has published several articles relating to employee engagement. Interesting opinions presented Kevin Kruse (2012) who indirectly refers to the mistaken concepts and he explains engagement in reverse way i.e. states what is not employee engagement:

- Employee engagement does not mean employee *happiness*. Someone might be happy at work, but that doesn't necessarily mean they are working hard, productively on behalf of the organization.
- Employee engagement doesn't mean employee *satisfaction*. Satisfied isn't enough and engaged employee do more than satisfied employee (Kruse 2012).

Bakker et al. (2014) compare work engagement and *workaholism*. These two concepts represent two active, work-related states that are indicative of heavy work involvement. The main difference lies in the fact, that whereas work engagement usually combines high effort with positive affect and has favourable consequences, workaholism usually combines high effort with negative affect (Bakker and Oerlemans 2011, in Bakker et al. 2014).

There were extensive debates about the precise meaning of employee engagement and these are three things we know about it:

- it is measurable,
- it can be correlated with performance,
- it varies from poor to great (source: <http://www.engageforsuccess.org>).

Organizations are attempting to increase employee engagement, because there are evident advantages of having engaged employees. Engaged employees:

- are willing to make use of their full selves in their work roles in a positive way (Kahn 1990, in Xu & Thomas 2011),
- have better wellbeing (Hallberg and Schaufeli 2006, in Xu & Thomas 2011),
- are more productive (Rich et al., in Xu & Thomas 2011),
- remain in their jobs for longer (Saks 2006; Schaufeli and Bakker 2004, in Xu & Thomas 2011).

Kevin Kruse - NY Times bestselling author (2012) states that "employee engagement is the emotional commitment an employee has to the organization and its goals, resulting in the use of discretionary effort". Author, referring to 29 research studies argues that there is a correlation between engagement and: (1) service; (2) sales; (3) quality; (4) safety; (5) retention; (6) sales, profit and total shareholder returns; and (7) role of front-line managers.

1.2 Employee engagement determinants

AON – a leading global provider of risk management, insurance and reinsurance brokerage, and human resources solutions and outsourcing services with more than 66,000 colleagues worldwide annually publishes studies – reports on employee engagement. For assessing employee engagement the AON developed and uses Aon Hewitt's Engagement Model which examines both the individual's engagement outcomes and the potential engagement drivers that are part of the organizational work experience. This employee engagement model has been tested, evolved and validated by over 15 years of research on millions of employees across a variety of companies and industries worldwide (throughout Asia Pacific, Europe, Latin and North America). Aon Hewitt model defines and examines these engagement drivers divide into six categories:

1. *Work*: Empowerment/Autonomy; Sense of Accomplishment; Work Tasks.
2. *People*: Senior Leadership; BU Leadership; Supervision; Collaboration.
3. *Opportunities*: Career Opportunities; Learning & Development.
4. *Total rewards*: Brand/Reputation; Pay; Benefits; Recognition.
5. *Company Practices*: Communication; Diversity & Inclusion; Enabling Infrastructure; Performance Management; Customer Focus; Innovation; Talent & Staffing.
6. *Quality of life*: Job Security; Safety; Work/Life Balance.

Anitha J. (2014) - based on the most famous studies and opinions - defines following factors facilitating employee engagement:

1. *Work environment* – workplace environment that aids employees for focused work and interpersonal harmony.
2. *Leadership* – effective leadership is a construct comprising self-awareness, balanced processing of information, relational transparency, and internalised moral standards (Walumbwa et al. 2008 in Anitha 2014).
3. *Team and co-worker* – supportive and trusting interpersonal relationships, as well as supportive team promote employee engagement (Kahn 1990 in Anitha 2014).
4. *Training and career development* – helps the employees to concentrate on a focused work dimension.
5. *Compensation* – compensation or remuneration motivates an employee to achieve more and hence focus more on work and personal development. It involves financial and non-financial rewards.
6. *Organizational policies* – organisational policies, procedures, structures and systems (such as fair recruitment and selection, flexi-timing, aid in balancing work and life, and fair promotional policies) influence the extent to which employees are engaged.
7. *Workplace well-being* - wellbeing is defined as “all the things that are important to how we think about and experience our lives” (Rath and Harter 2010, in Anitha 2014).

Psychological meaningfulness, availability, and safety - three antecedent conditions proposed by Kahn (1990) provide opportunities for intervention to increase levels of engagement (in Xu & Thomas 2011). Based on these, we can define the factors affecting work engagement:

- *Work characteristics: challenge and autonomy* influencing psychological meaningfulness (Bakker and Demerouti 2007, in Xu & Thomas 2011).
- *Sufficient psychological and physical resources* such as *self-confidence* that influence psychological availability (Hallberg and Schaufeli 2006, in Xu & Thomas 2011).
- *Organizational social systems* with consistent and supportive *coworker interactions* and *organizational norms* influence psychological safety and allow greater engagement (Bakker and Xanthopoulou 2009, in Xu & Thomas 2011). In relation to the psychological safety there is another very important factor influencing engagement – *leadership*, especially one that provides a supportive, trusting environment (Xu & Thomas 2011).

CIPD's (2008) findings suggest that there is a set of well-designed employee practices and management behaviours that create strong/high levels of employee engagement in the organisations:

- reactive decision-making that pick up problems before it is too late;
- consistent management style based on the attitudes of individual managers that leads to perceptions of fairness;
- high levels of advocacy that help to avoid risk of creating a downward spiral of employee resentment and disengagement;
- presence of fluidity in communications and knowledge sharing;
- rich work–life balance;
- high perceptions of senior management visibility and quality of downward communication;
- coherent communication channels enabling clarity and timeliness of the message;
- recruitment and retention practices meeting the needs of teams;
- the need of new leaders to clarify their leadership style quickly (during organisational change and periods of low performance) in order to maintain engagement levels;
- attention paid to leadership development so that junior managers can progress in the organisation;
- employee take-up in involvement initiatives are strongly encouraged, particularly at lower levels of the organisation.

1.3 Current researches on employee engagement

Although engaged workforce is powerful source of competitive advantage - because it positively impacts the quality of the service or goods provided by the company, increase company performance and productivity, boos business outcomes and much more - the bulk of the current workforce is not engaged. This is confirmed by various researches and studies, for example:

- **2012 Global Workforce Study** (providing a snapshot of the attitudes and concerns of 32,000 workers around the world) shows that only 35% of the global workforce is highly engaged, 22% is unsupported, 17% detached and up to 26% of employees feel disengaged.
- Gallup's study on American workplace **“State of the American Workplace”** (2013) shows that of the approximately 100 million people in America (holding full-time jobs) 30 million (30%) are engaged and inspired at work, 20 million (20%) employees who are actively disengaged and other 50 million (50%) American workers are not engaged. Gallup also found that women had slightly higher overall engagement than men, despite facing several gender equality issues in the workplace (e.g. hiring bias, lower pay, glass ceiling).
- **2012 Employee Job Satisfaction and Engagement** (a Research Report by the Society for Human Resource Management (SHRM). The survey examined 34 aspects of employee engagement. This study, inter alia, shows that more than one-half of employees reported feeling focused and enthusiastic about their work - 61% said that they were wrapped up in their work and were passionate and excited about their job, 54% said they enjoyed volunteering for activities beyond their job requirements, and 51% felt completely plugged in at work.
- Report of AON Hewitt **“2013 Trends in Global Employee Engagement”** (2013) demonstrated that 4 out of 10 employees worldwide are still not engaged. While 60% of employees globally are considered engaged, 40% of employees are passive or actively disengaged. Engagement levels are relatively stable.

- GfK - a global market research agency - conducted the study among more than 30,000 employees in 29 countries called **“GfK international employee engagement survey 2011”**. The study finds a labour market polarized between disillusioned 18-29-year-old employees and their older (possibly more resigned) counterparts. In the context of the study title **“A Disengaged Generation: Young workers disengaged by pressures of work worldwide”** it can be concluded that younger people are less engaged as older - just 21 % of 18-29-year-olds are highly engaged with their employer, compared to 31 % of those in their 60s. Among the 29 countries where the survey was conducted, Slovakia takes the 24th place (followed by only five countries - Peru, Portugal, Serbia, Czech Republic, Hungary). It means that the level of engagement of young employees is very low. In relative terms, only 9% of 18-29 year olds are “highly engaged” with their employer.
- **The Global Employee Engagement Index** is a global survey conducted by Effectory International that surveys the work-related opinions of employees in 47 different countries (including Slovakia). Respondents are asked more than 100 questions to gain a detailed insight into global work-opinions. From the data collected, Effectory International creates an independent benchmarking tool that compares countries on 17 key HR themes (including employee engagement). Respondents are randomly selected people working for companies ranging in size from 50 to more than 100,000 employees in various industries. Engagement is one of organisational X-ray elements. The score of Slovakia is 5.8 which is lower than global index (6.2) - it means that the overall level of engagement is lower than the average of the 47 countries studied.

According Czarnowsky (2008, in Shuck et al. 2011) there is a discrepancy between the perceived importance of engagement and the level of engagement that exists in organizations today that is why it is cause for major concern. This discrepancy presents a significant opportunity for human resource development scholars and practitioners to develop research agendas and practical strategies toward the forefront of this concept.

Millar (2012) points to the need of paradigm shift in employee engagement which requires moves from the independent/dependent relationship that exists between employer and employee to a relationship that is interconnected and where accountability exists on both sides. Where employees are caught in dependence they are looking to the organization to look after them and they behave like victims. Allowing them to own their accountability helps to create a more equal relationship from which employees will naturally give of themselves which represents win/win for all stakeholders.

Conclusion

People are swayed by a range of factors and have different reasons (mostly existential) why they work. Their mere presence in the workplace does not necessarily mean a good performance. In order to maximise productivity and profitability of workforce organisations should pay due attention to employee engagement. Engaged people are involved and committed to their work, maximize their skills and abilities, they spent more time, and energy, put more enthusiasm and exert more effort in the work and thereby benefiting themselves and particularly their organization.

Current level of employee engagement is not ideal. Most surveys showed disheartening findings - that less than half of the workforce worldwide is engaged in work. Since low engagement can contribute to multiple organizational problems (such as low performance, decreased productivity, increased levels of turnover etc.) it is important to enhance engagement. Managers and human resource professionals must create a supportive environment and favourable work conditions, develop strategies, programs, practices and policies to enhance employee engagement.

Given the lack of researches/studies focused on the level of employee engagement in Slovakia we have only a few isolated data that predicate of level of work engagement in Slovakia. This raises the need for studies that would comprehensively and consistently investigated employee engagement in Slovak organizations.

Resources

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EMAS: European Eco-Management and Audit Scheme and its practical application in EU and Slovak republic

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Abstract

A number of new tools such as environmental management systems – EMAS and EMS, environmental accounting, environmental reporting, life cycle assessment (LCA) and many others are available now for the purpose of making companies more environmentally pro-active. The EU Eco-Management and Audit Scheme (EMAS) is a voluntary scheme which allows all types of organizations to improve their environmental performance and achieve recognition for doing so. The Paper aims at practical application of the EMAS in the European Union.

Key words environmental management, EMAS, European Union,

1. INTRODUCTION

The interest in the environmental performance of organizations is continually increasing. Taking a proactive approach to environmental challenges is now the hallmark of successful organizations (European Commission 2014).

For a company, to be successful, managers have to analyse phenomena of the company environment on time and precisely and subsequently react to all changes (Širá 2011).

The enterprises can regard the activities of environmental improvement as a cost factor. Actually, its effects on reducing the costs, increasing the corporate image, providing an opportunity for exporting, and strengthening the competitive advantage together with reducing the environmental effects. In addition to these, the increase in the environmental performance considered to be more effective in the future causes the increase in the organizational performance (Akgemci, T., Doganalp, B. Cagliyan, V. 2010).

Multinational and domestic corporations around the world are adopting environmental management systems (EMS) and certifying them by international standards ISO 14001 is becoming the dominant international standard for assessing environmental management processes and in Europe many firms are also registering their EMS according to the Eco-Management and Audit Scheme (EMAS) (Morrow, D., Rondinelli, D. 2002)

2. EMAS

The EU Eco-Management and Audit Scheme (EMAS) is a management instrument developed by the European Commission for companies and other organizations to evaluate, report, and improve their environmental performance. EMAS is open to every type of organization eager to improve its environmental performance. It spans all economic and service sectors and is applicable worldwide. Currently, more than 4,500 organizations and approximately 8,150 sites are EMAS registered worldwide, among them are many multinational enterprises, smaller companies as well as public authorities.

EMAS' distinctive key elements are performance, credibility and transparency (European Commission 2014).

Its origins lie in European Council Regulation 1836/93, which allowed participation by industrial sector organisations within the EU in the Scheme. This Regulation is now in its third version and extends to all types of organisations.

The aim of EMAS is to recognise and reward those organisations that go beyond minimum legal compliance and continuously improve their environmental performance.

EMAS is open to all types of organisations, from all economic sectors, wanting to declare publically their environmental performance, from SMEs, local authorities, large companies and multi-national companies. The scheme allows registration to be applied corporately to a whole organisation or to individual sites (NQA 2014).

Through EMAS, the EU Commission seeks to motivate private and public organisations to improve their environmental performance on a voluntary, continuous and systematic basis. The starting point is an initial environmental review or stocktaking, which captures, analyses and assesses all environmental aspects of the company's activities and all applicable legal requirements (UGA 2011).

3. EMAS vs. EMS

Documents resulting from the common principle but they differ by fact that some system components are recommended by one document and required by another. Both systems are similar and they differ formally. They are used concurrently in one organization only exceptionally. The most important differences in extents and requirements between EMS and EMAS are appointed in Table 1 below.

Table 1: *The most important differences in extents and requirements of EMS and EMAS*

Extent	EMS	EMAS
Teritorial operation	Worldwide	European Union
Management system	contained	contained
Validity for types of activities	all types	mainly manufacturing industrial activities
Input analysis	recommended	required
Impact register	recommended	required
Environmental statement	not required	required
Competent authority	not required	required
Business subject registration	not required	required

Audit cycle	undetermined	the longest period of three years
End process management	certification	environmental statement verification, locality registration

Source: own processing according to *Environmental magazine* and *Slovak University of Technology* 2007

EMAS is fully compatible with the requirements of ISO 14001, the international standard for environmental management systems, but there are a number of areas where EMAS goes further than ISO 14001, as follows:

- EMAS requires the organisation to carry out an environmental review of all environmental aspects of the organisation
- EMAS requires the organisation to report against a set of core indicators – energy efficiency, material efficiency, waste, biodiversity and emissions
- EMAS requires the production of an environmental statement (made available to the public) documenting the organisation's environmental performance. This statement must be verified by a third party such as NQA to ensure that it accurately reflects the information portrayed.
- EMAS requires that the organisation has an EMS in place which incorporates all the requirements of ISO 14001 and additional requirements relating to the environmental review, legal compliance, environmental performance, employee involvement and communication with the public. EMAS states that organisations must 'provide for compliance with all relevant requirements regarding the environment'. ISO 14001 only states that there must be a 'commitment to comply with relevant legal and other requirements'. Essentially, these can be interpreted similarly, in that, if legislation, guidelines, recommendations or best practices exist, knowledge of the legislation should be apparent and compliance should be demonstrated. Breaches of environmental legislation may result in EMAS registration being withdrawn. (NQA 2014)

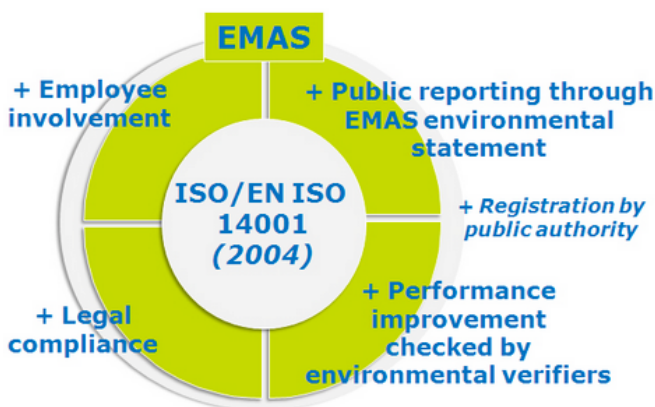


Figure 1: *EMAS and ISO 14001*

Source: *European Commission* 2014

The main root of the practical application of the EMS (ISO 14001) and EMAS is presented in the Figure 1. We can see that comparing to the EMS (ISO 14001) EMAS is supplemented by 4 main functions + registration.

Registration

- **Preparation of an Environmental Statement** – Your environmental statement must be written clearly, using language that the general public will understand.
- **Verification** – Once your statement has been prepared, an independent environmental verifier ☐ ucha s NQA must ensure that it gives an accurate representation of your organisation and its activities and it fulfils the requirements of EMAS.
- **Validation** – Once the independent verifier is satisfied that your statement and EMS meet the requirements, bearing in mind that changes may have been required, they will validate the environmental statement and supply you with a declaration on verification and validation activities.
- **Application** – Once validated, you can forward the environmental statement, the declaration on verification and validation activities and the details of your site to the Competent Body responsible for the Regulation of EMAS in the EU Member State. In the UK, this is IEMA. A separate application fee for this may be applicable.
- **Registration** – EMA will then register acceptance of the validated statement and provides your organisation with a registration number. Your organisation can then use the EMAS logo on the environmental statement and corporate literature (as described in Annex V of the EMAS Regulation).

Total number of records		
Country	Sites	Organisations
AT	775	252
BE	133	43
BG	3	3
CY	51	51
CZ	62	25
DE	1012	650
DK	392	57
EE	45	5
ES	1282	1074
FI	23	4
FR	19	19
GR	56	38
HR	0	0
HU	27	26
IE	4	4
IT	5947	1069
LT	10	9
LU	2	1
LV	0	0
MT	1	1
NL	5	5
NO	18	18
PL	129	45
PT	118	59
RO	7	5
SE	18	18
SI	1	1
SK	2	2
UK	61	48
Total records:	13735	

Figure 2: Total number of EMAS records in EU countries
Zdroj: European Commission 2014

Actually, 13 735 records from EU countries have been registered in EMAS register. We can see in the Figure 2 that the highest number of registered organisations are in the Italy and the Spain and the lowest in the Luxemburg, Malta and in the Slovenia. Latvia and Croatia have no registered organisations.

We can observe the reference of the registered companies within the frame of individual economic sectors. The highest number of registered companies in the service sectors is in the Public administration – 422 companies. The lowest number of registered companies is in the Human health activities (according to NACE codes) – 53 companies (see Fig. 3).

Leading service sectors	
Type	Count
Number of registered companies in 'Public administration': NACE code 84	422
Number of registered companies in 'Accommodation': NACE code 55	189
Number of registered companies in 'Activities of membership organisations': NACE code 94	137
Number of registered companies in 'Education': NACE code 85	116
Number of registered companies in 'Architectural and engineering activities': NACE code 71	111
Number of registered companies in 'Human health activities': NACE code 86	53

Figure 3: *Numbers of registered companies in leading service sectors*

Source: European Commission 2014

The highest number of the registered companies in the industrial sectors is in the Waste and disposal – 429 companies. The lowest number of registered companies is in Manufacture of paper and paper products (according to NACE codes) – 72 companies (see Fig. 4).

Leading industrial sectors	
Type	Count
Number of registered companies in 'Waste and disposal': NACE code 38	429
Number of registered companies in 'Fabricated metal products': NACE code 25	134
Number of registered companies in 'Electricity, gas': NACE code 35	252
Number of registered companies in 'Chemicals': NACE code 20	150
Number of registered companies in 'Manufacture of food products': NACE code 10	136
Number of registered companies in 'Manufacture of paper and paper products': NACE code 17	72

Figure 4: *Numbers of registered companies in leading industrial sectors*

Source: European Commission 2014

4. CONCLUSION

The EU Eco-Management and Audit Scheme (EMAS) is a management instrument developed by the European Commission for companies and other organisations to improve their environmental performance.

