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**EFFICIENT MANAGEMENT OF SUPPLY CHAIN IN ACHIEVING A
SIGNIFICANT COMPETITIVE ADVANTAGE IN THE MARKET**

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ABSTRACT

The issue treated in this paper is the latest trends in the supply chains, due to new technological knowledge, as well as globalization. Instead of local and/or national focus, companies direct towards global market and changes in transport prices, communication, materials, human resources, etc., creating new ideas, parts or products, wherever the need emerges. Through a case studies the paper has explored the management of (integrated) supply chains, as a way of synchronizing the processes of their own company and suppliers and connects the flow of materials, services and information to the requirements of consumers and trough the empirical research in Republic of Macedonia the paper has explored constantly work on modifying and development of new supply chains and those that will ensure efficiency and effectiveness.

The aim of this paper is to highlight the importance of supply chain management which has strategic significance and implications, in order to achieve a significant competitive advantage in the market⁴. Scientific contribution is seen in the statements and analysis for high correlation between overall consumer's satisfaction and total results (performance) of products or services that are offered and they are improved, modified and innovated through the management of (integrated) supply chain and its built-in tools. The results of the comparable research can be used as a basis for significant decisions to improve overall customer satisfaction through integrated supply chains and its built-in tools.

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⁴Wilson et al., (2008, p. 78); Zeithaml et al. (2006, p. 106-107); Kotler, P. and Keller, K. L. (2009)

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KEYWORDS: integrated supply chains, functional supply markets, Warehouse Management System (WMS), special strategies, RFID technology

JEL CLASSIFICATION: M30

1. INTRODUCTION

Nowadays, with the development of digital technologies, quite informed consumers expect companies to ensure maximum enjoyment and pleasure. Consumers are those who estimate which offer of the companies will provide the greatest value, whether it meets consumers' expectations, how it affects their satisfaction as well as likelihood that consumers will buy that product or service again.

Modern business implies an existence of supply chain, which owns flow of knowledge, especially in prototypes, new products etc. Supply chain is a lifecycle process that supports physical, information, financial flows and flows of knowledge about the movement of goods and services from the supplier to the end consumer.⁵ It can be seen as a dynamic, open system of relations between suppliers of materials and/or services and companies that transform materials in products and/or services delivered to customers. Basically, here is treated the concept of large vertical coordination among partners to buy and sell, established on trust and strong long-term relations. In this context, supply chains play a great role because they treat activities of consumer satisfaction on one hand, and on the other they are constantly looking for new ways to add value to the business market, in order to facilitate the purchase of goods and services.

The paper begins with presenting theoretical background and emphasizes new theoretical aspects, using quantitative and qualitative data, which indicate the practical aspects of the subject matter. Through comparative research, as a methodology of the study followed by results, will be presented meaningful solutions already implemented to improve overall customer satisfaction, across all intermediaries in the horizontal and vertical connection of the company. For research purposes in this paper are used valid

⁵ Ayers, BA, (2002)

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information and data in order to show and prove the necessity of more efficient management of the supply chain in achieving a significant competitive advantage on the market. At the end of this paper conclusions and recommendations for future will be provided.

2. SUPPLY CHAIN AS A CATALYST IN RELATIONS BETWEEN COMPANIES AND CONSUMERS

Business market whose main goal is to improve the efficiency and effectiveness, not only for companies as business suppliers, but also for consumers as a business customers, pays great attention to foster so called "*real business relations*"⁶, of all interrelated entities in the supply chain. Modern business implies an existence of supply chain, present by Ayers, BA, (2002, 5), as collaboration between manufacturers and suppliers or sub-suppliers, aiming at developing innovative products with improved performance and stability, effective and efficient sources of supply. Basically, here is treated the concept of large vertical coordination among partners to buy and sell, established on trust and strong long-term relations. Therefore, respecting the legislation should be emphasis on human business conduct of integrated supply chains. Code of ethics must continually innovate to respond to new situations, because thanks to the Internet the risk of the public is big. Corporate social responsibility is a part of the latest trends in management.

Customers and consumers increasingly demand information about the integrated supply chains results, about its social responsibility and its environmental dimension.

In practice supply chains can be extremely complicated. Many enterprises have hundreds or even thousands of suppliers, suppliers have their sub-suppliers, thereby providing a supply chain. Enterprises can have their own distribution centers, retail outlets, can directly deliver goods etc. When you understand the complexity of the supply chain, it becomes clear and value chain⁷.

⁶ see <http://www.business-sweden.se/en/about-us/Seminars-and-events/EventsSeminars/Baltic-Business-Forum-2014/>

⁷ Porter, M., (2001, p.51).