EMAS is open to all types of organisations, from all economic sectors, wanting to declare publically their environmental performance, from SMEs, local authorities, large companies and multi-national companies. Actually, 13 735 records from EU countries have been registered in EMAS register. The highest number of registered organisations are in the Italy and the Spain. The highest number of registered companies in the service sectors is in the Public administration – 422 companies. The lowest number of registered companies is in the Human health activities (according to NACE codes) – 53 companies. The highest number of the registered companies in the industrial sectors is in the Waste and disposal – 429 companies. The lowest number of registered companies is in Manufacture of paper and paper products (according to NACE codes) – 72 companies.

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Export performance and import intensity of Slovakia

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Abstract

The role of international trade in national and global economies is significant, especially in small economically developed countries characterized by a high share of foreign trade, roughly equal to their domestic product, and indeed even more so if there is an even higher share of foreign trade per capita of the country. The aim of this paper is to highlight the development of exports and imports with respect to the total gross domestic product of Slovakia for the period 1993 - 2012. Predictions will be based on data analysis via a regression tool to forecast the evolution of export performance and import intensity with regards to gross domestic product.

Key words Model, Profitability Indicator, Return on Assets

INTRODUCTION

The purpose of this paper is to define the status of international trade in the global economy for the 21st century, in the context of how the conjugate cycles of continuous scientific and technological advances are causing rapid change. One of the relevant changes in the previous period is the change in the nature and our understanding of internationally successful companies. In addition, traditional, nearly century old transnational corporations have been joined in the international arena by small and fast-growing companies. Globalization tendencies of the contemporary world have highlighted the role of business in the international environment.

STATUS OF INTERNATIONAL TRADE

International trade is a consequence of the determination and categorization of the value of commodities across borders. Consequences of international trade on the individual, state, and national economies are subject to the laws of economics. Theories of international economics have been covered by many authors, but the most current include Samuelson (1990), Krugman (2003), Soukup (2012), Majerová (2009), Nezval (2011), Žamborský, Jirásková (2009), Svatoš (2009), Baláž, Verček (2010) and others. International Economics uses basic methods of economic analysis as well as other professional economics models, because the motives and behavior of economic agents are often identical, whether they are domestic or foreign transactions. International Economics, according to Soukup (2012, p.12), is divided into two parts: one part analyzes the international exchange (economics international trade, international transactions of goods and allocation of economic resources); and the second part analyzes international money (cash flow with regards to international economics and monetary transactions).

International trade, according to Majerová (2011, p. 6) is defined as the exchange of goods from one country with those of another country's, thus extending the possibilities of consumer economies. There

are several factors that contribute to the continuous development: production conditions; the difference between the state of a nation's economics and its technology (i.e., the south will specialize in the development of coastal tourism while the north on developing ski resorts); increasing returns due to the scale of production (i.e., the average cost of production declines with growth); differences in consumer tastes and demands; governmental economic policy and tax-subsidy policy (may determine prices); and potential conflicts between production and consumption (almost no country is capable as a producer goods and services to meet the needs of their consumers).

Figure 1 shows the transformation function for foreign trade.

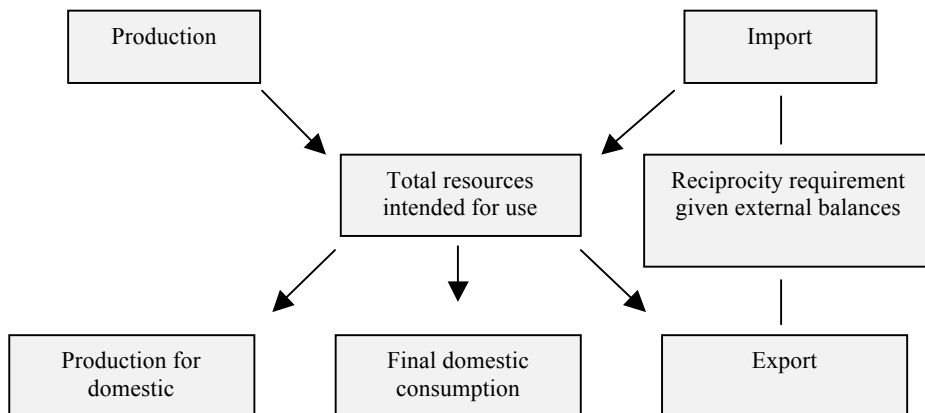


Figure 1 Function of Foreign Trade

Source: Štěrbová, 2013, p. 21

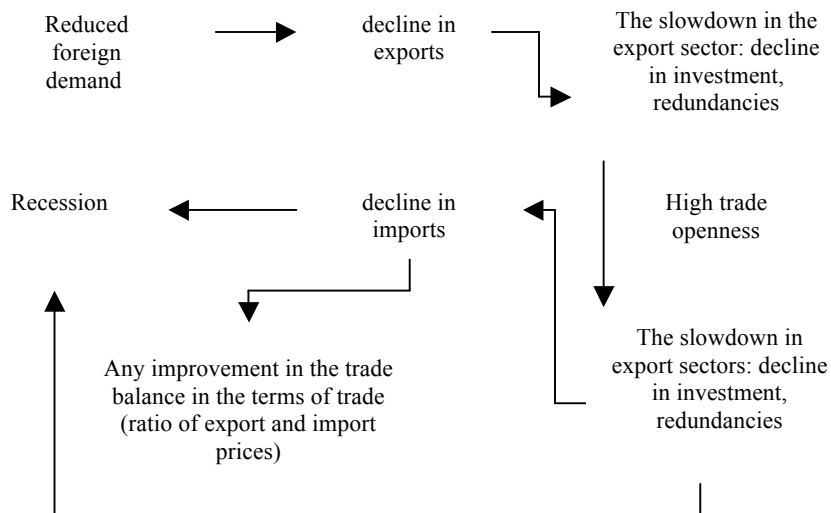


Figure 2 Transferring the Effects of an Economic Downturn from Abroad to the Domestic Economy

Source: Štěrbová, 2013, p. 25

Foreign Trade is a trade of one of the national economies with its environment, i.e. with one or more of the other national economies. Foreign trade involves business operations with institutions with an international element, i.e. foreign trade operations.

There is also a foreign element (trade policy) that can be defined in two ways.

By Holiness (2009, p. 29) trade policy is part of the state regulation of internal economic relations. In practice, any policy oscillates between two extreme principles: protectionism (protectionistic); and liberalism (freedom of trade). In addition, there are bilateral and multilateral trade policies. Trade policy includes a set of tools with which governments regulate foreign trade. Majerová (2011, p. 180) states that international trade policy amounts to the sum of the foreign trade policies of a country which are trying to regulate the foreign trade interests of the national economy. Foreign trade policy is influenced by the overall economic policy of the state and the state's foreign policy.

Foreign trade policy of the state is a national behavior towards foreign trade. It contains a set of objectives and instruments with which the government directly or indirectly regulates the scope and structure of foreign trade. The foreign trade policy of a state is a part of its economic policy, as well as a part of its foreign policy. This double bond can become a source of some tension when economic policies come into conflict with the foreign political orientation of a country (Majerová, p. 192). By (Šterbová 2013, p. 99-100) the trade policies of a state are the summary of its objectives, strategies, policies, measures, instruments, agreements and institutions, conceived and generated at the governmental level, but put upon domestic and foreign business entities. Trade policy is a system that is the upper part of a whole which has vertical and horizontal linkages with other policies both inside the country, as well as with the policies of other states which act as business partners. This is an integral aspect of all state policies through which the government manages the state's foreign relations, as well as the economic and social development of the country. It is therefore a subsystem of a state's economic policy and how the system applies to either a single state or a representational integration. An example of how this applies to such an integration is how common principles of trade policy are applied by the European Union.

By Legen (2013), "High balance surpluses are not the result of sharp rises in export performance, but rather subdued imports." May 2013 ended in a balance, according to the Statistical Office of the SR, with the historically highest monthly surplus of 664.1 million euros. Surpluses in 2013 grew from month to month and were mainly the result of subdued imports. In the fifth month of the year growth in exports, according to preliminary data, slowed down to 3.6 percent and reached 5.6 billion euros. Imports in May 2013 fell from the previous year by 1.1 percent. In April, imports jumped by 4.5 percent. Analysis by UCB stated several reasons for the decline of imports: low domestic consumption; oil prices; and less demand by industry.

Weak domestic demand reduces upward pressure on consumer and investment imports. After the first five months of 2013, the accumulated surplus of foreign trade climbed to 2.5 billion euros, or 6.4 percent of economic output. Exports grew by 4.2 percent and imports by a modest 0.3 percent. The National Bank of Slovakia in recent forecasts assumes that the foreign trade surplus this year will rise to 5.8 percent of gross domestic product, greater than last year's 5.1 percent. In the next two years its share in the performance of the economy should be even higher.

DEVELOPMENT IMPORT INTENSITY AND EXPORT PERFORMANCE

Functional openness is given by the sum of exports and imports to total gross domestic product. Export performance is given by the share of exports in the gross domestic product. Import intensity is given by import share of the total gross domestic product. Development of the overall export performance versus overall import intensity in percentages for the Slovak Republic is shown in Figure 3

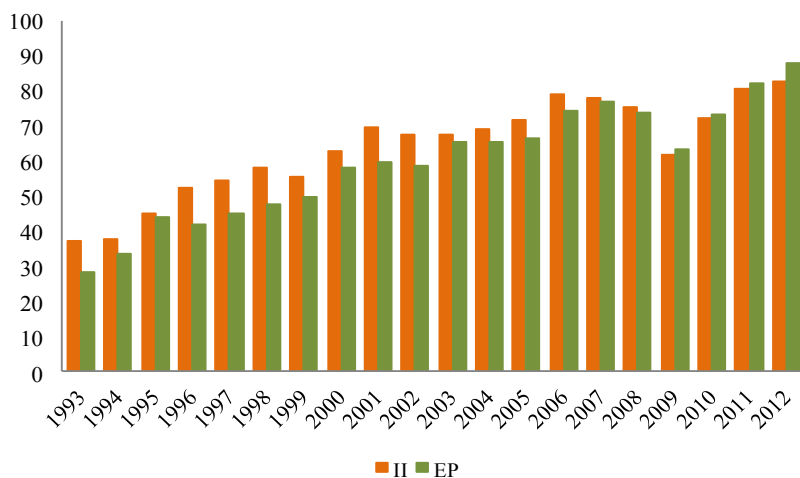


Figure 3 Development of Import Intensity and Export Performance
Source: own processing based on data from state budget

Table 1 Regression Statistics

Multiple R	0,896684299
R Square	0,804042732
Adjusted R Square	0,793156217
Standard Error	6,186713589
Observations	20

ANOVA

	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	2826,898929	2826,899	73,85676	8,70829E-08	
Residual	18	688,9576505	38,27543			
Total	19	3515,85658				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	42,320210	2,8739232	14,725	1,75E-11	36,282322	48,35809
X Variable 1	2,0617894	0,23991046	8,5939	8,7E-08	1,557756	2,565822

Source: Own processing in Excel

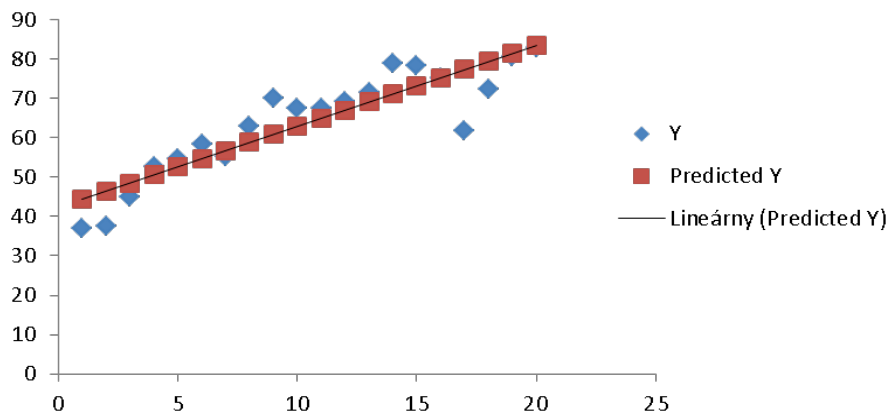


Figure 4 Prognosis Import Intensity

Source: Own processing

Table 2 Regression Statistics

Multiple R	0,956199595
R Square	0,914317665
Adjusted R Square	0,909557535
Standard Error	4,897799103
Observations	20

ANOVA

	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	4607,65820	4607,6	192,07	4,805E-11	
Residual	18	431,791848	23,988			
Total	19	5039,45005				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	32,234736	2,27518174	14,16	3,4E-11	27,454757	37,014716
X Variable 1	2,6322631	0,18992850	13,85	4,81E-11	2,233238	3,0312881

Source: Own processing in Excel

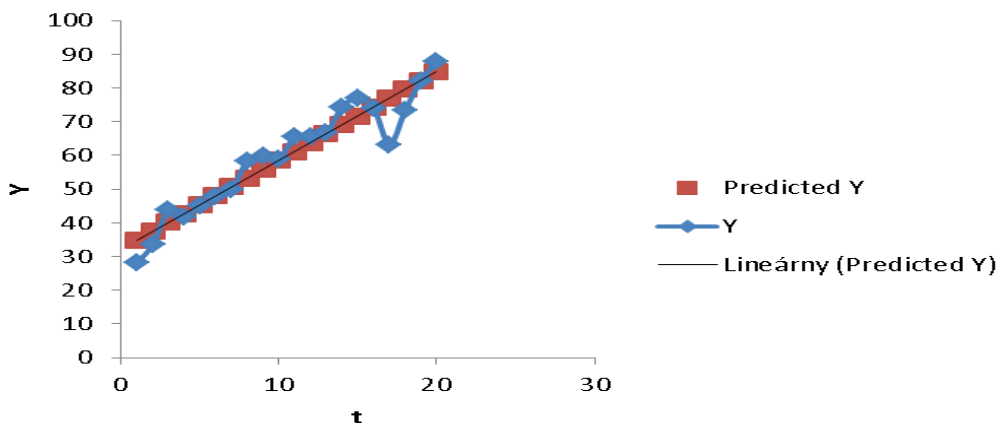


Figure 5 Forecast Export Performance

Source: Own processing

This linear model assumes a constant evaluation of the seasonal evolution of the phenomenon. Based on annual data on imports and gross domestic product from 1993 to 2012, the estimated prognosis of import intensity is displayed in the form of equations. The estimated regression line is $y = f(t) = 42.3202 + (2.0617 \times t)$. The estimated regression equation can be ingested on estimation and prediction. The coefficient of determination $R^2 = 80.402\%$, which quantifies the situation in which an 80.402%, change in the dependent variable is explained by the independent variables. In other words the estimated regression model explains about 0.804 of the variation values of the dependent variable. The correlation coefficient $R = 89.66\%$, with a significance level $\alpha = 0.05$; $p = 0.00$

Based on monthly data on exports from 1993 to 2012 the predicted prognosis of export performance is estimated by the equation $y = f(t) = 32.2347 + (2.6322 \times t)$. The coefficient of determination $R^2 = 91.43\%$. The correlation coefficient $R = 95.61\%$, with a significance level $\alpha = 0.05$; $p = 0.000$. The outcome of the test statistic is in the ANOVA table. The error value of regression = 2.27. Then the mean change in export performance in a unit increment estimate is the value 2.6322631. (regression coefficient β , directive selection of the regression line), $\beta < 2.233238$ 3.0312881. The test statistic is 13.85 and the p-value = 4,805. 10-11 test the statistical significance of regression coefficients, i.e. the linear statistical model is appropriate, since $p = 0.000$, the value is significantly smaller than α ($\alpha = 0.05$). For a comparison of countries in Table 3 of the export performance of the euro attributable to per capita income of the country.

Table 3 Export Performance (€ / Inhabitant)

Krajina	2000	2001	2002	2003	2004	2005	2006	2007	2008
Belgium	19931	20711	22184	21932	22509	25737	25737	29726	30094
Czech	3067	3616	3986	4225	5426	6145	7375	8696	9614
Danmark	10431	10785	11138	11394	12356	13401	13635	14301	14497
Finland	9652	9324	9191	9021	9482	10257	11714	12467	12377
Hungary	2984	3323	3589	3757	4421	4926	5958	6908	7350
Greece	1165	1171	1004	1082	1114	1254	1474	1539	1525

Slovakia	2379	2607	2830	3594	4126	4758	6189	7922	8926
Sweden	10643	9504	9663	10089	11048	11676	13020	13523	13573
Germany	7271	7759	7900	8050	8863	9459	10707	11712	11960
France	5857	5923	5711	5603	5834	5934	6246	6330	6389
Britain	5275	5162	5004	4546	4679	5146	5912	5272	5110
EU 27	5502	5699	5756	5742	6192	6662	7410	7873	8063

Source: Majerová, Nezval 2011, s. 249

CONCLUSION

Surplus is not the result of a sharp increase in export performance, but rather a subdued influx of imports. The share of exports in GDP of Slovakia confirms the dominance of foreign trade and production, as well as of our high dependence on external economic relations. From this, it naturally follows that an important aspect of any economic strategy of foreign policy, is that it be oriented to promote exports. Slovakia is, on the basis of its high export performance, on the verge of becoming an economy that will successfully engage in international trade, which will be a positive factor for the economic growth of the country.

In accordance with the EU-wide strategy, a tangible cardinal aim is to create a stable pillar to support its active foreign trade policy, in particular the development of Slovak exports and promoting the competitiveness of companies in Slovakia in international markets. Efforts are required to support the improvement of competitiveness and increase domestic production, which would reduce dependence on imports. The role of international trade requires good knowledge and information from the micro economic environment and the macroeconomic environment, as well as the presumption of the amenities of human capital and knowledge of the economy.

For faster growth of the Slovak economy in the second quarter of 2013, according to economic analysts net exports must increase. The same is the most significant factor in the increase in gross domestic product (GDP) in the second quarter by 0.9%. In the first quarter, while the country's economy grew by 0.6%, the foreign trade surplus in the second quarter of 2013 increased by 80%. Conversely, imports were subdued due to domestic consumption being almost stagnant.

Post is one of the outputs KEGA 037PU-4/2014, "Curriculum documents for e-learning based and their implementation in teaching disciplines of quantitative methodology, Information Management and Finance."

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IMPORTANCE OF SOCIAL NETWORKS FOR E-COMMERCE

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Abstract

The aim of the article is to describe the specific aspects of social media and their impact on e-commerce as a constantly evolving field of business. The article not only evaluates future direction of the issue, but also summarizes the theoretical basis of social media as such, the narrower concept of social networking, e-business, and e-commerce. Attention is paid to the results achieved in this field of business within the European region. Another objective of the article is to highlight the current state of the issue and point out to its shortcomings.

Key words Internet, Social media, Social networks, E-commerce

1. INTRODUCTION

The issue of e-commerce is not the youngest, but the lack of consumers' trust can be still observed, despite the efforts of business entities. The lack of personal contact between a buyer and a seller and usually one-off business transactions typical for the Internet environment places great emphasis on building a positive image of the organization in the eyes of consumers. It must be remembered that consumers' trust and opinions are created through interactions with the given organization. Social media represent the current trend in online communication with the target audience and they also build a positive image of a trustworthy business partner. Continuous development of social media is equally reflected in the business environment where the number of users affects the growth of this cost-effective marketing communication and sales channel.

2. BASIC THEORETICAL BASIS

According to Dorčák – Pollák, e-business means any information system or application which provides commercial transactions or other processes related to trade and management. E-commerce is a limited part of e-business focused on online transactions.

According to Kotler et al. (2007), e-commerce is a semantically narrower concept than e-business. Electronic business includes total electronic exchange of information in the company or between the company and customers. In contrast, e-commerce is the process of buying and selling through electronic means, especially through the Internet. It follows that e-commerce is a narrower concept, falling within e-business.

As Foret (2003) states, marketing communication via the Internet brings new opportunities to big as well as small businesses, reducing costs of sales and promotion. It accelerates and extends communication

possibilities and mainly leads to the creation of lasting relationships and links between sellers and customers, resulting in the satisfaction of individual wishes and needs.

For the definition of a narrower approach to e-commerce, Sedláček (2006, p. 96) states the following: *"Internet transaction is a sale or purchase of goods and services, whether between businesses, households, individual consumers, government, other public or private organizations, which is carried out via the Internet. Products and services are ordered via the Internet, but the actual delivery of the product or service can be made on-line or off-line."*

Electronic markets, within which e-commerce works, represent a virtual place where sellers offer their products and buyers, customers looking for information, define their needs and place orders using electronic payment transactions. (Hvizdová et al., 2007).

The basic forms of ecommerce include: (Hvizdová et al., 2007):

- **Business to Business (B2B)** – represents commercial transactions between business entities, which take place in the form of electronic transactions based on the formal, contractual relations.
- **Business to Consumer (B2C)** – the term refers to commercial transactions between businesses entities and end customers that are carried out in the form of electronic interactions.
- **Consumer to Consumer (C2C)** – these are advertising and auctions, where the Internet is an intermediary between a buyer and a seller.

This new form of business brings business entities several advantages over the traditional way of trading. We can consider the following as being the most significant (Suchanek, 2008):

- low costs of operation,
- minimum market entry costs,
- the possibility of interactive communication,
- unlimited time period (24 hours / 7 days a week),
- high speed and efficiency regarding business transactions
- possibility of extending the offer, but also demand
- positive effect on production, purchasing and consumer behavior
- an inexpensive entry into the world markets.

According to Jauch (2010) social media should be perceived primarily as online media which content is created and shared by the users. Social media are constantly changing as their content is changing and increasing and developing new possibilities of use.

The above definitions can be complemented by Stern (2011), who states that social media represent everything that allows anyone to communicate with anyone, in other words, it is a user-generated content distributed via easily accessible internet tools.

Authors Byron and Broback (2006) define the narrower concept of social networking as a web service. Consistently with Janouch (2010), they ascribe it functions of maintaining connections, contact, communication, sharing of information, multimedia content and photographs between users among which, according to Byron and Broback (2006), dominate students or graduates.

We agree with Štědroň (2011), who states that marketing potential of social networking, as a narrower concept of social media, results from easy reach of a large part of the Internet population. However, the specific nature of social networks is also of a great importance, which resonates very well with current efforts of companies to get closer to customers and create a close relationship with them.

Using social media, you can find out how the customers perceive the product. This fact is both important to users themselves, who are looking for the right product or service, and also for companies that offer their products and services on the market. Marketing on social media means for business entities understanding and learning, observation of the market, experimentation, guiding the audience, assessment and evaluation. (McPhee, 2011)

As reported by Scott (2010), the evidence on how people actually carry out their research and search for products clearly shows that the company must be available at the time and spread its offer when potential customers are looking for answers on the Internet. Here, we turn our attention to the Internet as a medium with a high potential for the presentation of own company with low costs, but with comparatively higher revenues.

3. CURRENT STATUS OF THE ISSUE

Based on the data obtained from the national associations for electronic commerce (E-commerce-Europe, 2013), the number of B2C e-commerce in Europe was estimated at 550,000 at the end of 2012, which represents a year on year growth in the range 15 - 20%. Growth of electronic commerce can be also seen on GDP value (Gross Domestic Product - GDP) of European countries. Share of electronic commerce in the total GDP of European countries for the period of 2012 is estimated at 3.50%. The total turnover of this segment amounted in Europe in 2012 to € 311.6 billion, which represents an increase of 18.80% within year-to-year comparison. In the case of EU states, year-to-year increase was 18.10% to € 276.50 billion, representing 88.70% of the total turnover of the monitored region (Table 1). In the case of e-commerce's impact on the employment (Ecommerce-Europe, 2013), it is estimated that this segment employs 2 million people within the European market, and with the expected growth of Internet users in the next period, growth of employment in this segment is also expected.

European Region	2009	2010	Growth	2011	Growth	2012	Growth
West	99,0	118,1	19.4%	138,8	17.5%	160,8	15.8%
Central	44,2	53,3	20.7%	63,4	18.8%	76,3	20.5%
South	16,4	20,0	21.9%	25,1	25.2%	32,4	29.3%
North	19,2	22,0	14.2%	24,9	13.3%	28,7	15.1%
East	5,7	7,5	31.3%	10,1	34.9%	13,4	32.6%
Total Europe (47)	184,5	220,9	19.7%	262,3	18.7%	311,6	18.8%
Total EU (28)	166,7	198,6	19.1%	234,1	17.9%	276,5	18.1%

Table 1: Turnover in e-commerce sector in millions of EUR

Source: Ecommerce-europe, 2013

As shown in Table 1, turnover growth within the e-commerce segment for EU 28 in 2012 was 18.10%, compared to 18.80% of all European countries, where the largest annual turnover growth of 32.6% (€ 13.4 billion) was achieved by Eastern European states. The lowest turnover growth was recorded in Nordic countries with the growth of 15.10% (€ 28.7 billion). On the other hand, the highest turnover was achieved by developed countries of Western Europe, amounting to 15.80% (€ 160.8 billion). It should be noted that the share of Western European countries on the total turnover of the monitored segment represents 51.60%, led by Great Britain and France (Ecommerce-Europe, 2013).

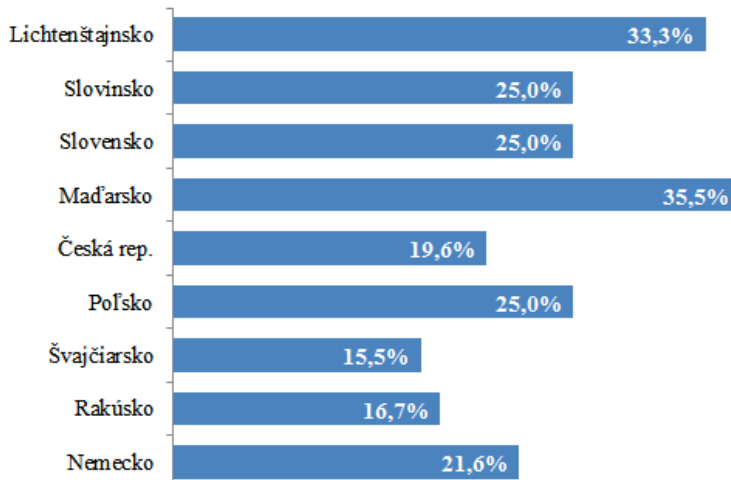


Figure 2: The share of purchases across product groups on the EU 28 Internet population using online shopping

Source: Own calculations according to Ecommerce-europe, 2013

The closer look at our home region of Central Europe (Ecommerce-Europe, 2013), with regard to the electronic commerce in 2012, revealed the growth of 20.50% amounting to € 76.30 billion, which have ranked this region into the third position according to the annual turnover growth of monitored regions. The largest annual increase in turnover was recorded by Hungary 35.5% (€ 675 million) and Liechtenstein 33,3% (€ 40 million). When regarding the achieved turnover, it should be noted that Germany had in 2012 a turnover of € 50 billion with an annual growth rate of 21.6% which represents a 65.79% share in the total turnover made by Central European region.

Sales growth within electronic commerce is also reflected, and one could conclude that it is conditional to the growth of Internet users. Our statement is supported by Eurostat (2013), which in October 2013 published the results of a survey that aimed to highlight the buying behavior of EU 28 internet population. The survey results point to the fact that within the EU28 countries, the proportion of Internet users aged from 16 to 74 who have used this media to shop represents 59%. Survey results showed that the highest proportion of online shoppers in the total active Internet population countries is to be found in the United Kingdom (82%), Denmark and Sweden (both 79%) and Germany (77%). The lowest positions are occupied by Romania (11%), Bulgaria (17%), Estonia and Italy (both 29%). To clarify your idea, the internet penetration into the households of EU28 in the period of 2012 amounted to 76%, which is an increase of 26.7% compared to 2008 (Eurostat, 2013).

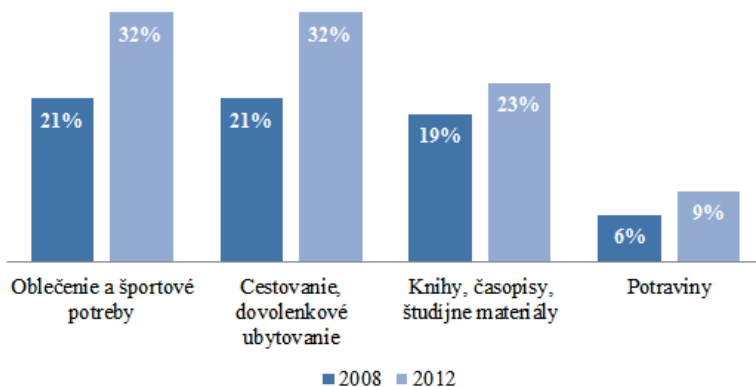


Figure 2: The share of purchases across product groups on the EU 28 Internet population using online shopping

Source: Eurostat, 2013

In the light of the above Eurostat survey results (2013), the survey aims to determine the proportion of online purchases in a given group of goods and services in the B2C business model to a group of users who at least once conducted an online purchase in the last 12 months. As Figure 2 indicates, monitored categories such as Clothing and sport equipment; Travel, holiday accommodation consistently recorded an increase of 52% to 32% share in 2008. The lowest growth was recorded in the group Books, magazines and educational materials, that has increased by 21.05% to 23% in 2008. Overall, the lowest share under the two categories of goods and services was recorded by Food with a share of 9%, but on the other hand with a 50% increase against 2008.

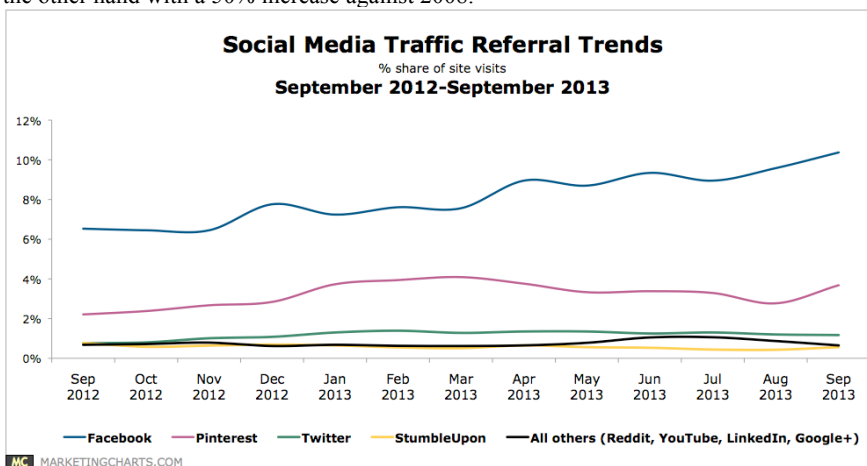


Figure 3 Social media traffic referral trends

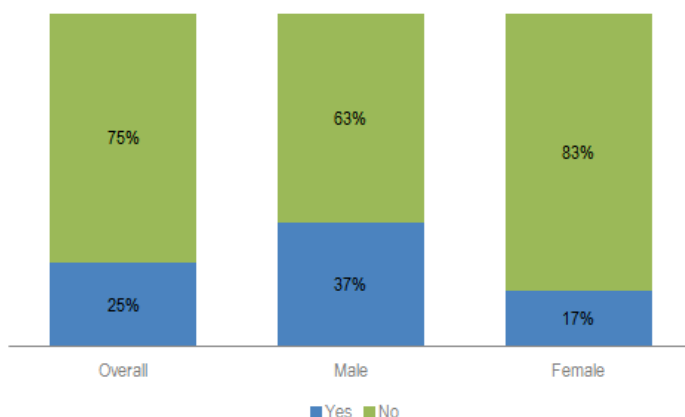
Source: Shareaholic, 2013

Social network Facebook also dominates as a source of referral traffic, which was confirmed by the results of Shareaholic analysis (2013), that in the period between September 2012 and September 2013

collected data from more than 200,000 websites. The total sample of monthly unique visits of these websites reached more than 250 million. Published results of the analysis indicate that Facebook's referral traffic to the monitored website amounted to more than 10% in September 2013 (see Chart 3), which inter-annually increased by 58.80% from the value 6.53%. It is also necessary to point out that the social network Pinterest represents 3.68% of all referral traffic, which is more than a cumulative value of social networking sites Twitter, LinkedIn or Google+ together.

The importance of social networks in the e-commerce was also revealed in the results of the analysis which shows the impact of the social network Pinterest on purchasing decisions of its users. The analysis was conducted by Emily Carr University of Art + Design in March 2012 on a sample of 500 users of the social network. The most significant fact arising from the published results is that Pinning is more frequently linked with shopping in a store than with shopping online. The analysis showed that up to 16% of users marked the product (Pinning) they subsequently purchased in a store, and only 12% of users marked the product (Pinning) which they purchased online. The analysis also showed that one in five users of the social network buys products that are marked (Pinning). (McNeill, 2012)

Have you ever purchased a product/service after discovering it on a Pinterest?



Graf 6 The impact of Pinterest on buying decisions

Source: Caine, .J (2012) Available on-line: Compete.com

The results of a survey conducted by Compete in 2012 focused on the knowledge of online shoppers. The survey which involved a sample of 484 respondents revealed that 37% of men have bought a product / service after it appeared on the social network Pinterest. For women, the proportion was 17% of respondents (Caine, 2012). The results point to a significant fact that up to 39% of respondents stated that social network Pinterest has changed their online behavior, as well as the fact that 25% of respondents do not expect to spend so much time on other social networks as on Pinterest.

4. CONCLUSION

Our present time is characterized by breakthroughs in technology that aim to minimize costs and there is an obvious global effort to spread Internet connections to the remotest corners of the world. With the

increasing number of households with internet connection, we observe the growing volume of customers who have started to trust online sellers - electronic commerce entities. As reported by Eurostat (2013), in 2012 59% of active internet users in EU28 purchased a product or service online at least once within the last 12 months. Also, a significant 18.10% year on year revenue growth of EU28's B2C entities amounting to more than € 276 billion is a strong evidence of growth. Looking to the past, we can talk about the growth of this segment. The possibilities offered by online Internet environment to electronic commerce entities such as relatively low operating costs compared to brick and mortar, technical capabilities and functional conveniences of e-commerce, the possibility of a global reach and effective marketing tools create an ideal platform to implement their business plans.

The current importance of social networks for e-commerce is undeniable. Either retailers or brands themselves can present their products through social networks and positively affect perceptions of users as potential customers. It is important to highlight the fact that the issue of social networking for the purpose of e-commerce is a new and poorly understood area, which now occupies minds and is part of the marketing plans of many marketers.

Research purpose, the project

This article is one of the partial outputs of the current scientific-research grant VEGA n.1/1338/12 entitled "The impact of virtual social networks on potential customers and the improvement of the competitiveness of Slovak SMEs."

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LOSS AVERSION

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Abstract

The paper focuses on the presentation of the concept of loss aversion, as well as the concept of „deviation from rationality“. The main aim of the article is to define loss aversion and to describe several examples realized by authors such as: Daniel Kahneman and Amos Tversky (1991), Masashi Toshino and Megumi Suto (2004), Stephen G. Dimmock and Roy Kouwenberg (2010). The intention of the paper is to introduce the meaning of subjective value losses, as well as mathematically express loss aversion by using utility function. The aim of the paper is not only to present the notion of loss aversion, but also to inform about the difficulty of obtaining necessary data for potential research, applying complex experiments rather than simply questionnaire.

Key words: Loss Aversion. Hypothetical Weighting Function. Deviation from rationality.

INTRODUCTION

Prospect theory is dealing with the core and functioning of loss aversion, which formation can be dated back in 1979, when Daniel Kahneman and Amos Tversky published an article titled: "Prospect Theory: An Analysis of Decision under Risk" – Prospect Theory: Analysis of Decision Making under Conditions of Risk.

As reported by Vladimír Baláž (2009), deviations from rationality are errors in judgments and proceedings, occurring in certain situations in humans. These are patterns of reasoning and performing that can be defined, and which differ from the reasoning and performing of other subjects and/or differ from reasoning and performing the same subjects but in different situations. Deviations thus represent a "bias economic agents in collecting, analyzing and evaluating information and in making economic decisions". (Vladimír Baláž, 2009)

At the time of continuous decision making processes in everyday activities (e.g.: while visiting theater or cinema, while shopping, visiting family by using public transport or car, and so on...) the loss aversion is one, which consciously or unconsciously influences our decisions.

Loss aversion reflects the intuition that the loss of $X \text{ €}$ is more aversive than the profit of $X \text{ €}$ is attractive. (D. Kahneman, A. Tversky, 1984)

The aim of this paper is to introduce one of emotional deviations from rationality, the loss aversion. In addition, the aim is to present subjective value of losses, because the attraction of potential profit is far from sufficient in the aim to compensate for the eventual loss aversion at the same bets.

The intention of this work is also to define a mathematical expression through loss aversion utility function. The work provides examples of the loss aversion realized by the authors: D. Kahneman and A. Tversky (1991), M. Toshino and M. Suto (2004), S. G. Dimmock and R. Kouwenberg (2010).

LOSS AVERSION AS EMOTIONAL DEVIATION FROM RATIONALITY IN FINANCIAL BEHAVIOR

The expression of loss aversion as emotional deviation from rationality is that people feel losses much more intensive than profits. The most visible expression of loss aversion is the reluctance to invest in risky assets, especially in shares. Loss aversion is a universal deviation that is not limited just to investors' amateurs. The majority of funds in the financial markets are not held by individual investors, but mostly by institutional investors: banks, insurance companies, mutual and pension funds, securities dealers and the like. (Vladimír Baláž, 2009)

Emotional deviations can be rectified only with a lot of difficulties, if at all. It is necessary to adapt the client with strong emotional tendencies. (Vladimír Baláž, 2008)

Kahneman and Tversky (1984) report in their work, that the psycho-physical approach to decision-making can be observed already in a remarkable essay of Daniel Bernoulli, published in 1738. He tried to explain why people are generally averse to risk and why risk aversion with growing wealth is decreasing. To illustrate this example: "Imagine that you have a choice between two possibilities:

- a) **85%** chance to win **1000 €** (**15%** chance that you win nothing),
- b) definite win **800 €**."

Most people prefer sureness before gambling, even though gambling represents mathematically higher outlook. Expectations arising from gambling are $0,85 \times 1000 \text{ €} + 0,15 \times 0 \text{ €} = 850 \text{ €}$, what exceeds the expectations of **800 €** connected with sureness. Prioritizing definite profit is an instance of risk aversion.

SUBJECTIVE VALUE OF LOSSES

The decision analysis usually describes the results in terms of overall wealth. For example: Offer to bet 20 € on the coin toss is a choice between the current individual wealth W and its possibility to move to $W + 20 \text{ €}$ or to $W - 20 \text{ €}$. It seems psychologically unrealistic: People usually do not think of relatively small results, as to the state of wealth, but rather focus on profits, losses and neutral results (e.g.: maintaining status quo). If they convey effective subjective value of change in the wealth rather

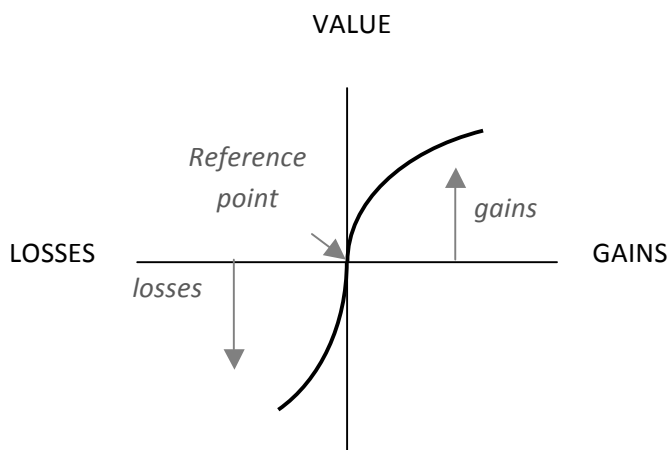
than the final status of wealth as we assume, than the psycho-physical analysis of the results should be applied rather to gains and losses, as to the total assets. (D. Kahneman, A. Tversky, 1984)

The difference in subjective value between the loss of 200 € and loss of 100 € seems to be greater than the subjective value between the loss of 1200 € and 1100 €. If the function value for gains and for losses shown in the same graph, we get S-shaped function, as can be seen in Figure 1. (D. Kahneman, A. Tversky, 1984)

Loss aversion reflects the intuition that the loss of X € is more aversive than the profit of X € is attractive. Loss aversion explains the reluctance of people to bet on a "fair coin" for the same bets: attractiveness of potential profit is not nearly enough to compensate the eventual aversion to loss. For example: The majority of respondents in a sample of students refused to bet 10 € on the loss of the coin flip, if they would win less than 30 €. (D. Kahneman, A. Tversky, 1984)

Figure 1 Hypothetical Weighting Function

The function value is defined by gains and losses (rather than total wealth) and is concave in the area of gains and convex in the area of losses and is considerably steeper for losses than for gains.