2.1 Modern development and management of integrated supply chains

Supply chain management (SCM) is the process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible. Supply chain management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point-of-origin to point-of-consumption⁸ The sub areas comprising a supply chain include: Forecasting/Planning, Purchasing/Procurement, Logistics, Operations, Inventory Management, Transport, Warehousing, Distribution, Customer Service.⁹

Management of the supply chain sometimes differs in terms of external and internal parts of the chain. Control over the external chain is smaller. Therefore, enterprises plan their operations, so that there are almost always alternative flows, when it comes to a disorder or disruption of cooperation. External and internal termination of the supply chain, leads to harm that can be caused by unsuccessful cooperation between the external and internal chain or because of poorly performed operations in the internal chain. Due to the large number of participants (entities), as well as for the separate operations it would be unrealistic to expect that all interruptions in the chain could be removed¹⁰.

However, for managers is a challenge to remove as many as they can interruptions. "Companies have invested in processes, tools and resources to achieve efficiency and effectiveness through their supply chains. Many of them have migrated to an integrated planning approach with the objective of increased service level, responsiveness and on-time full delivery while judiciously balancing working capital needs. However, such integrated planning often starts with an assumption that supply chain networks are static and tends towards driving optimization around the same. Since supply chains themselves are dynamic, supply chain network design exercises attempt to make supply chains agile enough to address current changes and future

⁸ see <http://www.supplychainrecruit.com/content/supply-chain-explained-26.htm>,

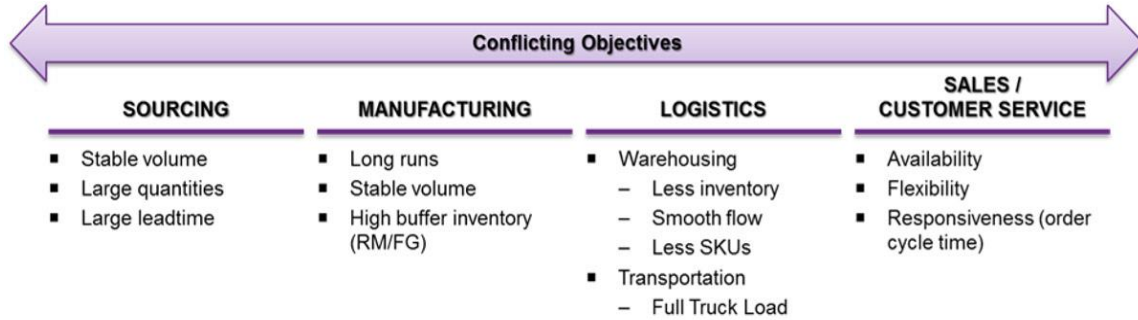
⁹ see <http://www.logisticsit.com/absolutenm/articlefiles/85-Supply%20Chain%20Final.pdf>

¹⁰see (IAI) Istituto Affari Internazionali, (2015)

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uncertainties. Internal Factors: Often, individual (function-specific) objectives and company objectives are not well defined or aligned. Different functions work on their individual objectives, often achieving local optimization while adversely impacting the overall supply chain performance”¹¹,

Figure 1. Conflicting Objectives



Source: Balaji, L.N., Kumar, S., ITC InfoTech (2013).¹²

Companies have realized the importance of supply chain network design exercises but are still unable to make the best use of it. The challenge typically lies in selecting the right approach. Internal factors driving supply chain network design are focused on driving service delivery and working capital optimization across existing networks. On the other hand, external factors also drive significant structural changes.

Supply chain management, represents design, maintenance and management operations of the process chain in order to satisfy final consumer. Managing the flow of materials and services have been traditionally seen as a process performed in three sectors: procurement, sales and distribution¹³, In the area of procurement management process is aimed at providing the required quality and quantity of input factors. Sales management is the process of transformation, in order to ensure adequate products or services supply. Distribution is the process of managing the flow

¹¹ Balaji, president & Kumar.S., vice president, ITC Infotech, (2013) L.N.

¹² Supply chain network design can deliver significant reduction in supply chain costs and improvements in service levels by better aligning supply chain strategies.

¹³<http://www.accaglobal.com/sg/en/student/exam-support-resources/professional-exams-study-resources/p3/technical-articles/value-chains.html>

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of materials from the producer to the consumer, from warehouses to retail, to the final consumer, including warehouse and transportation.

Management of integrated supply chain should include changes in the individual management of business processes from one member of the chain to the integrated activities of several members of the core business processes of the supply chains¹⁴. Today, special strategies in supply chain management, dealing with research on effective integration of business processes in the supply chain in order to improve their overall performance, called re-design of business process, eng. Business process redesign.¹⁵

Integrated supply chain includes forecasting, inventory management, total planning, resource planning. The external part of the integrated chain is focused on relations, communications, interface enabled between the internal supply chain, customers and suppliers. On one hand, the supply chain should be integrated, and on the other hand it has to remain open and flexible enough for entry of new suppliers. Moreover, another problem occurs when buyers and suppliers are not prepared for change and to leave the current way of working and applied processes.

According to Cooper's model¹⁶, managing integrated supply chain consists of three main elements:

- supply chain structure - defining the key members of the supply chain, which will be connected to specific business processes;
- business processes - defining business processes types that will connect the individual members of the supply chain and
- Control components - defining the level of integrated management for each business process.