SOURCE: Own processing on the basis of Daniel Kahneman and Amos Tversky: *Choices, Values, and Frames*, 1984.

MATHEMATICAL EXPRESSION OF LOSS AVERSION

Kahneman and Tversky (1991) named loss aversion as uselessness of giving up the things that is greater than the utility associated with acquiring them. The nature intuition concerning the loss aversion is that the losses (scores below a certain reference value) represent a bigger threat compared with corresponding gains (scores above the same reference value).

According to N. Barberis and M. Huang (2001) the loss aversion means that people are more sensitive to a decrease in wealth rather than to its increase, what can be included in the utility function. Simple form of function that captures loss aversion is:

$$w(X) = \begin{cases} X, & \text{for } X \geq 0 \\ 2X, & \text{for } X < 0 \end{cases}$$

Where: X – is an individual loss or gain, $w(X)$ shows the utility of profit or loss.

D. Kahneman and A. Tversky (1979) presented loss aversion as a way of explaining why people tend to reject smaller hazard, by using the following form:

$$G = \left(110, \frac{1}{2}; -100, \frac{1}{2}\right)$$

Meaning that: we get 110 € with probability $\frac{1}{2}$ and we lose 100 € with probability $\frac{1}{2}$.

Most of utility functions used by financial economists are not able to explain risky attitudes, because they can be differentiated and they make investors risk-neutral despite small gambling. (N. Barberis and M. Huang, 2001)

If we wanted loss aversion to be included into inter-temporal framework, we would have to take the dynamic aspect into account. A. Tversky and D. Kahneman (1981) acknowledged that their prospect theory was originally developed only for one-time hazard and any requirements in the context of a dynamic development should be subjects for further evidence of how people think in context of gains and losses.

It is assumed that the investor's loss aversion is captured by function according to D. Kahneman and A. Tversky (1979). Starting with an example (N. Barberis and M. Huang, 2001) where investor is considering buying a portfolio of two shares. The shares are currently trading at 100 € and after careful thinking the investor decides for both shares. The value of share will be from now distributed as follows:

$$\left(150, \frac{1}{2}; 70, \frac{1}{2}\right)$$

That will be a function of the investor's aversion to loss. If the loss aversion is above the fluctuations in the portfolio, the expected utility of the investment can be expressed as follows:

$$\frac{1}{4} w(100) + \frac{1}{2} w(20) + \frac{1}{4} w(-60) = 5$$

This implies that:

- with probability $\frac{1}{4}$, both shares will earn 50 €, with total profit of 100 €,
- with probability $\frac{1}{2}$, one share earns 50 €, second loses 30 €, with total profit of 20 €,
- with probability $\frac{1}{4}$, both shares lose 30 €, with total loss of 60 €.

However, if the investor's loss aversion to partial (individual) share volatility, the expected utility from the investment will be expressed as follows:

$$2 \left[\frac{1}{2} w(50) + \frac{1}{2} w(-30) \right] = -10$$

It means that for every share there is the same chance to earn 50 €, but there is also the same chance to lose 30 €. As we can see, the result is not very attractive. (N. Barberis and M. Huang, 2001)

The question is that which form of calculation better describes the behavior of the individual. Traditional pricing models usually assume such a broad form of accounting as possible: the utility is usually specified only by total wealth or consumption, not through the individual shares fluctuations. N. Barberis and M. Huang (2001) indicate in their work that with the help of mental accounting, people are involved in the narrow framing, what means that there often occurs focusing on narrowly defined gains and losses.

EXAMPLES OF LOSS AVERSION FROM THE PERSPECTIVE OF SEVERAL AUTHORS

In practice, we can find many examples of loss aversion. We are daily encountered with it and are faced decision-making in which loss aversion is manifested in various forms and frequencies. In the next chapter we discuss examples implemented by authors such as: D. Kahneman and A. Tversky (1991), Masashi Toshino and Megumi Suto (2004), Stephen G. Dimmock and Roy Kouwenberg (2010).

Let me take the following example (D. Kahneman and A. Tversky, 1991):

"Imagine you have been assigned to work part-time as a part of your professional training. However training is over and you are looking for a work. You are considering two possibilities. Both possibilities are similar to your professional training in many ways, with the exception of the amount of social contact, convenience, commuting to and from work. To compare the two jobs to the current one, it is advisable to draw up a table:

Table 1 Example for loss aversion

Comparison of the reference point (present work) with two options: job A and job B with help of taking two factors into account: social contact and time attendance to/from work.

Job	Social contact	Commuting time
Current job	isolated	10 min.
Job A	limited contact with surroundings	20. min
Job B	certain degree of social contact	60 min.

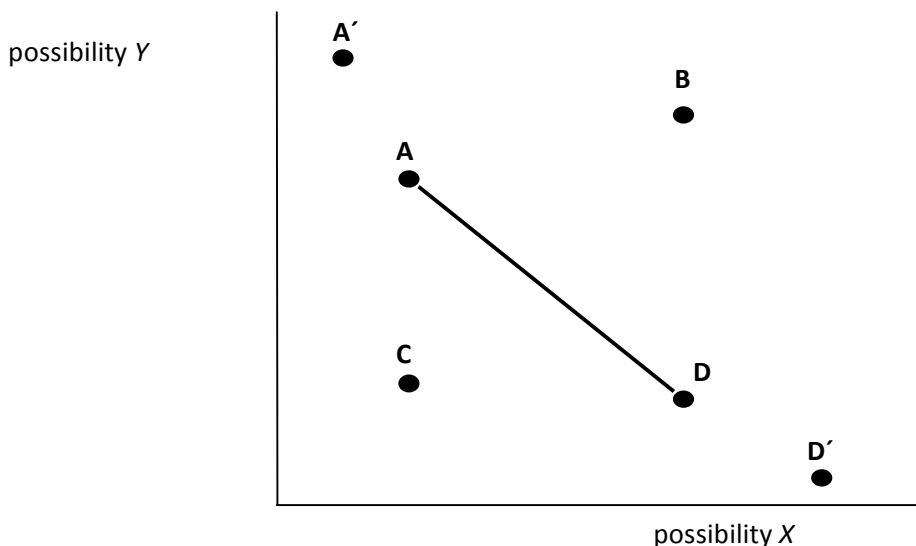
SOURCE: Own processing on the basis of D. Kahneman and A. Tversky: Loss Aversion in Riskless Choice: A Reference – Dependent Model, 1991.

Job A and job D are evaluated on the basis of the reference point represented by the current job, which is better in terms of commuting time, but worse with respect to social contact. Based on the study, the proportion of individuals who choose the possibility of “job A”, represents 70% of all respondents.

However, if a reference point (current job) includes social interaction and 80 min. commuting time to and from work (D'), then the proportion of respondents who choose "job A", was only 33%. It means that the subjects are more sensitive to the dimensions in which they tend to lose due to the reference point. (D. Kahneman, Jack L. Knetsch, Richard H. Thaler, 1991)

Figure 2 More reference points for choosing between options A and option D.

Behavioral changes of respondents when changing the reference point (current job) to new reference point D', providing better social interaction and 80 min. commuting time to/from job.



SOURCE: Own processing on the basis of D. Kahneman, Jack L. Knetsch, and Richard H. Thaler: Anomalies – The Endowment Effect, Loss Aversion, and Status Quo Bias, 1991.

Another example represents the observation realized by the authors: Masashi Toshino, Megumi Suto (2004). Their research is based on a questionnaire querying, so the results may be affected by the prevailing feelings of the Japanese securities markets during the period October – November 2003. They stated that if they repeat their survey again, they could get completely different results.

Regarding the loss aversion, the authors examined only the factor of relative size of losses against gains. However, prospect theory also implies that people are beginning to take greater risks when suffering from losses. Their research did not focus on this aspect. Their research confirmed the tendency to loss aversion, where investors feel much more pain of losses than pleasure from the same amount of profit. (Masashi Toshino, Megumi Suto, 2004)

In order to further investigation in the risk attitudes of investors in the area of gains and losses, it would be necessary to meet and to get know investors and the subsequent application of complex experiments instead of a simple questionnaire survey of anonymous investors. (Masashi Toshino, Megumi Suto, 2004, Beáta Gavurová, 2012, Vincent Šoltés and Beáta Gavurová, 2013).

Stephen G. Dimmock and Roy Kouwenberg (2010) were able to calculate the coefficient of loss aversion for each household assumed on data relating to the required risk premium. Subsequently the coefficient was compared with data relating to whether the household own equity assets or not. If household own equity assets, the share of total household financial assets was observed. Authors reached the following conclusions:

- The higher loss aversion is, the less probability of owning equity assets by the household is.
- If the household really have equity assets, their share of total financial assets also depends on the degree of loss aversion. The smaller aversion, the higher proportion of equity assets (stocks, equity funds, shares in private companies etc.).

Loss aversion as a pattern of thinking and behaving of the population is so common that it is considered to be a standard rather than to be a deviation from rationality. In all likelihood, loss aversion is the reason why most people are refusing involvement in investment into risky assets and in the case they have decided to participate, extremely high risk premium is required. (Vladimír Baláž, 2009)

CONCLUSION

The intention of the work is to bring the loss aversion into attention, as one of emotional deviation from rationality in financial behavior. Aim of this paper is to present subjective value of losses with a graphical view of a hypothetical weighting function.

Daniel Bernoulli already in 1738 tried to explain why people are averse to risk and why risk aversion is decreasing with increase in wealth. However, as has been demonstrated, people usually do not think about relatively small results concerning the amount of wealth, but they focus on gains and losses.

The work also examines a mathematical representation of loss aversion followed by the example of application in which respondents have to choose between two new job opportunities compared to the current work, defined as the reference point. The results of the survey conducted by the authors: D. Kahneman and A. Tversky (1991) have shown that subjects are more sensitive to the dimensions in which they lose (the loss), with respect to a reference point.

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OCCUPATIONAL STATUS OF WOMEN IN THE LABOUR MARKET IN POLAND: ANALYSIS OF THE PHENOMENON

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Abstract. For many years, the phenomenon of entrepreneurship has been the focus of scientific discussions in the field of economic and social sciences in developed countries. Women represent a substantial potential from the standpoint of the economic growth. In the public domain, their presence in the labour markets seems to be one of the most important achievements of the 20th century. Despite equal legal opportunities in the labour market, significant differences continue to exist, especially between the salaries for women and men. The variety of factors that affect professional careers of women and their professional activity causes that the analysis of the phenomenon compared with other countries of the European Union necessitates distinct determination of the causes for development of particular structures and tendencies. The aim of this paper is to analyse the occupational status of women in the labour market in Poland based on a statistical survey.

Keywords: professional activity, entrepreneurship of women, labour market., occupational discrimination.

1. THE CONCEPT OF ENTREPRENEURSHIP

There are a variety of definitions of entrepreneurship. Therefore, it is difficult to present a uniform and coherent theory of entrepreneurship, both in the field of the economy and other sciences since it represents a multi-dimensional category. Entrepreneurship is frequently related to economic activity and the person of entrepreneur. In the literature, the definition of this concept was first introduced by J.B. Say, who argued that an entrepreneur (owner) is a person who skilfully manages different factors of production through transfer of economic resources from the areas of smaller to greater performance and higher profits [9]. In the economic literature, the entrepreneurship is considered as a specific form of working or an independent factor of production. It determines the effectiveness of management through the choice of directions of the activity, using manufacturing techniques and adjusting them to the previously set goals of the enterprise under current conditions of business surroundings [4].

1.1 Entrepreneurship of women in Poland

Entrepreneurship of women represents a multifaceted research area. It is the area of particular interest, which is conducive to development of statistical and survey-based methods. From the economic standpoint, economic growth necessitates promotion of entrepreneurship among women and the increase in their share among enterprise owners. Nowadays, the opportunities for finding resources for starting and development of business activity using state or EU's funds are easily available. There are a variety of institutions that support business and broadly understood entrepreneurship. Both commercial and non-commercial organizations help promote entrepreneurship. One of the organizations to support both present and newly created enterprises is Polish Agency for Enterprise Development (Polska Agencja Rozwoju Przedsiębiorczości, PARP) [11]. Since its beginnings, PARP has been committed to the activities aimed at development of entrepreneurship, innovativeness and implementation of structural policy of the European Union. The aim of PARP's activities is to implement programs for development of the economy that support innovation and research activities of small and medium-sized enterprises, regional development, export, development of human resources and the use of new technologies.

Similar to other European countries, occupational situation of women in the labour market differs from the status of men. Entrepreneurship of women and their professional activity has been analysed particularly from the standpoint of differences in education compared to men, qualifications, salary inequality, legal regulations and practices used during employment. When implementing legal laws that prevent sexual discrimination, the European Union obliged all the member states to use them. A substantial effect on the economic conditions in a country or a region is from the percentage of professionally active people. The diagram below presents a graphic interpretation of the economic activity rate in Poland and in the countries of the European Union in 2000-2012.

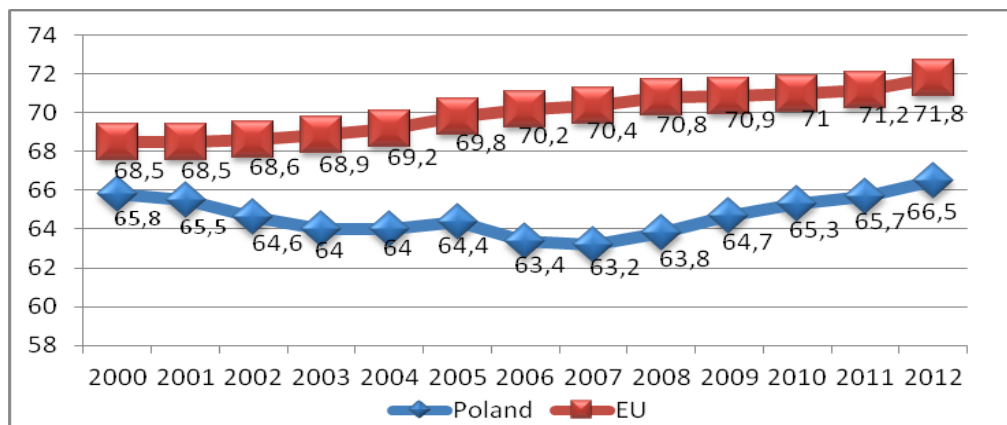


Diagram 1. Economic activity rate in Poland and the EU in 2000-2012 [%]

Source: author's own elaboration based on the data from Eurostat [10]

Economic activity rate is measured for the population who constitutes manpower supply. It demonstrates the percentage of professionally active people in the population. The people at the working age are women aged 18-59 years and men aged 8-64 years. It can be observed that the economic activity rate in the countries of the EU was increasing in the period studied, reaching the level of 71.8% in 2012. The country with the highest economic activity rate in the EU is Sweden, with its age range of 15-64 years including 80% of both employed and unemployed. In Poland, this rate is lower than the mean for the

European Union. Since 2007, the number of professionally active people has been rising continuously. However, the difference remains substantial.

Although it is possible to define the discrimination of women in the labour market, presentation of this phenomenon in quantitative terms is much more complex. Discrimination occurs if women who are educated, have sufficient knowledge, experience and working performance at the same level as men experience problems with being employed, receive lower salaries and their careers progress much slower than those observed in men [8]. Despite the sexual equality guaranteed by the Polish legislature, Polish women are facing challenges in the field of employment, whereas the rights they have are not always respected. Sexual stereotypes significantly affect occupational segregation in the Polish labour market. A feminization of a part of occupations and certain divisions of the economy can be observed. Table 1 presents the data concerning the share of the employed according to sex and selected divisions of the Polish Classification of Business Activities in 2013.

Specification	Total [in thousands]	Men [in thousands]	Women [in thousands]	Share of women in overall number of the employed [%]
Public administration and national defence; compulsory social security	1 056	517	539	51.0
Construction	1 220	1 127	93	7.6
Financial and insurance services	383	128	255	66.6
Professional, scientific and technological activities	511	222	289	56.6
Education	1 208	262	947	78.4
Mining and extraction	268	240	27	10.1
Hotels and food services	316	96	220	69.6
Information and communication services	334	227	107	32.0
Health and social care	952	187	765	80.4
Industrial processing	3 045	2 120	926	30.4
Agriculture, forestry, hunting and fishing	1 918	1 134	784	40.9
Transport and warehousing	926	734	192	20.7

Table 1 Employees according to sex and selected divisions of the Polish Classification of Business Activities in the 3rd quarter of 2013 in Poland

Source: author's own elaboration based on „Aktywność ekonomiczna ludności Polski III kwartał 2013“ GUS, Warsaw 2014 [1]

Analysis of the structure of employment in Poland reveals a partial feminization of certain industries and sectors. Women dominate health and social care, education, hotels, food services and financial agencies. In other sectors, such as construction, mining and extraction, women represent less than 20% employees. For comparison, recent 20 years have seen a decline in employment of women in public administration and national defence (from 58.8% in 1993 to 51% in 2013). Small increase in the percentage of the women employed was observed in education (73.1% in 1993). Women remain to choose working in education, health care and social assistance, even if these occupations are less profitable. Differentiation of the salaries results from the subjective choice of the university majors: women prefer humanities, which consequently leads to choosing different jobs [8].

An exception from the principle of equality of women and men in Poland is the prohibition of employing women in jobs that can be particularly burdensome to women's health. In 1996, there were 90 professions prohibited for women [2]. At present, this problem is regulated by the ordinance of the Council of Ministers as of September 10, 1996 [6]. According to this ordinance, women cannot start jobs connected with physical effort and transport of heavy goods, forced body position, working underground and working at heights and working under noise and vibration conditions.

An important factor in changing the role of women is their education. More women than men have now higher education [see Table 2].

Educational level	Total [in thousands]	Men [in thousands]	Women [in thousands]	Share of women in overall number of the employed [in %]
Total	15 738	8 748	6 990	44.4
Higher	4 882	2 118	2 764	56.6
Post-secondary and secondary vocational education	4 299	2 419	1 880	43.7
Comprehensive secondary education	1 394	655	739	53.0
Basic vocational education	4 164	2 903	1 260	30.3
Junior, primary and incomplete primary education	1 000	653	347	34.7

Table 2 Employees according to education in the 3rd quarter of 2013 in Poland

Source: author's own elaboration based on „Aktywność ekonomiczna ludności Polski III kwartał 2013“ GUS, Warsaw 2014 [1]

Analysis of the above data reveals that men choose basic vocational education more often than women. More specifically, the group of the people employed with higher education level is dominated by women. Increasing education level among women offers opportunities for better vocational position. Although women represent almost half of the employed, none country have similar female representation among managers. Low share of women on high managerial positions does not result from the fact that women's education or skills necessary to perform these functions is insufficient. On the contrary, women dominate among students in universities and post-graduate courses. More and more women decide to participate in MBA (Masters of Business Administration) courses.

However, analysis of the status of the women employed should not be based only on the employment range. The status of women in the labour market is also characterized by the inequalities with respect to men and discrimination towards them concerning promotion and, consequently, their access to higher salaries. One of the most serious problems is direct discrimination in terms of salaries. Women often earn salaries much lower than men while performing the same duties and having the same level of education and vocational competencies. Table 3 compares mean gross salaries according to groups of professions as of October 2012 (in Polish zlotys).

Analysis of the data contained in Table 3 reveals that female salaries are lower than those earned by men in all the groups of professions analysed. Proportions of salaries vary from group to group. In general, the higher salaries the higher disproportions in salaries earned by women and men. The highest percentage of women are employed in the group of high-skilled jobs (35% of women employed in general) [7]. This group includes typically female groups of professions, such as nurses or midwives. The difference in salaries between women and men in this group is one of the highest (27%). Another numerous female group of professions is employees in the service-providing sector and salespersons.

These women account for 14.1% of women employed in general [7]. The highest difference between salaries was observed among industrial workers and craftsmen (34%). This group is dominated by men, with 23.5% of all men and only 4.8% of women employed in general. The lowest difference between the salaries (2%) was recorded among office workers. However, it should be emphasized that the differences in salaries earned by women and men are gradually fading. It was in the mid-nineties of the 20th century when statistical female Pole earned 75% of the statistical male Pole [5]. The differences in the salaries are gradually reducing due to the fact that employers are more willing to employ well-educated and competent women and due to changing awareness among women. Women know their vocational competencies and skills and show sufficient knowledge of the rights they have [3].

Group of professions	Men [in Polish zlotys]	Women [in Polish zlotys]	Salary earned by women as a percentage of those earned by men [%]
Representatives of public authorities, higher-level public servants and managers	9295.30	6748.69	73
High-skilled jobs	5677.13	4320.92	76
Technicians and junior staffs	4458.30	3436.85	77
Office workers	3236.68	3174.71	98
Service providers and salespersons	2482.36	2158.84	87
Farmers, gardeners, foresters and fishers	2659.36	2519.32	95
Industrial workers and craftsmen	3294.91	2185.36	66
machinery operators and engineers	3346.22	2611.44	78
Employees performing simple works	2568.69	2019.01	79

Table 3. Mean gross salaries according to groups of professions as of October 2012

Source: author's own elaboration based on „Struktura wynagrodzeń według zawodów w październiku 2012 r.“, GUS, Warsaw 2014 [7]

Both women and men in Poland are characterized by lower employment ratio than the average employees in the respective sexes in the countries of the European Union. Diagram 2 presents employment rate for men and women in Poland compared to selected countries of the European Union according to the situation in the labour market in Poland in 2011.

Poland is among the countries with one of the lowest female employment rates (53.1%). Compared to Poland, the countries with substantially higher employment ratios among women are Denmark (70.4%), Germany (67.7%), Finland (67.4%) and Austria (66.5%). It should also be stressed that Poland is the country with one of the lowest male employment ratio compared to the countries of the European Union, which was 66.3% in 2011. Lower ratios were recorded only in Hungary (61.2%), Romania (65%) and Latvia (62.9%).

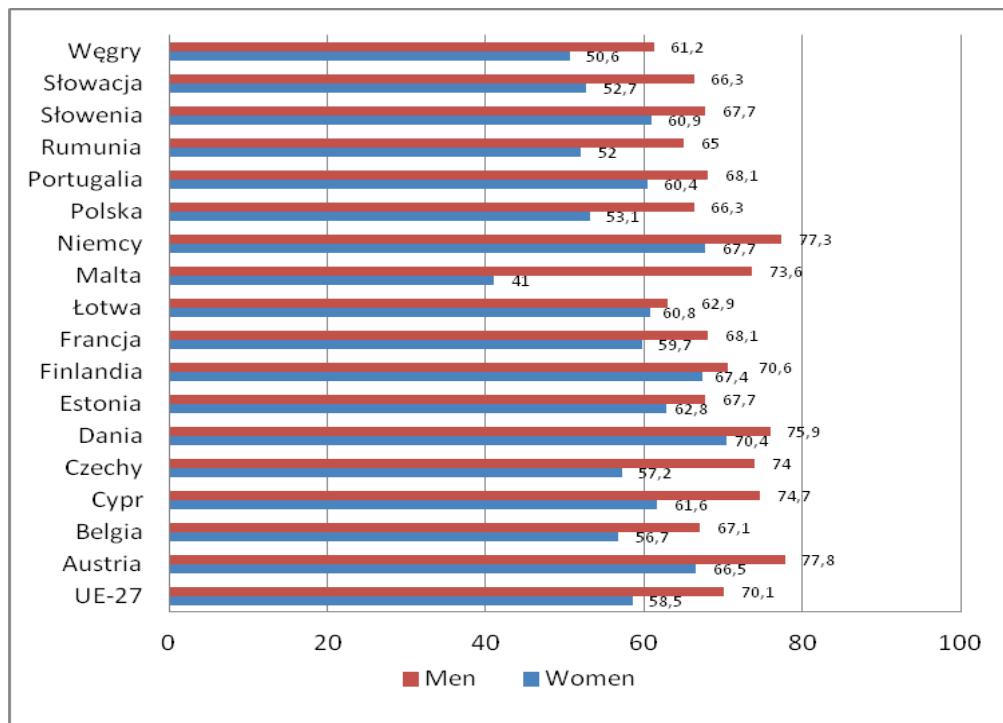


Diagram 2. Employment rate for both sexes in Poland and the countries of the European Union in 2011 (%)

Source: author's own elaboration based on the data from Eurostat [10]

2. CONCLUSIONS

Women's entrepreneurship necessitates a professional support from a variety of commercial institutions that are committed to promotion of professional activity and creation of conditions for popularization of modern technological solutions for the economy aimed to improve the quality of interpersonal opportunities through education, training and counselling. A wide range of services are offered by the European Social Fund aimed at preventing unemployment and development of human resources, which is one of the EU Structural Funds. The areas of support include [12] initiatives in the labour market through promotion of the solutions that equalize opportunities in the labour market, ensuring access to trainings and counselling and improving chances of women to find jobs and make professional careers. The resources of the Fund help finance trainings and vocational practices, vocational counselling and agencies as well as analyses and surveys in the labour market.

From the standpoint of the state institution, it is essential to implement activities aimed at levelling social barriers of the entrepreneurship. It is also essential to promote similar attitudes toward the roles performed in society by men and women, and to depart from stereotypical approach to typically male and female activities. Institutional support is necessary, especially for entrepreneurship of unemployed women who are graduates from secondary schools and universities or mothers who return to work after a maternity leave or child care leave.

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ORGANIZATION OF SUPPLY CHAIN FOR INTERNATIONAL CONSIGNMENTS OF LTL CARRIER ON THE MARKET

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Abstract

The purpose of this article is to bring solutions used in the forwarding companies, within the framework of the construction of international supply chains. This is an extremely important aspect which is already at the stage of creating a strategy for the development of the portfolio of services provided by the shipping company. Discusses system forwarding transport process, what they use and what services they offer. The last part of the article shows a comparison of the two models used to carry out the international transport of general cargo (LTL)-bilateral cooperation between the two freight forwarding companies of two countries and the international distribution system that connects a number of partners. Shown here are the pros and cons of both solutions. However, they are pretty much balanced, therefore, shows both solutions, but the final choice of one of them may be subject to several very individual factors to be taken into account by the managers making the choice.

Key words pickup and delivery models, operation strategies, logistic networks, forwarding, international supply chain management

1. INTRODUCTION

The themes of the forwarding company is closely linked to the process of organization of the supply chain, which is an ordered scheme of the actions taken in order to provide the product in place and time, which corresponds to the needs of the buyers. The supply chain is also characterized as interconnection between suppliers and consumers, on the basis of processes and activities, which, as the final product to give services to clients.(Kot, Starostka – Patyk, Krzywdą, 2009)

The concept of the supply chain organization, which is affiliated with the international means of transport can be described as a collection of actions that are related to the overcoming of differences (temporal and spatial), and which are on the line of production and consumption. (Kramer, 2004)

Similarly, referred to it as an activity consisting in the sale and delivery of the product obtained the final consumer, in accordance with the previously defined needs or desired quantity, at the right time and place for it. (Grabarski, Rutkowski, Wrzosek, 2001)

2. SOLUTIONS OF THE INTERNATIONAL SUPPLY CHAIN

Supply chain cargo consignments in the international distribution system, in the context of the agent handling is done in two ways. Forwarders to begin construction of the product of the international

General cargo face a choice of whether to become a participant in one of the available distribution systems or establish direct cooperation with similar partner – shipping company in the country. To make a choice between should become, therefore, the way in which the company wants to solve the problem–there are two ways to specify them: as "upward causation–everything" (separation problem on its actual smaller components) or "holistic" (where the links between the components of the problem and looking for a holistic solution for him). (Kot, Starostka – Patyk, Krzywda, 2009)

Such activities are aimed at building an international distribution channel, which is understood as a system dependent companies that deal with the physical flow of the products from their manufacture to the final client, as well as streams of payments, property rights, information and promotion. (Duraj, 2004)

Focusing only on the line of organizing transport FTL and PTL, for example, does not give an adequate level of profitability services. The relationship is also closely linked with marketing concept, which must be targeted at market orientation of the company. Overriding value in that case must be customer starts and their needs. Developing a portfolio of product in this field is an increase to meet the needs of the customer at an angle of the place, time and quality of service. (Szymczak, 2000)

Also the fragmentation of business on many smaller clients may produce better liquidity, even if one of the operators will be late with a payment for freight, which on the local market for freight transport services is quite widespread. Such a system is characterized by great potential for their own, which gives opportunities to perform tasks in his framework, and consists at him five main factors, namely: technical, technological, the socio-economic-organizational and financial information.(Dembńska – Cyran, Jedliński, Milewska, 2001)

3. THE DETERMINANTS OF THE DEVELOPMENT OF FREIGHT FORWARDING COMPANIES

By analyzing the problem in example: XYZ Company offers shipping services FTL and PTL. However, the market is moving constantly towards fragmentation. Companies do not want to build stocks on their warehouses, however, large quantities of products or semi-finished products and prefer to receive smaller quantity at increased frequency in spite of higher costs of such services. It also increasingly spread the idea of Just-in-Time supply,(Dima, Grabara, Pachura, 2010) that do not focus on full loads. Global business strategy for companies, such as ranges as well: the reduction of CO2 emissions, reducing the amount of energy needed to transport, and to reduce the volume of traffic in cities, promotes the development of the product general cargo transport. (Popa, 2011)

If company is not going to be determined to develop cooperation in this field, can bounce on it negatively in terms of economic performance. This is due to too high or too low levels of customer service. In the case where the level of customer support is higher than its financial capacity, the company will suffer significant losses associated with rotation. If, however, it will not guarantee the quality of services to field competitive companies can.(Kempny, 2001) Business strategies related to the long-term maintenance of key customers are geared more towards the reduction of operating costs than on an increase in the price level of services. For those companies to service clients–decision-making forwarding still a key role is played by the rates on the service even if the market position of the supplier services.(Kot, 2010) Thus, through marketing approach – you can look at the wider logistic market and found common benefits by several partners within a single distribution system. (Ciesielski, 2006) Attention should be paid also to cover the cost of logistics. Continuous examination of the level of costs is extremely important, especially in terms of logistics and forwarding companies can not forget in any way about them as is the case with the level of logistical costs in any other undertaking.(Man, Nowicka – Skowron, 2010)

3.1 The international distribution system

In Europe there are more than a dozen international distribution systems. Among them we can highlight:

- ONLINE Systemlogistik GmbH,
- System Plus Logistic Service GmbH & Co. KG,
- IDS Logistik GmbH
- The Pall-Ex Group
- TPN – The Pallet Network

They all have similar features, as well as the rules for participation in these works. The principle of their operation is to create one central HUB for cross-dock, whose office should be located in the central part of Europe, so as to guarantee the shortest commute times from all the neighboring countries, which are members of the system. Having prepared for operations in the system overnight HUB, the company recruits participating, on the basis of quazi franchises.

3.2 Direct cooperation

Another commonly used solution is to establish by shipping direct cooperation with another company in the expedition of the State with which the company wants to start exchange of goods transport. Bilateral cooperation-how is determined the market cooperation, works in a very similar way to the system of international distribution, however, combines two companies mentioned only (one from each Member State); or several companies from one Member State to the one from the other. Such a combination between service providers, a kind of competitive, gives a similar effect as the service provider of the connection with the client. The merging companies must pay attention to the proper preparation of the project, its subsequent control and constantly review the progress in mutual learning processes.(Popa, 2010)

The introduction of solutions to everyday connection can be used in the case of guarantees for the satisfactory or pipe. Currently, transport policy is created in a rather innovative way in Central and Eastern Europe, particularly as a result of the enlargement of the European Union, and to facilitate the exchange of goods. See also the significant impact of technological advances on the transport sector, which gives you the ability to use the latest technology (even) in the context of the development of services offered. (Kot, 2008)

4. RESEARCH ANALYSIS OF REVENUE

To analyze the case, comparing both solutions for revenue, cost and profit data on actual dates of company SwissLogis Ltd for 2012, there is need to look at in detail on the number of items handled by the company during the period from March to December of 2012. The data presented in Table 1 show the quantities of items in terms of monthly, as well as the sum of revenues, costs and the income generated from the sale of a product of international transport general cargo on the Poland-Italy. The company has used during this period only from bilateral cooperation arrangements with the Italian partner operators.

Table 1. Number of shipments handled in the framework of the international distribution by SwissLogis Ltd in period for from 03.2012 to 12.2012

MONTH	IV	V	VI	VII	VIII	IX	X	XI	XII	TOTAL
NUMBER OF SHIPMENTS	8	16	32	45	29	43	56	48	34	311
REVENUE(TOTAL EUR)	2596,8	4021,4	11334,4	14341,5	8804,4	14426,5	16732,8	15451,2	10482,2	98191,2
COST (TOTAL EUR)	1388,48	2795,69	5835,52	7733,25	4925,36	7678,08	10092,88	8200,8	5949,32	54599,38
GROSS PROFIT (TOTAL EUR)	1208,32	1225,71	5498,88	6608,25	3879,04	6748,42	6639,92	7250,4	4532,88	43591,82

Source: Own elaboration based on information obtained from the shipping company SwissLogis Ltd, 2013

The data presented in Table 1 indicate the tendency of the development of the company. Since March the amount increased gradually supported. Growth was reported for July. In August, followed by a decrease (due to economic circumstances is a period of vacation home in Italy - the parable of the authors) to again increase recorded in September and October and following slight declines by the end of the year (November and December). The company in this period for recorded income from sales of this product of EUR 43591,82.

Table 2. Illustrative data on consignments accepted into the detailed analysis in the cost comparison of both solutions.

SENDER	RECIVER	From [post code – first part]	Where [post code – first part]	Income [EUR]	Costs – bilateral cooperation [EUR]	Costs – distribution system [EUR]
REG	SPO	PL30	IT81	116,9	83,50	107,55
BEL	TIR	PL30	IT50	217,1	155,07	168,97
REG	SPO	PL30	IT81	116,9	83,50	91,89
ZAP	CED	PL35	IT20	329	235,00	288,77
CHR	PAN	PL26	IT90	287	195,00	245,30
ELP	REC	PL44	IT30	217,1	155,07	165,74
CHR	MES	PL26	IT00	254,7	176,40	182,30
FAS	CAT	PL40	IT23	36,4	26,00	34,60
ELP	NES	PL44	IT06	312,3	223,07	237,21
CHR	PAN	PL26	IT90	652,2	405,60	438,06
LES	PAV	PL63	IT31	72	50,50	60,73
MOL	DEL	PL83	IT10	314,3	224,50	248,63
AMK	PIZ	PL96	IT55	168,6	120,43	145,69
POL	BES	PL30	IT20	43,5	31,07	43,97
BEA	SEA	PL21	IT50	231,2	165,14	189,60
CHR	PAN	PL26	IT90	652,2	465,83	552,26
AVERAGE				251,34	174,73	200,08

Source: Own elaboration based on information obtained from the shipping company SwissLogis Ltd, 2013

Table 2 shows the 16 representative cases – consignments which have been handled by the company SwissLogis Ltd in month of may 2012. Looking at the coverage of the whole year to be tempted by an analysis of the income projections in terms of the whole year. Such a calculation can be done by the average business expenses for one shipment, calculated on the basis of representative 16 consignments presented in Table 2 in comparison with actual income. A detailed calculation of the forecast data presented in Table 3.

Table 3. In terms of income forecast throughout the year on the basis of a system of international distribution.

MOUNTH	IV	V	VI	VII	VIII	IX	X	XI	XII	TOTAL
NUMBER OF SHIPMENTS	8	16	32	45	29	43	56	48	34	311
REVENUE(TOTAL EUR)	2596,8	4021,4	11334,4	14341,5	8804,4	14426,5	16732,8	15451,2	10482,2	98191,2
COST (TOTAL EUR)	1606,4	3212,8	6425,6	9036	5823,2	8634,4	11244,8	9638,4	6827,2	62448,8
GROSS PROFIT (TOTAL EUR)	990,4	808,6	4908,8	5305,5	2981,2	5792,1	5488	5812,8	3655	35742,4

Source: Own elaboration based on information obtained from the shipping company SwissLogis Ltd, 2013

Projected income, which would be developed in the case of participation in the international distribution system in accordance with the data in Table 3 would be EUR 35742,40. To compare and choose the preferable solution for the company, as well as during the actual case to evaluate whether the company has taken the right decision in terms of the selection there is need to compare monthly income and annual for both variants. It is understood that if the income is generated in the effort smaller compared with the not worst of customer satisfaction, and maintaining the quality of the service, this solution should be considered. In addition to the increase of income, it should be also keep in mind that the same increase circulation company generates additional benefits. Even increasing the level of cash in circulation.(Ślusarczyk, Kot, 2012)The compilation is presented in Table 4.

Table 4. A comparison of the actual income from prepared forecasts.

MOUNTH	IV	V	VI	VII	VIII	IX	X	XI	XII	TOTAL
NUMBER OF SHIPMENTS	8	16	32	45	29	43	56	48	34	311
REVENUE(TOTAL EUR)	1208,32	1225,71	5498,88	6608,25	3879,04	6748,42	6639,92	7250,4	4532,88	43591,82
COST (TOTAL EUR)	990,4	808,6	4908,8	5305,5	2981,2	5792,1	5488	5812,8	3655	35742,4
GROSS PROFIT (TOTAL EUR)	-217,92	-417,11	-590,08	-1302,75	-897,84	-956,32	-1151,92	-1437,6	-877,88	-7849,42

Source: Own elaboration based on information obtained from the shipping company SwissLogis Ltd, 2013

5. ANALYSIS SUMMARY

The company opting to participate in the international distribution system would provide less income on an annual basis about EUR 7849,42 than using the bilateral cooperation arrangements with other forwarding. Analyzed the statement is confirmed by the quantitative benefits of bilateral cooperation. Looking at the pros and cons of global both variants of cooperation can, however, see the value added that is not often seen in the table, the digital approach.

Participation in the international distribution system carries many benefits for the partners of the acceding to it, the main ones are:

- Turnkey solutions to calculate shipping prices
- Availability of transport to many countries at the same time
- Joint, mutual responsibility for quality of service

International Distribution System is unfortunately also the drawbacks of participation in it:

- A system of penalties for failure to comply with the terms of the agreement
- The need to fill in the items of the car line
- the cost of entry and participation in the system

Bilateral cooperation gives the company a lot of amenities, but also disadvantages. The most valuable aspects of the application are:

- Easy contact – the immediacy of contact between partners
- Specialization in handling the country concerned
- Ease of settlement-no other intermediaries between partners

Discussed bilateral cooperation, however, also has a few flaws:

- dependence on one supplier of services in the country
- the lack of options for potential development

6. CONCLUSIONS

Shipping if someone want to develop in the direction of LTL freight services international, needs to decide how it wants to participate in this kind of supply chain. These distribution systems, as well as bilateral cooperation on developing capabilities like give company its product portfolio. Both solutions allow to meet the needs of customers forwarding, however, participation in the system allows to enter into supply and load in more countries by an extensive network of partners. Unfortunately, the cost of participation in them and the risk associated with additional costs, as not conducive to the development of the company in the context of strategic planning. Look also here clients of great importance, if the company that so far has not offered LTL transport services, in a short period of time, through the accession to the system, extends their capabilities in many countries, support of the distribution can be badly received. Consumers today increasingly prefer to choose a specialist with an industry, because, despite the slightly higher costs, they can get much better service. Specialization in a given direction of transport by far provides the cooperation between partners. Presented arguments confirm that the better choice is the progressive development and enabling future directions-the import export partner. This form of cooperation also provides greater transparency in the accounts and, with proper choice and efficient operating conditions and reliable contact and information about shipments.