Each of these elements is directly related to the objectives of the supply chain, the degree of fulfilment of the requirements of the end users, taking into account key

¹⁴ Vorst, van der J., Silva, da C.A., Trienekens, J.H., (2007)

¹⁵ Aćimović S., (2006, p.170).

¹⁶ Ballou, R.H., (2004),

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indicators (*eng. Key performance indicators-KPI*). Well-defined KPI (*KPI compare efficiency and/or effectiveness of the system standard or target/desired value*) set can help identifying the technological backup for key logistics processes and their later use. One good example is SCOR (*eng. Supply Chain Operations Reference*) model, is designed by the Supply Chain Council - an independent, non-profit international association of companies, organizations and professionals in the field of management of supply chains, as an integrated process of planning, procurement, production, delivery, feedback process, *eng. Plan-P, Source-S, Make-M, Deliver-D, Return- R*¹⁷. In addition to these processes, a recent version of the SCOR model includes elements of group support (*eng. Enable-E*) for each of these processes. This group of elements is more focused on the flow of information on the relationship among members of the chain, in order to enable effective planning and implementation of the above key logistics processes.

One of the open questions in the integrated supply chain is the ability to store information^{18,19}. Information should provide data on trends and data from the past, especially in electronic operations. Very quickly shifts from one to another model but at the same time there is a need to preserve knowledge of the previous period.

According to the mentioned above the role and importance of the supply chain management is very important, because companies have success when they deliver quality, i.e. when products or services meet or exceed customers' expectations. According saying previously, the supply chains are complex concept and therefore there are different ways of their points of view and explanation. However, despite the emphasized importance of the concept and its role in the success of organizations, very little empirical work has been devoted to the study of the relationship among delivering of quality of products and services, customer satisfaction and profitability of the company.

¹⁷ Kilibarda, M. J., Zecevic, S. M., (2008)

¹⁸ Joost W. van der Laan, (2010)

¹⁹ see <http://retaileconomics.com/supply-chain-integration/>

2.2. The experience of managing the supply chains in the Balkan countries

This strategy critically examines existing business policy, practices and procedures in the company, performs critical analysis and then make suggestions for redesigning of existing business processes, including redesigning of supply chains. The redesign moving from strategic methods for radical changes or re-engineering of business processes²⁰, to progressive methods of continuous process improvement²¹ has already become a practice in the Balkan countries²². Particularly in Macedonia and Serbia foreign companies and managers is working to transfer the experience of managing the supply chains of their parent companies, such as Us still, BFC Lafarge, Din Philip Morris, Nelt, etc.

In this section the EU countries, particularly Germany, the Ministry of Economy and Energy of Germany - BMWi, as a part of B2B project: German Initiative for finding suppliers in the countries of the Western Balkans (2015)²³ want to actively contribute to increase economic activity in the region and strengthen the European idea. Functional supply markets, reliable network of suppliers and efficient supply chain, which are essential for reducing the high foreign trade deficit in the countries of the region. Sales department issues deliver orders, process claims and objections of customers, gives daily orders for goods and services issues etc. The realization of orders includes the planning of transport from supplier to the enterprise, the enterprise to customers, issue orders for placement of primary goods and services, transport, reloading etc.

In this context, on the regional level, there are initiatives that will improve professional driver's qualifications and training systems. This multinational initiative *SEED* (The South East Europe harmonized qualification of professional drivers) of specialized organizations for road transport and professional training from nine countries in the region of Southeast Europe including Macedonia is by assistance of the

²⁰ (eng. Business process reengineering)

²¹ (eng. Continuous process improvement)

²² Cooper, M.C., Lambert, D.M., Pagh, J.D. (1997, 8-1, p.1-13)

²³ see <http://www.bosniatoday.ba/germany-seeks-suppliers-in-the-western-balkan-countries/>

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European Union²⁴. Nine partners from professional training sector, Macedonia, Belgium, Bosnia and Herzegovina, Serbia, Croatia, France and Kosovo*, according to UN resolution, have joined their resources in order to develop a training programme for drivers and instructors in the region with around 500,000 Euros, provided by the European Commission. The aim is to increase road safety by improving drivers education system, according to harmonized qualification and to reduce the higher rate of traffic accidents casualties compared to other regions of the EU²⁵. These measures in transport policy naturally play an important role in the modern supply chain, as they provide efficient distribution of almost all daily needs. If it is an imperative, to be ensured transport workers that will be 100% equipped with knowledge and skills, then it will provide safe and efficient services, entirely in accordance with the quality standards of the industry.

Warehousing is very important link in the supply chain, especially when there are dislocated plants and distribution centers. It is significant in companies whose core business is retail and wholesale. The advanced *WMS-Warehouse Management System*, and handheld mobile computers give a possibility storage and transport to become more efficient²⁶. These technologies are transforming traditional warehouses in modern and efficient. Based on these technologies, traders can build long-term logistics strategies to develop their businesses.

Software solutions of WMS, as a part of supply chains, optimize operations in warehouses, allowing visibility of operations from order to delivery in real time. WMS provides automated and centralized standard procedures to carry out operations in the warehouse through bar codes and RFID-tags on one side as carriers of information and barcode readers, RFID-readers, mobile computers and wireless networks on the other side as devices that handle information. This system enables management of storage and transfer of goods in warehouses. The ultimate goal of the system is to minimize the cost and shorten the time to carry out the activities.

²⁴ <http://www.seed-project.net/>

²⁵ see SEED Giants vs. U.S. farmers (2013)

²⁶ see <http://www.mhi.org/media/members/75421/130721984634737299.pdf>.

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The effectiveness of WMS implementation is identified through: Elimination of errors and increased efficiency, so-called *Automatic identification-barcode or RFID* and software control procedures, it means *centralized system with a unique database of well-structured logistics data*; Optimizing the use of space - *Grouping of locations*; Traceability - *Monitoring of stored goods, level control inventory and utilization of warehouse space*, which is confirmed by the Macedonian companies in the industry, distribution and retail²⁷.

WMS can be integrated with other systems such as: TMS - *Transport Management System*, the system for managing transport, thereby receiving additional benefits: Planning loading vehicle; Planning delivery tours - merging orders for delivery in one tour for delivery according to tour and vehicle; Planning/alignment of vehicle capacity and tour; LIFO, it means *Last In First Out - What enters last first goes out*, a loading principle and therefore the order of selecting contractor from the buyer. WMS can be integrated with YMS - *Yard Management System*, a yard management system and management system of customer orders and orders to suppliers.

The joint stock company for transport of Macedonian Railway Transport Skopje work on changing of new technologies in operation, with traditional, mostly "*non-electronic*" and "*non-IT*", processes need to be supplemented or completely replaced with appropriate fully automatic or semi-automatic process in one of the major's branch - shipping. Design of RFID technology has been introduced in tracking wagons and goods by the company, and other activities will be enhanced or improved by the introduction of new information technologies. The main element of RFID - *Radio Frequency Identification* technology, is RFID microchip (transponder tag) connected with flattened antenna that together with the chip makes oscillating circuit, which responds to a particular frequency of which is tuned RFID reader. Microchip and reader are so thin, so they can be stick as a label of the object to be detected. This part is

²⁷ see Warehouse Management Innovation Beyond Your Senses, WMS Brochure (2011)

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often called RFID tag. The tag broadcasts information via radio signals that are collected and with the help of computer further processed²⁸.

The role of the man - an operator in this process is minimal because it will run fully automatically. This technology has great advantages in this segment of the supply chain: the mass transport, high security, relatively favourable transportation cost, energy efficiency, low reliance on shipping on weather conditions, low external costs for the protection of labour and environment, current reforms in the railways, employees in railway with their experience and knowledge. If this business plan finishes with foreign investors, interested in Macedonian railway transport, the introduction of RFID technology will provide quality rail transport throughout the Balkan region²⁹, and the company will become a leader in the technological level of the logistics of transporting goods in this region and "starting point" and reference to other companies, which would introduce these or similar technologies.

2.3. Key advantages of the management supply chain

- *Better control of suppliers.* It helps streamlining the negotiation process and contracting. Collaboration with suppliers should be secure and stable. Their choice should be based on their ability to adapt to the needs or be linked to market demand. Creating loyalty is the heart of any business³⁰.

- *Reducing costs and savings in procurement.* Reducing costs and savings in procurement lead to productivity growth, reducing costs for employees in the procurement and reducing dependence on paper documents. It also allows better positioning of the company in relation to the buyer. There are opportunities for giving quantity discounts or other benefits. Reducing costs and savings are reflected in the purchase price. It can be reduced to 15% -35%, depending on the level of integration of the chain.

- *Better documentation.* The use of electronic channels significantly increases the accuracy of monitoring and recording transactions and improves the

²⁸ see Standards for identification of goods in transport, Technical Faculty Bitola (2010).

²⁹ Cvetanovski, I., (2010, p. 58-62)

³⁰ Peppers, & Rogers (2005)

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process of reporting and documenting. The accuracy is increased, orders are fulfilled and the appearance of undocumented purchase is eliminated by irresponsible workers³¹.

- *Increase working speed.* Management of supply chain helps employees in the department for procurement to atomize many routine activities in procurement, to eliminate redundant operations and increase efficiency in purchasing. Inventories should be positioned in the supply chain in a way that will allow fast delivery.