Market leading in the direction of the fragmentation of the loads, it will also create opportunities for continuous product development LTL. Freight forwarding companies that in a professional manner will be provided their services offered to transport general cargo, to become the market leaders for directions, where in addition to a relatively competitive prices will offer very high-quality service. Solution of

distribution systems franchise quazi, should become a kind of complement to LTL freight services and provide support for the pipeline individual clients, and were occasionally pallet consignments, for a relatively low price.

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Seasonality as a Part of Tourism

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Abstract

Seasonality has long been considered to be one of the most significant features of tourism. It causes fluctuation in the number of visitors, capacity utilisation, and employment and thus affects income of tourism enterprises. The contribution analyses seasonality in three types of hotel enterprises. The analysis was based on monthly revenues in the period from 2010 to 2012 in a mountain, urban and spa hotel. Data were statistically processed using the method of seasonal indices.

Key words: Tourism, hotel enterprises, seasonality, revenues.

1. INTRODUCTION

Seasonality is perceived as a major problem of the tourism industry. It is held responsible for causing or recreating a number of difficulties faced by this industry. These include gaining access to capital, recruiting and maintaining full-time staff, which leads to fluctuation in quality employees, capital intensity and the like (Baum, Lundtorp, 2001). It has also a major impact on trading income of tourism enterprises, most of which are hotels. Owing to seasonality, hotel enterprises have fluctuating occupancy of accommodation capacity that affects the revenue and several expense items.

Seasonality is in general determined by natural climatic conditions, legislative and administrative arrangements relating to leisure time (holidays, public holidays, industrial holidays), by availability of some activities at a certain time (castles and chateaux, mountain valleys) and the like (Jakubíková 2012). Broadly speaking causes of seasonality might be natural and institutional.

2. MATERIAL AND METHODS

The article aims at analysing seasonality in three types of hotel establishments on the basis of monthly revenues in the period from 2010 to 2012. We processed internal data concerning revenues of three hotel establishments, a mountain hotel, urban hotel and spa hotel. Data were provided on condition that real business names would not be revealed. There are various methods for measuring seasonality, and we decided to use the method of seasonal indices (Weidner 2006).

Input data for calculating seasonal indices are shown in Table 1 (data are in thousands €).

Period	Hotel category								
	Mountain hotel			Urban hotel			Spa hotel		
	2012	2011	2010	2012	2011	2010	2012	2011	2010
I.	40,00	38,50	37,90	37,50	36,10	34,30	224,10	215,50	208,4
II.	52,50	50,10	49,00	47,50	45,90	43,70	232,50	234,90	231,4
III.	36,50	34,80	34,80	34,50	33,80	32,70	309,90	209,90	238
IV.	34,00	32,50	32,60	25,00	24,20	23,00	277,30	266,90	260,1
V.	25,00	23,90	23,50	30,00	28,80	27,40	252,10	245,70	235,8
VI.	37,50	35,80	35,10	42,50	40,60	38,10	199,10	187,30	184,9
VII.	39,50	37,80	36,80	43,00	40,10	37,50	280,20	269,40	267,3
VIII.	49,00	47,00	46,20	45,00	41,90	39,60	293,20	281,40	275,6
IX.	42,00	40,20	39,40	18,50	27,30	27,00	258,50	248,60	237,6
X.	40,00	38,20	37,60	35,00	33,70	32,20	276,90	268,80	264
XI.	41,00	39,20	38,40	31,00	29,70	28,50	308,00	296,20	290,1
XII.	50,00	47,90	46,70	38,50	36,90	36,90	385,5	368,5	354,7
TOTAL	487,00	465,90	458,00	428,00	419,00	400,90	3297,30	3093,10	3047,90
Average	40,5833	38,825	38,1667	35,6667	34,9167	33,4083	274,775	257,758	253,992

Tab. 1 Monthly revenues of hotel enterprises
Source: Own processing based on internal documents

3. RESULTS AND DISCUSSION

Analysis results were obtained by calculating seasonal indices for the three types of hotel enterprises and are shown and compared in graphs. When calculating seasonal indices we followed these steps:

- yearly revenues were divided by the number of months to gain the average monthly revenues;;
- monthly revenues were divided by average monthly values and multiplied by 100;
- the sum of all monthly seasonal indices must equal 1200, in this case these are not indices used in statistics for expressing development but they are indicators fluctuating over and below 100 %

Calculated seasonal indices of particular hotel enterprises in Table 2.

Period	Seasonal indices								
	Mountain hotel			Urban Hotel			Spa hotel		
	2012	2011	2010	2012	2011	2010	2012	2011	2010
I.	98,56	99,16	99,30	105,14	103,39	102,67	81,56	83,61	82,05
II.	129,36	129,04	128,38	133,18	131,46	130,81	84,61	91,13	91,11
III.	89,94	89,63	91,18	96,73	96,80	97,88	112,78	81,43	93,70
IV.	83,78	83,71	85,41	70,09	69,31	68,85	100,92	103,55	102,40
V.	61,60	61,56	61,57	84,11	82,48	82,02	91,75	95,32	92,84
VI.	92,40	92,21	91,97	119,16	116,28	114,04	72,46	72,66	72,80
VII.	97,33	97,36	96,42	120,56	114,84	112,25	101,97	104,52	105,24
VIII.	120,74	121,06	121,05	126,17	120,00	118,53	106,71	109,17	108,51
IX.	103,49	103,54	103,23	51,87	78,19	80,82	94,08	96,45	93,55
X.	98,56	98,39	98,52	98,13	96,52	96,38	100,77	104,28	103,94
XI.	101,03	100,97	100,61	86,92	85,06	85,31	112,09	114,91	114,22
XII.	123,20	123,37	122,36	107,94	105,68	110,45	140,29	142,96	139,65
SPOLU	1200,00	1200,00	1200,00	1200,00	1200,00	1200,00	1200,00	1200,00	1200,00

Tab. 2 Seasonal indices of hotel enterprises
Source: own processing

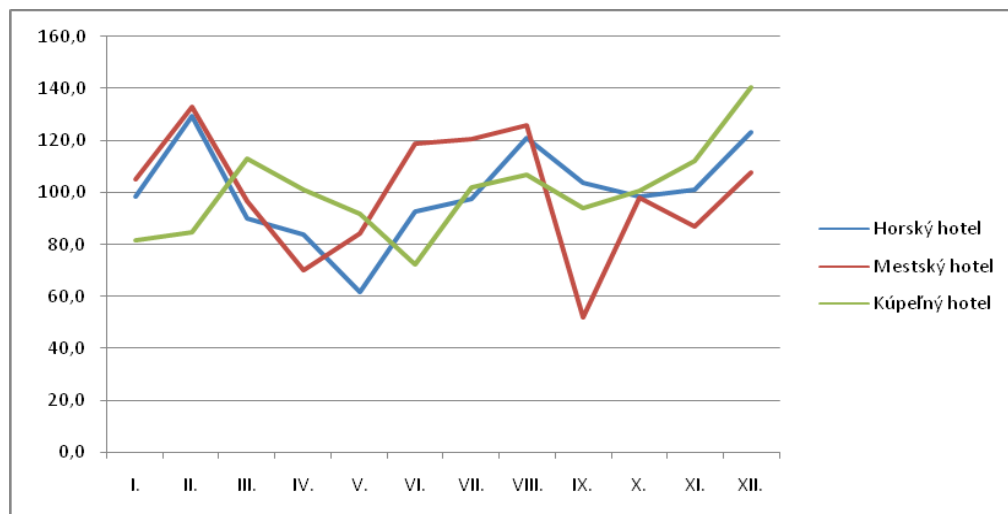


Figure 1 Comparison of seasonal indices of particular hotel enterprises
Source: own processing

Figure 1 illustrates seasonal indices of all three hotel enterprises in 2012. From the graph above we can see that values of seasonal indices of each hotel enterprise in particular months vary considerably. The mountain hotel reached the highest index in February, amounting to 129.36 and the lowest one in May (61.60). This hotel has two seasonal peaks during the year, in summer, during the third quarter, and in winter at the beginning of the first and the end of the fourth quarter. The urban hotel attained the highest index in February at the value of 133.18 and the lowest one in September at 51.87. As the graph shows, this hotel enterprise has two seasonal peaks. The first one was recorded during the first quarter and the second one at the turn of the second and third quarter of the year. The spa hotel reached the highest index in December (140.29) and the lowest in June (72.46). It also has two seasonal peaks, in the summer season during the third quarter and the winter season in the fourth quarter.

4. CONCLUSION

Analysis results show that the hotels we examined are subject to different impacts of seasonality. The mountain hotel has two higher peaks during the year, during winter, in January, February and December and during summer in July and August. These peaks of seasonality are caused by natural conditions, that is natural weather changes such as temperature, snowfall, sunlight and the like. Analysis results concerning the urban hotel show that it is not solely sensitive to seasonality of natural causes. The hotel targets at business clientele, so in this case seasonality causes have institutional character. Processing the data gained from the spa hotel enterprise we found out that there are several seasonal peaks. In terms of seasonal indices it reaches the peak in the last month of the year due to New Year's Eve stays sold at a higher price, which is reflected in hotel revenue. Seasonality is a phenomenon that will always be a part of tourism. Companies doing business in this sector must be aware of that and they must prepare for the "fight", in which they must do everything possible to minimise its impact on trading revenues.

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Sharing Factual Information Via Stories

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Abstract

Stories are identified as means for personalizing raw information in the world of technology and business. Sharing the information and technological data with focus on the involvement of the audience seem to be more efficient via inserting small personal bits into both technological and business topics. Stories are what we live. Our everyday lives are stories. Developing the efficient relationship between a presenter and audience, arts abilities help develop the capacity for sympathy and those seem to become even more crucial than producing technologically the most modern machines or it is suggested to be balanced.

Key words: facts, sharing, presentation, information, storytelling skills, business

1. INTRODUCTION

It is impossible to argue against the improvement of science and technology as a key component of our contemporary life. Good scientific and technical development will help all the countries in the globalized economy. But there are equally crucial abilities that help ensure the health of all societies and the creation of a decent world culture and also business. These abilities are associated with the arts: the ability to think critically; the ability to transcend local loyalties and to approach world problems as a “citizen of the world”; and, finally, the ability to imagine sympathetically the predicament of another person. An education grounded in these capacities cultivates human beings and their humanity and makes the world worth living in the world and its peoples, and educates and refines the capacity for sympathy—in short, an education that cultivates human beings and their humanity, rather than producing generations of useful machines. If we do not insist on the crucial importance of the humanities and the arts, they will drop away because they do not make money. But they do something far more precious than that by generating vital spaces for sympathetic and reasoned debate, helping to build democracies that are able to overcome fear and suspicion and creating a world that is worth living in (Goodman and Nussbaum 1994).

2. STORYTELLING

The difference between human beings and other animals is that people live in a world directed by the stories they tell. Most of what they know, they have never personally experienced, but heard from stories and then tell the stories, and there are three kinds of stories: stories about how things are, stories about how things work, and stories about what to do about them (Forest 2000). They have a strong ability to socialize a culture. The shaping of human behavior is the stories that we hear and tell from childhood on. We are born into a culture in which these stories begin to develop our sense of self, and our sense of life, and the world, and society. Now these three kinds of stories have been woven together into an invisible web called culture. Culture is defined as stories and messages that create images that govern our conception of life and our behavior.

It is worth having a look at the statement about stories in management work. It's (management and organization) a world almost totally focused on analysis and abstractions. The virtues of sharpness, rigor, clarity, explicitness and crispness are celebrated everywhere including sharing facts of different kinds within giving presentations. It's a world that is heavy with practical import. The fate of nations and indeed the economic welfare of the entire human race are said to rest on the effectiveness of this discourse. Having spent my life believing in the dream of reason, I was startled when I stumbled on the discovery that an appropriately told story had the power to do what rigorous analysis could not – to communicate a strange new idea easily and naturally and quickly in order to get people into enthusiastic action (Denning 2000).

Our everyday life is a story and its sharing among people. We can be influenced by all the bits of behavior (and the values and perceptions they manifest) which we see and hear all around us. These bits of storytelling are around us every moment of the day: 'The Iron Lady' was a term used about Mrs. Thatcher, the former British prime minister. This name, coined for her by the Russians, has stuck with us, for better or for worse! We cannot forget it because it contains the grit of drama, like the grit in the oyster which becomes a pearl. A difficulty, a mismatch, a problem are seeds of stories offering themselves for germination. There is a dramatic tension between the two words, 'iron' and 'lady'. This is part of the world of poetry. "Iron lady" is obviously a part of the storytelling world but so is the way we choose to greet each other, responding as we do to our notions of values, perceptions and behaviors which we live by (Wright 2011). The way we treat a boy because he is a boy, or a girl because she is a girl, is part of nonverbal storytelling: the colors we clothe them in, the toys we give them, the expectations we have of them. In the story about Tom, the independence we gave Tom to wander and to think is a manifestation of values, perceptions and behaviors which came from the story world and fed back into his life story map. The typographic design of the M of MacDonald's is very different to the typographic design of the R of Rolls Royce. The M of MacDonald's is part of the storytelling of MacDonald' a company which purports to be informal and cheerful and warm and good natured. And the 'copper plate' writing of the R of Rolls Royce? A reputation built of many, many years of the very highest standards and traditions and supplying products to the 'higher classes' of society (Wright 2011).

2.1 Non-verbal behavior

Non-verbal behavior is so important that political leaders have teams of 'story tellers' who tell them how to dress, how to smile, when to put their hand on the shoulder of the visiting president and, of course, what to say and how to say it (Wright 2011). More abstractly, but more fundamentally to our lives, I use the world story and sometimes, 'story map' to mean the values, perceptions and behaviors which guide us in our moment by moment response to the experience of living. These values, perceptions and behaviors derive partly from the stories we are told and which we read or see in films but also derive from the verbal and non-verbal behavior, in our daily lives, of people around us (Wright 2011). In every country millions of people choose to watch the storying of contemporary life in soap operas. Twenty or so years ago a leading actor in a Brazilian soap opera killed the leading actress in a car, in a car park, by stabbing her to death in real life! The media reported the story using the soap opera names. Brazil

became paralyzed, not knowing if it was true in the soap opera or true in life and experiencing that the soap opera experience was indivisible from their experience of their own daily lives. This interweaving of story and life continued: the scriptwriter of this soap opera had to write in to the next episode the death of the actress and the absence of the actor, in order to explain their absence in terms of the soap opera and the screen writer was the mother of the actress who had been killed! Stories are who we are (Wright 2011). The first big change is the printing press. The printing press begins the industrialization of storytelling. The printing process begins the process, which is still accelerating, that puts storytelling on some kind of an assembly line, and thereby is able to stamp out large quantities of, and commodities that embody stories, images, and the whole array of the human storytelling process. The second major change is the electronic revolution. And the mainstream of the new electronic revolution is television, and it's going to be the mainstream for a long time to come. Television is the only medium that comes into the home. It's the only medium that provides an environment into which children are born. For the first time in human history, a child today is born into a cultural environment in which television is on an average more than seven hours a day. For the first time in human history, most of the stories, most of the time, to most of the children are told no longer by the parent, no longer by the school, no longer by the church, but essentially by a shrinking group of global conglomerates that really have nothing to tell them, but have a lot to sell. This is a major transformation in the way in which our children are socialized, in the way in which most of the stories are told, in the way in which we grew up and identify ourselves (Wright, 2011).

2.2 Effect and cultivation

When people talk about the effects of television, they're usually thinking about some kind of change about a before, and an after. We worry that a television program might make someone become violent, or that television can change our minds about what we buy or who we vote for, but there are other ways to think about effects. Sometimes the biggest and most powerful effects might not cause any obvious change at all. Instead of effects, Gerbner and Morgan (2002) talks about cultivation, which means that without our minds, or our behavior, television tells us stories that continually shape and reinforce a particular way of seeing the world. When the same images and patterns are shown on television over, and over, and over, viewers tend to mistake the fictional world of TV for the real world. As we absorb television's images they remind us about what we should take for granted, what we believe is normal and natural. They become part of how we perceive reality. This process is called cultivation because the values that television emphasizes are continually nourished and sustained many hours a day for most viewers. It's not something that just happens to us at one point in time. So there's no before and after because television is there from birth. Effect itself originated from a kind of persuasive, market oriented, advertising, political campaign type of communication. The measure of effect is before and after, or a group in which you include the message, a group in which you don't, and you try to look at the difference, and you ask the question of "What has changed? Has my message been effective?" So effect is change oriented. Now the question is, it's easy to see how you measure change, but how do you measure no change? How do you measure stability? This leads us to the notion of cultivation as compared to and contrasted with effects.

3. CONCLUSION

Cultivation basically is the building and the maintenance of stable sets of images about life in society that are driven by the everyday flow of communication. In practical terms this means that I compare heavy viewers of television, people whose cultural life is essentially monopolized by television, who don't read much of the newspaper or don't read much of anything, with people who are light viewers, not because they don't like television, but because they have a much greater variety of cultural participation patterns: they read newspapers, they read magazines, they read books, they go to concerts, and when we do that indeed we find significant differences. We find that the heavy viewers see things

differently from the light viewers. The heavy viewers and people whose cultural life is essentially monopolized by television absorb the television image of life and society from infancy on. They act in a world, which is created mostly by the storytelling capacity of television (Gerbner and Morgan 2002).

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The impact of monetary policy on the credit activity in the Slovak Republic

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Abstract

This article focuses on the monetary policy of the National Bank of Slovakia and its development after the Slovak Republic joined the European Monetary Union. The aim is to analyze the impact of current monetary policy of the European Central Bank implemented through the national central banks on the credit activity in Slovakia and to forecast its future development using the Autoregressive Moving Average method. In order to prove the statistical significance of the monetary policy effect on the credit activity represented by the overall volume of credits, the linear regression was applied. We have shown that the amount of granted credits depends on the interest rate on marginal lending facilities, the interest rate on deposit facilities, the monetary aggregate M3 and the deposits in the National Bank of Slovakia.

Key words: Monetary policy; Credit operations; Forecasting of credit development.

Introduction

The Slovak Republic acceded to the European Union in May 2004 and the National Bank of Slovakia (NBS) became the member of the European System of Central Banks. In 2009 Slovakia adopted the euro and joined the eurozone and since then the National Bank of Slovakia is no longer exclusively responsible for monetary policy, but it still participates in monetary policy making of the Eurosystem. The European Central Bank (ECB) realizes monetary policy through the national central banks. Using monetary policy instruments it influences short-term market interest rates, monetary basis, exchanges rate as well as supports economic growth, employment and financial and price stability.

Central banks' policy decisions influence also the demand and supply of credits. In the period of sharp economic growth credits granted by intermediaries were available and demand for them was enormous. During global financial crises the credit risk increased, therefore, there was a reduction of loan supply from commercial banks (the so called credit crunch) and credit demand declined due to worsening situation in the business sector and deceleration of the real wage growth.

The factors affecting the credit activity are a currently debated issue in the economic articles. In accordance with an uncertain economic development many analysts pay a special attention to the

potential factors which can affect the level of granted credit in an economy and the future development of credit activity.

Albulescu (2009) considers the endogenous factors related to the macroeconomic condition as potential factors influencing the credit activity. Into the model he has included the interest rate on the inter-banking market, the industrial production, the net wages growth rate, the growth rate on deposits and the unemployment rate. Hofmann (2001) has analyzed the determinants of private non-banking sector such as the gross domestic product (GDP), the real interest rates and the real estate prices. Eller, Frömmel and Srzentic (2010) consider the real industrial production, the nominal deposit interest rate and the consumer price index (CPI) as the independent variables. Drakos and Giannakopoulos (2011) have found that credit granting depends on firm size, profitability, sales growth, ownership type, legal status, sectoral heterogeneity and the country-specific level of domestic credit.

Kobayashi (2011) studied the impact of monetary policy on credit availability for firms that have no choice but to borrow funds from banks to cover labor costs. Bijapur (2009) has investigated the effectiveness of monetary policy during a credit crunch and has presented that the relationship between monetary policy and the demand and supply of credits affects the economic growth. Goh, Chong and Yong (2007) have examined the response of bank loans to changes in interbank money market interest rates, CPI and the industrial production index.