3. EMPIRICAL RESEARCH ON MODIFYNG SUPPLY CHAIN IN MACEDONIA (ELECTRONIC SUPPLY CHAIN)

Today's generic models of supply chains in the electronic environment provide all listed advantages, because they include all the key elements of the architecture of supply chain and their mutual interactions. With the application of Internet technology in the concept of SCM began a new phase, supply chains in the e-environment, or e-SCM³². The purpose of electronic SCM concept is an exchange of strategic and operational information through the entire supply chain using EDI technology, extranets and monitoring through appropriate information and communication technologies.³³

According to the State Statistical Office there are 70,659 active business entities in the Republic of Macedonia³⁴. Only 212 of them, or 0.3%, are companies in the category of large enterprises with more than 250 people employed of which 70% of them are located in Skopje, while 1271 companies with 50 to 249 employees belong to the category of medium-sized enterprises. The rest of the number belongs to the small and micro companies. In fact, large and medium-sized companies are financially more powerful and have stronger management, which would contribute to monitor the world's best practices, which includes IT implementation and application of the electronic supply chain. Most of them are in the trade industry, with 34,9% of the total,

³¹ Levi-Jaksic & Komazec, (2003)

³² Present by Rejman Petrović, D., Milanović, I., Kalinić, Z. (2012)

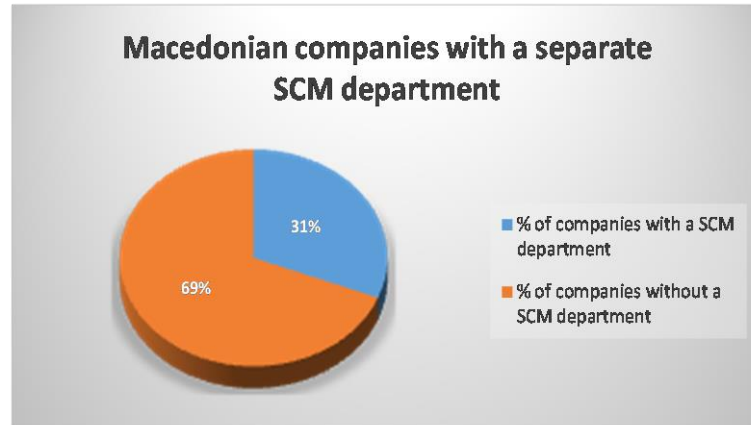
³³ Present by Bowman (2014)

³⁴ See State Statistical Office of Macedonia, (2015)

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or 24,674 companies, and then less numerous companies in the manufacturing industry with 10,9%, or 7,675 companies. To review the level of SCM and IT usage in the Republic of Macedonia, 65 managers employed in 65 companies of different sizes, i.e. 14 large, 25 medium and 26 small companies from various sectors have been surveyed using a questionnaire, and the research was conducted through the Internet. The questionnaire included 13 multiple-choice questions.

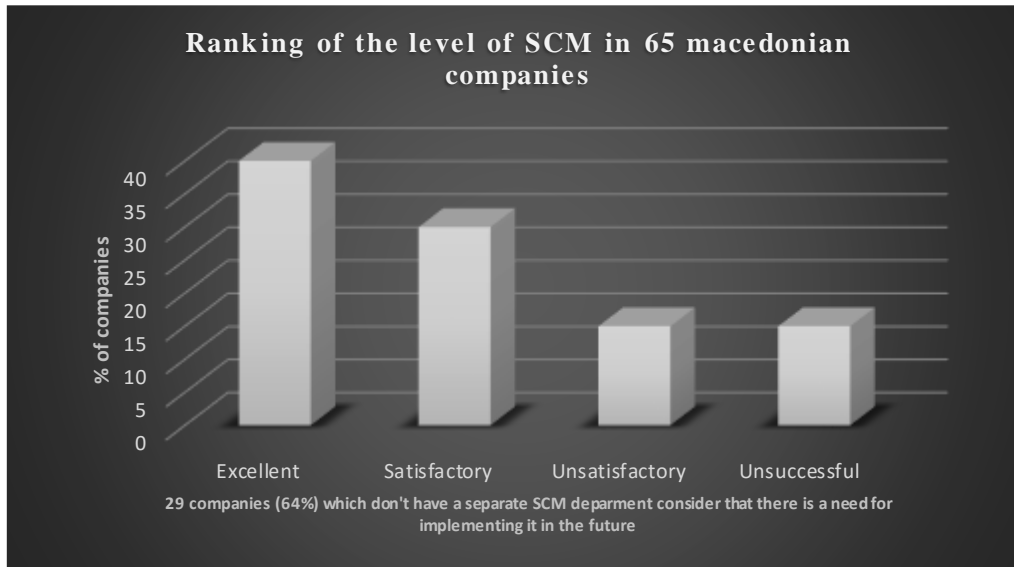
Graph 1. SCM departments in Macedonian companies



According to results shown in graph 2 (related to question 2 from the analysis), we can conclude that Macedonian companies are attune satisfactory level in terms of supply chain management, primarily because of the fact that only 31% or 20 companies have a special department to manage the logistics or more extensive supply chain; 14 of them belong to the category of large enterprises and 6 in the group of medium-sized enterprises. Of the total number of companies, 40% rate the supply chain management at an excellent level and the other 30%, 15% and 15% respectively satisfactory, under satisfactory and unsuccessfully level. Of other 45 companies, 29 companies or 64% plan to introduce this department in the future while 15 think there is no need. The results are shown on the next page in graph 3.

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Graph 2. Management level rank of Macedonian companies supply chain

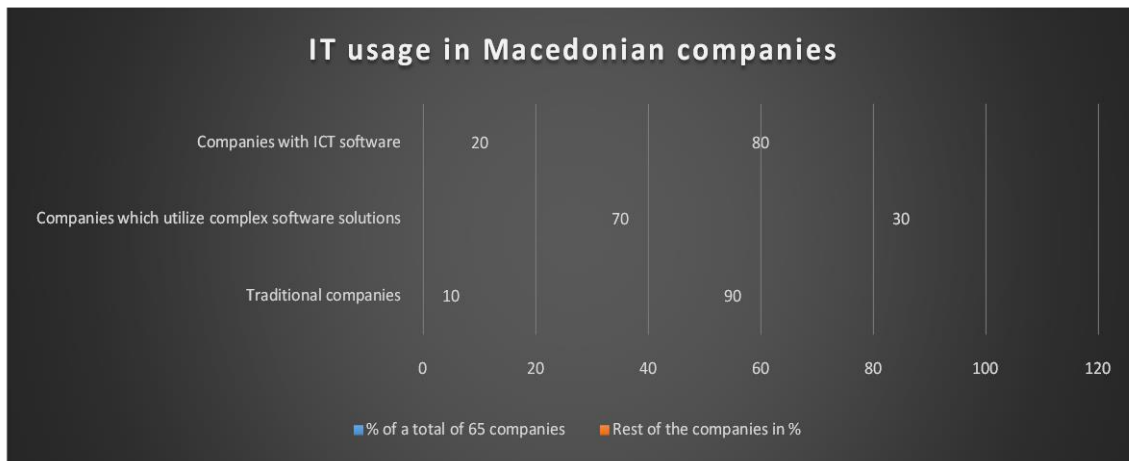


Regarding the implementation of the electronic supply chain, the questionnaire included several questions regarding the implementation of the information systems, software solutions, such as ERP, customer relationship management systems, EDI, right in time and other systems elaborated in this paper in the companies' daily operations.

They were also asked whether they plan to make organizational changes to implement some of the information technologies that contribute to the virtualization of the supply chain in the future and whether they are aware of the benefits they would receive or already have by the electronic supply chain. Graph 4 on the next page shows that 13 companies or 20%, have implemented some of the information systems, 70% use some larger software solutions and 10% work in the traditional way. According to these data we can conclude that in Macedonia IT is fairly used, companies do use benefits of supply chain virtualization insufficiently and above all, those are the larger companies.

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Graph 3. IT usages in Macedonian companies



To the question whether they are familiar with the benefits of virtualization, almost 90% of the managers think that they are familiar enough, but quite encouraging is the fact that 60% of managers consider that organizational technologies and building an information structure are necessary. Despite the unsatisfactory results showing that companies lag behind regarding the use of IT and partial implementation of electronic supply chain, unlike large brands, they become more aware of the benefits of virtualization and how it can change their operation³⁵.

As a main prerequisite for successful supply chain implementation is establishing a special department for supply chain management that will perform financial analysis and feasibility analysis of IT implementation, that indirectly influence the important decisions of the companies.

4. CONCLUSION AND FURTHER AREAS OF RESEARCH

This paper clearly indicates that MSC, its functions and software technologies can lead to significant benefits for companies such as close cooperation, exchange of knowledge, resources sharing and information flow in real time.

MSC in the future need to adapt and specialize in their functioning, it will be managed not with only one, but multiple product brands in order to maximize sale, as

³⁵ Present by [Chopra, S.](#), [Meindl, P.](#) (2015)

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well as maximum flexibility in formation of package offers. In particular, integrated supply chains management, in terms of consumers, should pay more attention to the "original offer," which results in a product category management. Also, radicalization in supply chains will have to be achieved by introducing self-service, changes in the products, their package and way of packaging, introduction of electronic commerce.

The complexity of supply chains processes of sales and changes in integrated supply chains will impose another trend - existence of the most effective sellers, or so called "*missionary sales force*" and brand recognition and the name of the manufacturer, the formulation and implementation of the package offer, so-called, "*system sales*", as a prerequisite for loyalty and willingness of consumers to notice the change.

Modifying supply chain (electronic supply chain), should and will be an addition of unstructured data from external sources, (such as books, articles, blogs, surveys, and social media), because through the so called "surfing" (or browsing) in the environment, supply chains will extract meaningful data to make analytics. Big database analysis and analytics, will be 90% of all business information, and can have a huge impact on supply chains.

Technological progress should constantly work on modifying the e-SCM, i.e. development of new supply chains and those that will ensure efficiency and effectiveness. This development and implementation will provide detailed information support to managers in making decisions for the whole supply chain. If these radical changes and trends are introduced in the supply chains, it will improve the efficiency of the entire supply chain, which, in turn, will increase their competitiveness and potential for market success.