Our main aim is to find out what tools of monetary policy, in accordance with its targets, can be used to affect the credit growth. The relevance of bank lending channel for transmission process of monetary policy is investigated using the linear regression. We focus on the situation in Slovakia in the period from January 2009 to July 2012.

Data description

The credit operations of banks (the response variable) are the indicator of the credit activity and they are represented by the total volume of credits granted by monetary financial institution in the Slovak Republic to all sectors in an economy.

Since the National bank of Slovakia has joined the Eurosystem it realizes monetary policy using the tools of the European Central Bank. The Eurosystem makes decisions about three key interest rates. First, there is the interest rate on the main refinancing operations and within standing facilities there are two interest rates; the rate on the deposit facility and the rate on the marginal lending facility. Standing facilities aim to provide and absorb overnight liquidity, signal the general monetary policy stance and bound overnight market interest rates (ECB, 2012).

In accordance with the minimum required reserves, which are the instrument of the ECB monetary policy, we have chosen the reserve coefficient on overnight deposits, deposits with agreed maturity or period of notice up to 2 years, debt securities issued with maturity up to 2 years and money market paper.

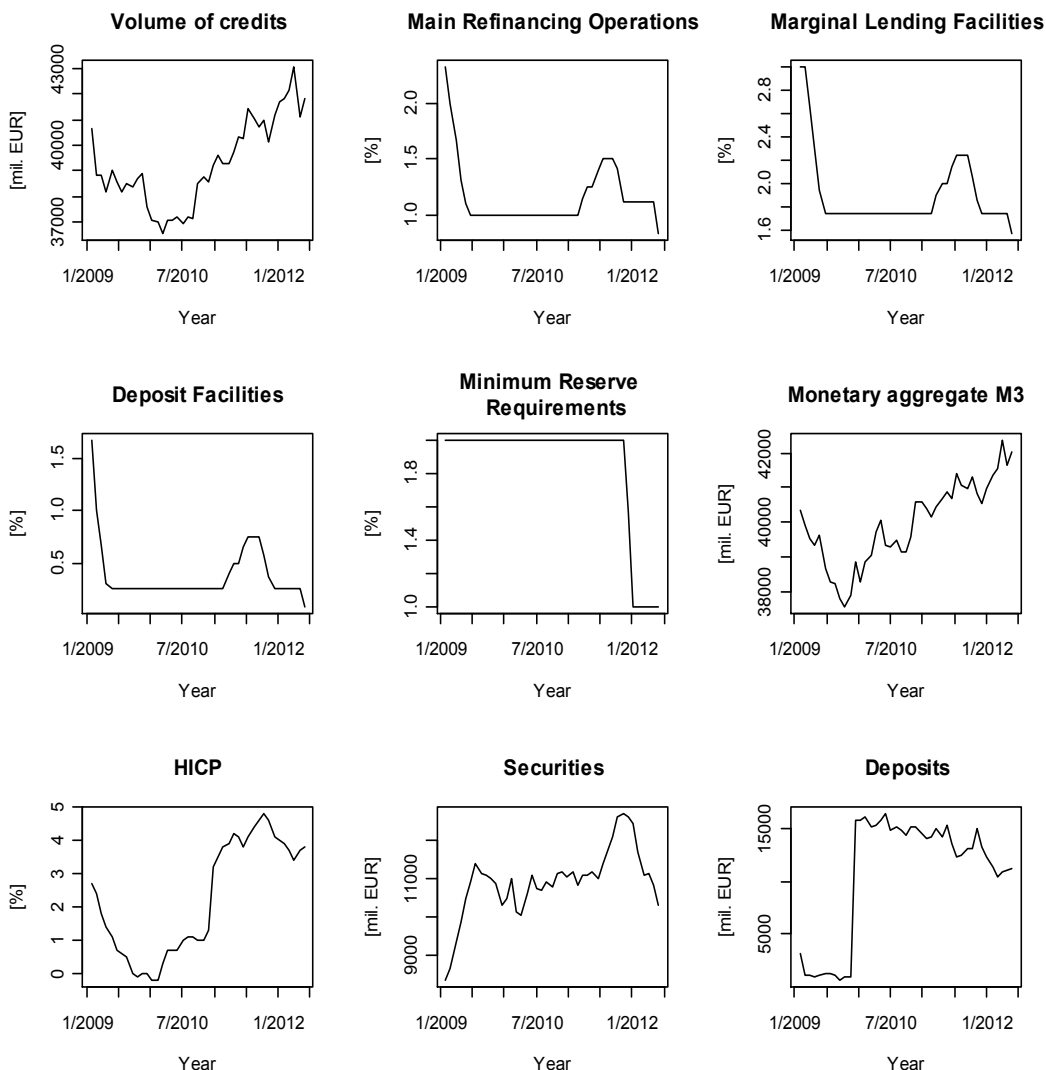
The next selected factor influencing the credit activity is the monetary aggregate M3, also called "broad money", which the ECB can use for managing the liquidity situation in the market. According to the Guideline of the European Central Bank for money and banking statistics (2000), the monetary aggregate M3 comprises the sum of currency in circulation and overnight deposits, deposits with an agreed maturity of up to two years, deposits redeemable at notice of up to three months, repurchase agreements, money market fund shares as well as units and debt securities up to two years.

The Harmonized index of consumer prices (HICP), the explanatory variable, assesses price stability, which represents the main target of the ECB.

Using other operations the Eurosystem affects the liquidity situation in the market and consequently credit availability. Within these operations we have selected securities on the asset side of the balance sheet of the NBS emitted by the residents of the eurozone and deposits accepted from the residents of the eurozone in the balance sheet of the NBS.

Graphical analysis of the described variables and their basic descriptive statistic are depicted in Image 1 and Chart 1.

Image No. 1: Graphical analysis of model variables



Source: Statistics of the National bank of Slovakia and the European Central Bank

Chart 1: Descriptive statistics of model variables¹

	Number of observations	Mean	Standard Deviation	Variance	Median	Minimum	Maximum
VC	43	39256	1690.06	2856311	38869.98	36566.94	43013.62
MRO	43	1.1623	0.2902	0.0842	1	0.83	2.33
MLF	43	1.9125	0.32328	0.1045	1.75	1.58	3
DF	43	0.3769	0.2788	0.0778	0.25	0.08	1.67
MRR	43	1.8504	0.3526	0.1243	2	1	2
MA	43	39961	1199.2	1438255	40048	37558	42347
HICP	43	2.2139	1.7079	2.9169	1.8	-0.2	4.8
S	43	10929	871.57	759641.5	11008	8378	12655
D	43	10743	5839.7	34103221	13253	639	16405

Source: own calculations

Methodology

In order to estimate the relationship between monetary policy and credit operations of commercial banks in the Slovak Republic, the linear regression was used.

The model of the linear regression has the general form (Baltagi, 2008, Kennedy, 2008, Lejnarová, Ráčková, Zouhar, 2009) :

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik} + u_i \quad (1)$$

where y is the response variable, $x_1, x_2, \dots, x_k$ represent explanatory variables, $\beta_j, j = 0, \dots, k$ are unknown parameters, the so called regression coefficients. They can be interpreted as the expected change in y caused by the increase of x by 1 unit assuming no changes in other regressors $x_i, i = 1, \dots, k, i \neq j$. ε_i is a random variable, the so called error term.

Second part of our analysis is devoted to the prognosis of the variable volume of credit which has been realized using the ARIMA Method (Cryer, 2008, Rublíková, Prihodová, 2008 Shumway, 2006). ARIMA (p, d, q) is based on the d – multiple differencing.

If the differencing process is denoted as D_t , then

$$D_t = \nabla^d x_t = (1 - B)^d x_t \quad (2)$$

where $(1 - B)$ is an operator of backward difference, d is a number of differences and x_t is a non-stationary time series.

¹ VC means the total volume of credits, MRO - the interest rate on the main refinancing operations, MLF - the rate on the marginal lending facilities, DF - the rate on deposit facilities, MRR - minimum reserve requirements, MA - monetary aggregate M3, HICP - Harmonized index of consumer prices, S - securities, D – deposits.

So ARIMA (p, d, q) has the following form:

$$\phi(B)(1-B)^d x_t = \theta(B)w_t \quad (3)$$

If $E(\nabla^d x_t) = \mu$, the model is written as:

$$W_t = \nabla^d x_t = \alpha + (1-B)^d x_t \quad (4)$$

The ARIMA model includes the AR and MA processes. The autoregressive model of order p or AR(p) is based on the idea that the current value of the time series, x_t , can be explained as a function of p past values $x_{t-1}, x_{t-2}, \dots, x_{t-p}$, where p determines the number of lags necessary to forecast the current value. The model has the following form:

$$x_t = \alpha + \phi_t + \phi_1 x_{t-1} + \phi_2 x_{t-2} + \dots + \phi_p x_{t-p} + u_t \quad (5)$$

where x_t is a stationary time series, α is a drift, ϕ_t is an intercept, $\phi_1, \phi_2, \dots, \phi_p$ are constants ($\phi_p \neq 0$) and u_t is a residual.

The moving average model of order q or MA(q) assumes the white noise and is defined as follows:

$$x_t = u_t + \phi_1 u_{t-1} + \phi_2 u_{t-2} + \dots + \phi_q u_{t-q} \quad (6)$$

where q is the number of lags in the moving average and $\phi_1, \phi_2, \dots, \phi_q$ are parameters ($\phi_q \neq 0$).

In order to forecast the development of the time series, the linear process in period (T+h) can be defined as follows:

$$y_{T+h} = \alpha_{T+h} + \omega_1 \alpha_{T+h-1} + \dots + \omega_{h-1} \alpha_{T+1} + \omega_h \alpha_T + \omega_{h+1} \alpha_{T-1} + \dots :$$

$$\omega(B) \alpha_{T+h}$$

In the period, in which we compute the prognosis y_{T+h} for $h \geq 1$, we know the values of the time series $y_t, y_{t-1}, \dots$, thus the prediction of the future value $y_{(T+h)}$ will be their linear combination.

The goal of forecasting is to predict future values of time series x_{T+h} , $h = 1, 2, \dots$ based on the data collected to the present time, $x = (x_T, x_{T-1}, x_{T-2}, \dots, x_1)$. In this paper we assume the model parameters are known and time series x_t do not have to be stationary because of using ARIMA model.

Results

We present the results in two main sections. In the first section, we analyze the impact of monetary policy decision-making of the ECB on the credit operations in the Slovak Republic. We test whether representative variables have a unit root and whether their differencing is needed. Moreover, we estimate the significant model using the Ordinary Least Squares (OLS) method. Subsequently, we test whether the model fulfills the Gauss-Markov assumptions and is specified correctly. In the second part, we forecast future development of the credit operations using ARIMA method. We determine the value of the AR, I and MA processes and identify the best ARIMA model according to AIC and BIC. In the next

step we check and detect the suitability of the model. Finally, we predict the development of the volume of credits for the next 10 periods.

Time series in a linear model have to fulfill the requirement of stationarity, therefore, it is necessary to test whether model variables have a unit root. The Augmented Dickey Fuller test (ADF) was chosen to test the data stationarity. In case of all analyzed variables, the alternative hypothesis of stationarity has to be rejected at the 5 % level of significance, thus we consider that a unit root is present (See Chart 2).

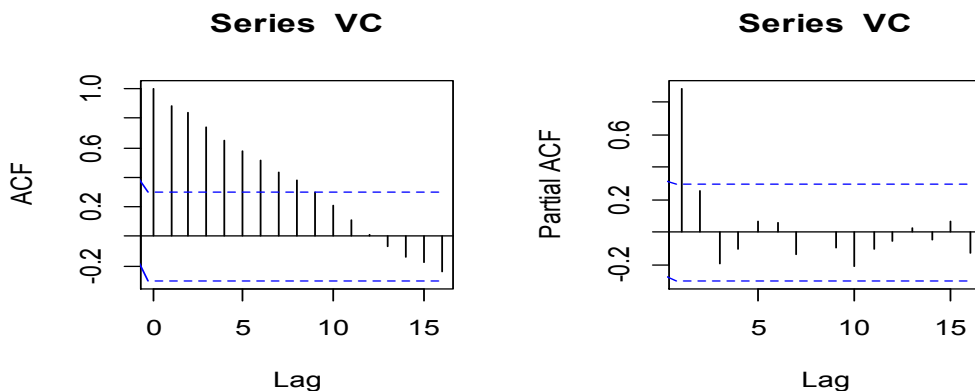
Chart 2: ADF Test of stationarity (without drift and trend)²

	VC	MRO	MLF	DF	MRR
p-value	0.748	0.2085	0.3153	0.1783	0.2402
	MA	HICP	S	D	
p-value	0.8268	0.6077	0.7379	0.5565	

Source: own calculations

This conclusion has also been confirmed by following graphical analysis (Image 2).

Image No. 2: Autocorrelation function and partial autocorrelation function of the response variable



Source: own calculations

In order to eliminate the presence of a unit root, we have used first differences. The ADF test applied on the differentiated data has brought the results that are presented in Chart 3.

Chart 3: ADF Test of stationarity (without constant and trend)

	VC	MRO	MLF	DF	MRR
p-value	0,0000	0,0039	0,0001	0,0000	0,0000

² Optimal number of lags was determined by the AIC.

	MA	HICP	S	D	
p-value	0,0000	0,0000	0,0079	0,0000	

Source: own calculations

The results in Chart 3 show that we cannot reject the alternative hypothesis of the ADF test at 5 % significance level. Thus, all analyzed variables are stationary in their first difference.

After appropriately transforming the data, the next step is to estimate the model comprised of the significant explanatory variables. The results in Chart 4 prove that independent variables, the interest rate on the main refinancing operations, the minimum reserve requirement, HICP and the securities are statistically insignificant at the 5 % level of significance. Subsequently, we excluded all insignificant variables gradually and obtained the model in the following form:

$$(VC_t - VC_{t-1}) = \beta_0 + \beta_1(MLF_t - MLF_{t-1}) + \beta_2(DF_t - DF_{t-1}) + \beta_3(MA_t - MA_{t-1}) + \beta_4 \quad (8)$$

where $VC_t - VC_{t-1}$ represents the intermonth changes of the dependent variable (the volume of credits), $MLF_t - MLF_{t-1}$, $DF_t - DF_{t-1}$, $MA_t - MA_{t-1}$ and $D_t - D_{t-1}$ represent the intermonth changes of the independent variables (the interest rate on MLF, the interest rate on DF, the aggregate M3 and the deposits respectively). Estimated coefficients of the mentioned independent variables are statistically significant at the 1 % significance level.

Chart 4: Test of significance of independent variables

	Estimate	Std. Error	t value	p value
Intercept	4.554e+01	8.223e+01	0.554	0.583025
MRO_t-MRO_{t-1}	3.866 e+02	2.693 e+03	0.144	0.886754
MLF_t-MLF_{t-1}	-2.358e+03	8.484e+02	-2.779	0.008519 **
DF_t-DF_{t-1}	2.589e+03	6.945e+02	3.728	0.000643 ***
MRR_t-MRR_{t-1}	-9.337 e+02	8.206 e+02	-1.138	0.263415
MA_t-MA_{t-1}	7.173e-01	1.815e-01	3.951	0.000336 ***
HICP_t-HICP_{t-1}	-5.051 e+01	2.240 e+02	-0.225	0.823013
S_t-S_{t-1}	0.1179	0.2378	0.496	0.623340
D_t-D_{t-1}	-1.401e-01	3.364e-02	-4.163	0.000180 ***
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Multiple R-squared: 0.5206				
Adjusted R-squared: 0.4688				

Source: own calculations

The model was subjected to the Jarque - Bera test of normality of residuals, the Breusch-Pagan test of heteroscedasticity of residuals, the Durbin-Watson test of autocorrelation of residuals and test of multicollinearity realized using the Variation Inflation Factor. We also conducted the RESET test to confirm that the model was specified correctly. The estimated model fulfills all requirements of a linear model based on the above mentioned tests (See Chart 5).

Chart 5: Testing assumptions of the linear regression

Normality of residuals	Jarque - Bera Normality Test – p value	<i>0.153</i>
Heteroscedasticity of residuals	Breusch-Pagan test – p value	<i>0.8712</i>
Autocorrelation of residuals	Durbin-Watson test – p value	<i>0.861</i>
Multicollinearity (VIF value)	$DF_t - DF_{t-1}$	<i>1.565635</i>
	$MA_t - MA_{t-1}$	<i>1.182936</i>
	$D_t - D_{t-1}$	<i>1.125877</i>
	$MLF_t - MLF_{t-1}$	<i>1.558453</i>
Specification of the model	RESET test – p value	<i>0.3453</i>

Source: own calculations

Based on the estimated values of the regression coefficients in Chart 4 the key interest rate on marginal lending facilities and the key interest rate on deposit facilities explain an important part of the credit activity in the Slovak Republic. The increase in the interest rate on MLF difference by 1 will lead to the decrease in the difference of the volume of credits by 2 358 mil. EUR, thus there is a negative correlation between variables. The higher interest rate on MLF causes a lower interest of the commercial banks in overnight liquidity from the central bank. Consequently, the commercial banks have less financial resources for granting of credits.

In case of the interest rate on deposit facilities, the observed conclusion differs. This key interest rate is positively correlated with credit growth. When this explanatory variable rises, the commercial banks have a bigger interest to make overnight deposits in the central bank. Then the banks obtain back not only a deposit, but also interest, so they have more money for clients.

The development of the money supply expressed in terms of differences has positive influence on the difference of the volume of credit. The results support the theory claiming that the real economy can be affected by monetary policy in the short run. Monetary easing realized through the rise in the monetary aggregate M3 can stimulate the investment and lead to increasing amount of the granted credits.

The increase in the deposits' difference by 1 will lead to the decrease in the difference of the volume of credits by 0,14 mil. EUR. It means, the more financial resources the commercial banks have in the NBS, the less credits they can offer.

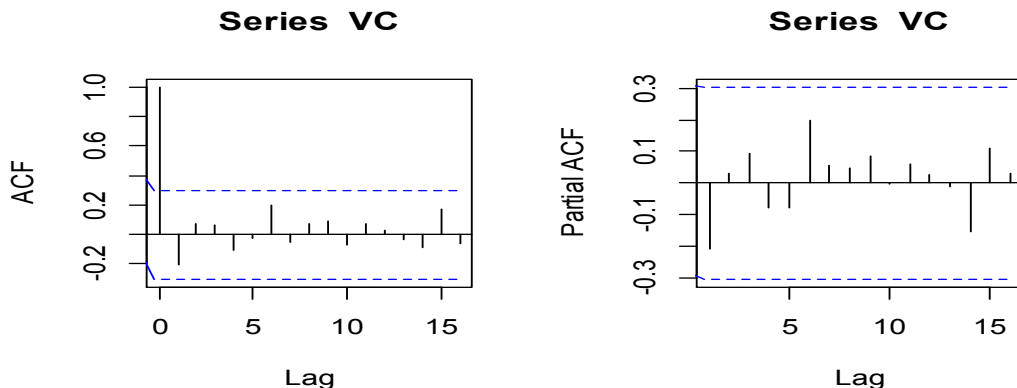
In order to predict the future development of the volume of credits, the ARIMA method was chosen. The Autoregressive Integrated Moving Average was applied to the non – stationary time series. Using the Akaike information criterion and the Swartz – Bayesian information criterion we have identified the most suitable model ARIMA (0, 1, 0). In the next step we have performed the Anderson-Darling test of normality of residuals, the Goldfeld-Quandt test of homoscedasticity and test of autocorrelation of residuals using the autocorrelation function and the partial autocorrelation function. The resulting model fulfills all the requirements of an ARIMA model based on the mentioned tests (See Chart 6 and Image 3).