Further research may be directed toward study of specific methods of the distribution chain, such as virtual stores, virtual fulfilment and digital distribution.

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BIBLIOGRAPHY

- Aćimović, S., (2006). *Understanding the Supply Chain, Economic Annals*, p. 170
- Ayers, BA. (2002). *Supply Chain Management. Work: Design, Implementation, Partnership, Technology and Profits, Auerbach Publication*, 5
- Ballou, R. H. (2004). *Business Logistic/Supply Chain Management, 5th Edition*. Pearson Education International, Prentice-Hall, Inc.
- Balaji, L.N., Kumar, S. (2013). *How to Reduce Costs through Supply Chain Network Optimization. Retrieved from <http://www.industryweek.com/planning-amp-forecasting/how-reduce-costs-through-supply-chain-network-optimization?=&=1-3>*
- Bowman, J. R. (2014). *Global Supply Chain conference Palo Alto, CA, (2014), seven best Practices for Supply Chains in 2025*.
- Chopra, S., Meindl, P. (2015). *Supply Chain Management: Strategy, Planning, and Operation 6th Edition, Hardcover*.
- Cvetanovski, I. (2010). *Standards for identification of goods in transport, Technical Faculty of Bitola, Department of Traffic and Transportation, University,, St. Kliment Ohridski " Bitola*, 58-62
- Istituto Affari Internazionali (IAI), *Building Sustainable Agriculture for Food Security in the Euro-Mediterranean Area: Challenges and Policy Options*, (2015) by Edizioni Nuova Cultura
- Joost W. van der Laan, Article in *Retail Economics*, published in "Executive Outlook" of March 2001 and updated in 2010
- Kilibarda, M. J., Zecevic, S. M. (2008). *Upravljanje kvalitetom u logistici*. Saobraćajni Fakultet, Univerzitet u Beogradu.
- Kransdorff, A., (1982), Article: Booz Allen's rather grandly titled supply chain management concept, *The Financial Times*, June 4, 1982 <http://www.supplychainrecruit.com/content/supply-chain-explained-26.htm>,
- Kotler, P. and Keller, K. L. (2009) *Marketing management (13th end)*. New Jersey: Pearson Education Inc, Upper Saddle River,
- Levi-Jaksic, M., Komazec G. (2003). *Management operacija, 2th edition*, Megatrend Univerzitet primenjenih nauka, Beograd, 370-371
- Peppers, D., & Rogers, M. (2005). *Customers Don `t Grow on Trees*", *Fast Company*.
- Porter, M. (2001), p.51, Article: *The value chain and competitive advantage*, *Understanding Business Processes*, edited by David Barnes at the Open University
- Rejman Petrović, D., Milanović, I., Kalinić, Z. (2012). *Arhitekture lanaca snabdevanja u e-okruženju, Ekonomski horizonti*, Ekonomski fakultet, Univerziteta u Kragujevcu, Sveska 1, 37-50.
- *Managing the future supply chain*, Kersten, W., Blecker, T., Ringle, C.M., (2012), Band 9, ISBN 978-3-8441-0180-5
- SEED Giants vs. U.S. farmers, Report by the Center for food safety & save our seeds (2013)
- State Statistical Office of the Republic of Macedonia (2015), *Number of active business entities*, available at

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http://www.stat.gov.mk/PrikaziSoopstenie_en.aspx?rbtxt=79 (accessed on 20.11.2015)

- Standards for identification of goods in transport, Technical Faculty Bitola (2010).
- Wilson A., Zeithaml V.A., Bitner M.J., Gremler D.D. (2008) Services Marketing, McGraw-Hill Education
- Vorst, van der J., Silva, da C.A., Trienekens, J.H. (2007). *Agro-industrial supply chain management: concepts and applications. Food and agriculture organization of the United Nations, Rome, Italy.*
- Zeithaml V. A., Bitner M. J., Gremler D. D. (2006) Services marketing, 4th edition, McGraw-Hill.

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MACEDONIANS' INNOVATION SYSTEM: WHAT DOES AND WHAT DOES NOT

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ABSTRACT

Innovation is vital for the creation of jobs, growth and competitiveness and for addressing the great challenges faced by society. The today's innovation system is no longer restricted to R&D laboratories and to published scientific papers as it was previously seen. On the contrary now it emphasizes the collaborative nature of innovative processes regarding productive interactions among innovation actors as firms, the public sector, academia, and society. So, this article aims to define the innovative system and to assess the strength of the linking among innovation actors and extent of the Macedonia's innovation capacity. For this purposes, we analyze the drivers in the framework of Innovation Input Sub-Index published in the Global Innovation Index (GII) for period from 2012 to 2015. The findings present that Macedonia has relative weakness especially in infrastructure, R&D and link among the players in the innovation system. These findings should help policy makers and other stakeholders to create better policies, strategies, practices and other levers which will strengthen the Macedonia's innovative capacity and will be directed towards improving the linkages between the innovation actors.