Chart 6: Testing assumptions of the ARIMA model

Normality test of residuals	Anderson-Darling normality test – p value	<i>0.1082</i>
Homoscedasticity of residuals	Goldfeld-Quandt test – p value	<i>0.8155</i>

Source: own calculations

Image No. 3: Autocorrelation function and partial autocorrelation function of the volume of credit in its first differences



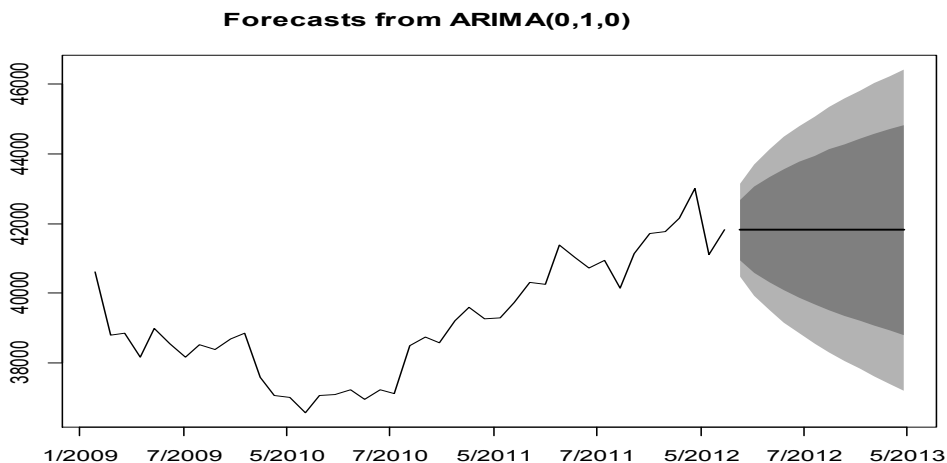
After checking the estimated model, we have realized the forecasting of the future development of the credit activity for the next 10 periods. The results are presented in Chart 7 and in Image 4.

Chart 7: Forecasting the volume of credits

Period	Forecast	Lo 80	Hi 80	Lo 95	Hi 95
August 2012	41749.94	40869.61	42630.27	40403.59	43096.29
September 2012	41749.94	40617.09	42882.79	40017.40	43482.48
October 2012	41749.94	40411.36	43088.52	39702.76	43797.12
November 2012	41749.94	40233.26	43266.63	39430.37	44069.51
December 2012	41749.94	40073.94	43425.94	39186.72	44313.16
January 2013	41749.94	39928.49	43571.39	38964.27	44535.61
February 2013	41749.94	39793.80	43706.09	38758.28	44741.61
March 2013	41749.94	39667.78	43832.10	38565.55	44934.34
April 2013	41749.94	39548.94	43950.94	38383.80	45116.08
May 2013	41749.94	39436.18	44063.70	38211.35	45288.53

Source: own calculations

Image No. 4: Forecasting the volume of credits



We assume that the credits will develop until May 2013 at the 80 % level of reliability in the amount between 39 436,18 and 44 063,70 mil. EUR and at the 95 % reliability level in the amount between 38 211,35 and 45 288,53 mil. EUR.

Conclusion

The development of the credit activity is a very important indicator in the time of financial and economic crises which still did not reach an end. Many experts pay a special attention to the potential factors which can influence the amount of granted credit in an economy and the future development of credit activity.

In this paper we have focused on the monetary policy decision-making and have explored its impact on the credit activity in the period from January 2009 to July 2012 in Slovakia. In order to estimate the relationship between monetary policy and the total volume of granted credits the multiple linear regression was applied. Using the Autoregressive Moving Average method we have forecasted the future development of the credit activity.

We have proved the statistical significant relationship between examined variables in the model. The analytical part of this study has shown that the credit activity depends on the interest rate on marginal lending facilities, the interest rate on deposit facilities, the monetary aggregate M3 and the deposits. The estimated model has indicated that the key interest rate on marginal lending facilities and the key interest rate on deposit facilities explain an important part of credit activity.

The results of the ARIMA have shown that the total volume of credits at the 95 % reliability level should move between 38 211,35 and 45 288,53 mil. EUR until May 2013. Based on the results of this study monetary policy does influence the total volume of granted credits in Slovakia.

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Multiple benefits of modern education

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Abstract

Knowledge and the implementation of innovations are considered as the key factor of success that can ensure economic growth for individuals, companies even for whole countries. It is not different in the school environment either. According to the development and current trends it is necessary for educational institutes not only to be „educating“ but also to be „learning“ to provide modern education. We developed an innovative manner of education in the subject Informatics II based on modelling and simulation at the Faculty of Economics, Technical University of Košice. The paper deals with the experience in this modern way of teaching.

Key words: education, creativity, critical thinking

1. INTRODUCTION

Information society starts to transform into a different, more organized form, so called knowledge society. From the development so far we can expect, that this form will be characterized by an urge in making the information more and more available for public, by using not only information but also knowledge stored and processed by information technology according to users' requirements. Computer technology will obviously dominate even in discoveries, formulation and gaining of new knowledge. Currently we have an opportunity to use such computer technology, memory structures and manipulation procedures with these structures that allow us to effectively represent knowledge in computer memory and use these representations in processes for problem solving [7].

These changes cause significant social impacts. Institutions, organizations, enterprises focus more on getting employees who excel in their knowledge and creative thinking. Today such intellectually exceptional people can do than they could than any time in the past create excellent working businesses. As a good example can serve Intel, established by Robert Noyce and Gordon E. Moor, or Microsoft, founded by Bill Gates and Paul Allen. What make these people special? Certainly they know a lot. However it doesn't need to be wide knowledge gained by long studies. Anyone who invests time and means into his own education can get knowledge/learned something. It is also needed to be able to change knowledge into an effective work. That is linked to a way of „system thinking“ which makes us see things in relations.

Dynamic changes in society and labour market require modern, flexible, innovative and creative possibilities of education. It is necessary, especially for higher education institutions, to search for the

new possibilities of improving the skills of specialists and professionals changing personal specializations, developing individual abilities and acquiring high level professional competences. Experience gained by the major part of countries shows that the development of economy and a rise in living standards directly depend on knowledge generation and the proper usage of information that help with educating society, creating new scientific products and improving technologies. The system of university education is one of the basic parts of education, culture, teaching, social welfare and economic development in every country. University education has been accepted as the foundation for public priority, economic prosperity and life quality. The institutions of university education are capable of training an educated, intelligent and knowledgeable society and raising national intellectual and creative potential. [8]

2. NEW MANNER OF EDUCATION

In order to prepare our graduates for new economic environment and labour market requirements, we decided to include new manner of education into basic informatics course. Except of the traditional methods of teaching, as lectures and practices, we used also e-learning, learning-by-doing and project method. Using these modern methods of teaching/learning we try to develop students' logical and critical thinking, we want to support creativity and ability to solve problems by own. The students are taking part in virtual projects of building information systems (IS) of various types of firms, companies and institutions. The projects consist of the main goals determination and user requirements description of new IS.

We integrate modelling of business processes into the education as the part of students' project. We consider problem oriented project education to be a suitable one. When students actively participate in learning process they not only test their understanding of the subject matter of the course, but further develop their thinking, communication and analytical skills. Using e-learning and electronic communication via LMS (Learning Management System) Moodle we make learning more effective. Current structure of subject Informatics II is on Figure 1.

Subject Informatics II	Traditional way of teaching - lectures and practices				
	New manner of teaching – e-learning, learning-by-doing, project creation, modeling and simulation				
	Project proposal	Learning in the field of IS, modeling of business processess	Project first draft	Consultation, using LMS Moodle, e-learnig	Project final version

Figure 1. Current structure of subject Informatics II

We want students to use modern standards, notation and tool for effective work in the area of business process modelling – ARIS Express, accessible on the web page <http://www.ariscommunity.com/aris-express> [1], see Figure 2. This free software tool is an excellent environment with a wide functionality for work in the area of business and organization modelling as we can see in Figure 3.

Working with this application is a great chance for students to extend their information competencies and modelling skills. They can use “Organizational chart” to present the organizational structures, to illustrate the relationships between organizational units, roles and persons. “Process landscape” gives an overview of the value-added processes in a company. It also serves to show hierarchies. “Business

process” describes the process as a sequence of events and activities. IT systems, organizational element or data may be added. “Data model” illustrates data structures by means of data units – entities, including their relationships and properties. “BPMN diagram” enables modelling of processes according to the Business Process Modelling Notation (BPMN 2.0) – also across organizations. “General diagram” provides a selection of graphic elements to which any required meaning can be assigned. [1]



Figure 2. ARIS Express webpage, [1]



Figure 3. ARIS Express 2.4 Model Types, [1]

During the teaching process we record and evaluate information, knowledge and experience and according them we adapt present scope, content and methods. We can summarize our experience:

- this manner of the education is interesting for both students and teachers;
- there is possibility of real using e-learning, learning-by-doing, inter-subjects connections, however this way of education especially preparation for teaching is more time demanding;
- students accepted this topic and methods very well, many examples of common life can be used, definitions of many terms in the field of modelling and information systems are often only the precise definition or explanation of the common terms;
- students need not much theoretical knowledge to work out simply models and project themselves;
- students can use their own view of solving problems, their creativity and knowledge, this themes and attitude helps to develop logical and critical thinking of the students;
- teaching Informatics II via modelling and simulation doesn't depend on the technical equipment of the school, doesn't require any special equipment.

3. BENEFITS OF MODERN EDUCATION

As well as in the economic sphere also in the school environment it is necessary to count with a minimal stability and certainty. The only thing that is certain in today's world is a permanent change. New skills for knowledge society are not only classical literacy (reading, writing, counting), but also digital literacy and good creative, logical and critical thinking. Given the wide availability of Internet and other ICT tools are these technologies become a key instrument for modern form of education. Different learning environments, tools, communities and pedagogies, supported by ICT, are currently available for every single learner instead of textbooks, and blackboards as the main tools and classroom teaching as the main form of education. For students it is more motivating, if they have to solve problems they encounter every day and in that case a variety of used media can support students' learning and provide a deeper knowledge and understanding of content and concepts.

The various ICT tools can play a role of assistant in process of developing the creativity, because they help to increase the speed of a creativity process (providing partially formed ideas, associations, idea visualisations, different alternatives or applications) and at the same time they usually enables to do step-back to earlier ideas, re-visit and re-assess what they have done, discard unsatisfactory outcomes and unsuccessful attempts.

We consider following facts to be the most significant benefits in our modern way of education:

- support of development and usage students' creativity;
- development of logical and critical thinking and system approach;
- modern ICT tool using for learning and business process modelling;

3.1 Importance of creativity development

The current time period is often referred to as to the age of creativity. Success of firms and organizations depends on creativity and innovations. Today it is necessary to use creativity potentials of all members of organizations and stimulate and develop it by providing an organizational support for creative and innovative behaviour of individuals and teams. However many professional activities are oriented to accuracy and perfection. We would probably choose experienced doctor who is perfectionist that to creative or we would be more comfortable in a plane if we knew the pilot is reliable rather than creative. Creative individuals are needed in right situations and positions. [7]

The important precondition for the people and companies, in order to be able to provide new ideas, products, services, i.e. to be innovative, is creativity. Creativity is a complex phenomenon, which is not simple to define. Structure of creativity is formed by personality, creative process, creative product and procreative environment. Most authors define creativity as a process of creating something that is original and valuable.

According to [4], creativity is a multidimensional phenomenon that manifests itself in many fields and contexts, from arts and crafts to design, science, research and entrepreneurship. It is regarded as a cognitive ability, but it is not the same as intelligence. It involves the ability to synthesize and combine data and information, but also requires confidence to take risks. In general, we can say, that creativity is the process of having original ideas that have value.

The history of our society is closely related to the permanent development of new forms of satisfying old and new needs. This development implies a creative process which leads to the permanent creation of new product and services. The understanding of principles of our society as a permanent process of destruction and creative re-combination of production factors is based on the work of the economist Joseph Schumpeter. For example he defines the entrepreneur as someone who carries out new combinations in five different cases [10], [11]:

- introduction of a new good, that is one with consumers are not yet familiar, or a new quality of a good;
- introduction of a new method of production;
- opening of a new market;
- conquest of a new source of raw materials or half-manufactured goods, and improved handling and transport of materials and goods;
- implementation of any new form of business organization in any industry, like the creation of department stores, or of a monopoly position, or the breaking up of a monopoly position.

Creative processes and stable routines have to be balanced in order to manage change, taking it as a chance, and harvesting the rewards. Not only entrepreneurial attentiveness and creativity are necessary to maintain the ability of quick reaction. In the late 1990s, the insight grew that this implied also the companies' access to the knowledge and creativity of the employees. The stimulation of the intellectual and creative potential of the employees and its systematic management was the aim of "knowledge management". This was a label for all attempts to collect, store, and redistribute the individual knowledge by means of ICT and transform into company-owned knowledge. "Knowledge management" or "idea management" were compared to treasure seeking: The belief was that the creative ideas of the employees only had to be collected and to transformed in usable process routines. Although the enthusiasm about idea management has decreased since some years, many tools and concepts of the general approach have survived in practice.

3.2 Development of system approach and critical thinking

As we can read in [9] a system is a set of interrelated, interacting components that function together as an entity to produce predicable end result. A business is a system composed of people, facilities, equipment, materials, and methods of work that function to provide goods or services. Components of a system can be seen as subsystems. The organizational structure of a business represents a formal recognition by its management of the subsystems from which it is composed. An organizational chart identifies these subsystems and shows their relationships. For a system function effectively, all its components should generate and communicate information. An organization is seen as a hierarchy with functions partitioned into subsystems that pursue assigned of the organization's goals.

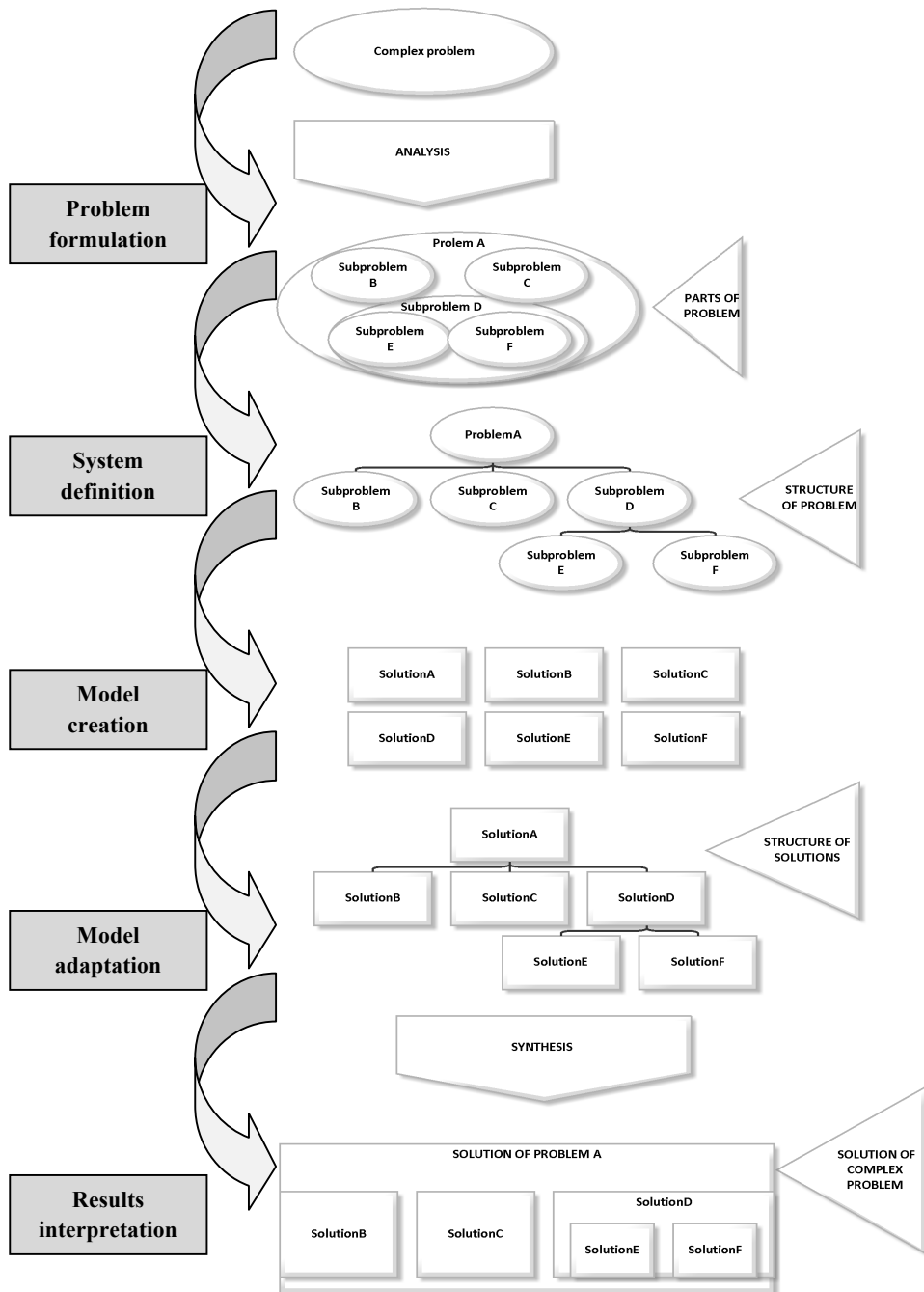


Figure 4. Application of system approach, analysis and synthesis in students' project creation, [9]

The system approach is a way of identifying and viewing component parts and functions as integral elements of a whole system. We consider it as very important part and valuable tool in all kind of problem solving procedure. That is why we try to use it in our manner of education as it is presented at Figure 4.

Critical thinking is a complex process of deliberation which involves a wide range of skills and attitudes. It includes, according to [2], identifying other people's positions, arguments and conclusions; evaluating the evidence for alternative points of view; weighing up opposing arguments and evidence fairly; being able to read between the lines, seeing behind surfaces, and identifying false or unfair assumptions; recognizing techniques used to make certain positions more appealing than others, such as false logic and persuasive devices; reflecting on issues in a structured way, bringing logic and insight to bear; drawing conclusions about whether arguments are valid and justifiable, based on good evidence and sensible assumptions; synthesizing information: drawing together your judgments of the evidence, synthesizing these to form your own new position; presenting a point of view in a structured, clear, well-reasoned way that convinces others.

Skills in critical thinking bring precision to the way you think and work. You will find that practice in critical thinking helps to be more accurate and specific in noting what is relevant and what is not. The skills are following:

- Observation
- Reasoning
- Decision-making
- Analysis
- Judgment
- Persuasion

are useful to problem solving and to project management, bringing greater precision and accuracy to different parts of a task. [2]

3.3 Usage of modern ICT tools

We have found, that the knowledge and abilities everybody must possess in order to work effectively and succeed in knowledge economy, have been dramatically redefined. Especially it can be seen in the field of ICT implementation. [6] The innovation potential of ICT has not been exhausted yet, because developers and visioners can still find new possibilities, products and services how to use ICT in all fields of human life. As we can see in [5], big data, HTML 5, the wireless device power, private clouds and applications stores, activity streams, Internet TV, NFC payment, cloud computing and media tablets are fastest growing technology. Some other technologies are now as a new trend - BYOD (Bring Your Own Device - bring your own equipment to working environment), 3D printing, analysis of social networks, and complex-events processing. Based on the Gartners' analysis of last Hype curve can be highlighted several expected trends in the field of ICT:

- any function on any device, anywhere and anytime;
- smarter things - as mobile robots, the Internet of Things, big data, wireless energy, machine-to-machine communication services, mesh networks sensors, home health monitoring;
- Big data, global computing power at low prices – the world presented by almost endless analytical understanding, computational power and continuously and effectively improving cost of it. In such a world, businesses can better understand their customers and effectively prevent fraud.
- Human communication technologies – technologies, which communicate with people and vice versa by much more human, more natural;
- Future of payment - no cash and all transactions are electronic, what helps companies to trace and increase efficiency of realised payments, and customers increase some comfort and safety of payments;

4. CONCLUSION

These days education and training are considered to be investments for states/nations, entrepreneurs and individuals. The educating system cannot just reflect current knowledge but it also has to anticipate the development from the view of contents and quality. According to [3], an important process is to introduce the achieved knowledge into the real life. The development of human's capital together with social capital is a key factor for building and inclusive, sustainable economic environment.

Application of modern methods, forms and content of education has multiple benefits. It helps us to create an environment in which students can without any problems use available knowledge with a high added value and in which exists possibility to support development and usage of creativity and critical thinking.

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