KEYWORDS: innovation system, innovation capacity, country's weaknesses/
strengths

JEL CLASSIFICATION: O300, O380

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INTRODUCTION

Innovation is vital for the creation of jobs, growth and competitiveness and for addressing the great challenges faced by society. Innovation has important role for both the companies and country. For the companies, innovation improves productivity, enables development and investment return. On other hand, the increased productivity encourages economic grow, raises living standard and stimulates employment in the countries. The best way for companies and countries to raise productivity is they to find new methods for productive utilization of natural, human and capital resources. To achieve this goal, they must innovate.

Based on the Oslo Manual developed by the European Communities and the OECD³ innovation is perceived and understood as: "the implementation of a new or significantly improved product, or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations". This definition clearly reflects that innovation includes research and development that areas not directly related to the development of a specific innovation and improvements in business practices, relationships and organizations. Besides, the definition implies that the innovation process includes various innovative actors and a broad range of activities that help the company become more productive and competitive. Also, innovation activities considered all scientific, technological, organizational, financial and commercial steps which actually, or intended to, lead to implementation of innovations. The main actors involved in innovation process (at macro and micro level) can be identified as: knowledge producers (universities, research institutes, R&D labs, training institutions, etc.); knowledge applicators (business and industry) and governance structure. The collaboration and the flow of ideas between these actors that form the innovation system of the country and access to knowledge are all increasingly important ingredients of innovation, which also

³ The *Oslo Manual* was developed by the OECD in 1992. The third edition of the *Oslo Manual* (OECD/Eurostat, 2005) distinguishes innovation in four areas: product, process, marketing and organisational. See OECD, "The Measurement of Scientific and Technological Activities – Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data", Third edition, OECD, Paris, 2005, p.46.

opened a new perspective in understanding the forces of competitiveness and national progress.

Development of one economy reflects level of development of national innovation system (NIS). The NIS considers that successful innovations depend on long-term relationships and close interaction among actors in the system, which includes enterprises, universities and government research institutes and the people within them. The concept of national innovation systems (NIS) as it was developed in the 1980s by Freeman⁴, Lundvall⁵, and Nelson⁶, is a continuous process where institutions (habits and practices), learning and networks play a central role in generating innovation and technological change. For example, Freeman (1987) states that an NSI is "the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies" (p.1). Lundvall's broad conceptualization (1992, p. 12) of NSI includes "all parts and aspects of the economic structure and the institutional set-up affecting learning as well as searching and exploring". Nelson (1993, p.4) notes that the innovation system is "a set of institutions whose interactions determine the innovative performance of national firms" and the most important institutions are those supporting R&D efforts".

The vitality of innovation in a country is shaped by national innovative capacity (NIC). The concept of NIC emerged in the academic and policy debate as a meta-concept to denote the real and potential capabilities of a system to convert knowledge into innovation, which is able to drive long term economic growth and wealth creation (Freeman 1995⁷, Furman et al. 2002⁸). It has been introduced and adopted by different scholars interested in investigating and understanding the factors and determinants at

⁴ Freeman, C. (1987). *Technology Policy and Economic Performance: Lessons from Japan*, Pinter: London.

⁵ Lundvall, B. A., eds. (1992). *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter.

⁶ Nelson, R (1993). *National Innovation Systems: A Comparative Analysis*. New York: Oxford University Press.

⁷ See Freeman, C. (1995), "The national systems of innovation in a historic perspective", *Cambridge Journal of Economics*, Vol. 18 pp.5-24.

⁸ See Furman, J.L., Porter, M.E., Stern, S. (2002), "The determinants of national innovative capacity", *Research Policy*, Vol. 31 pp. 899-933.

the root of innovation dynamics and the capabilities grounding regional and local development. For Porter and Stern⁹; Stern et al.¹⁰ and Furman et al.¹¹ primary purpose was to measure the origin of the differences between countries regarding the innovative production, reflecting upon the analysis of the clusters of innovation. These authors define the NIC as "the ability of a country's potential – as both a political and economic entity – to produce and commercialize a flow of innovative technology"¹². According to them¹³, the NIC depends on the strength of three main contributors to a nation's overall innovative performance: common innovation infrastructure (set of cross-cutting factors which contribute broadly to innovativeness throughout the economy as a whole, e.g., investment in basic science), the environment for innovation in a nation's industrial clusters (e.g., automotive, information technology), and the strength of linkages among them (e.g., the ability to connect basic research to companies and the contribution of corporate efforts to the overall pool of technology and skilled personnel).

The innovative capacity of a country is the basic driving force behind its economic performance; it provides a measure of the institutional structures and support systems that sustain innovative activity.¹⁴ This capacity also reflects the investments and policies of the government and private sector that affect the incentives for and the productivity of a country's R&D activities. In other words, this interconnected set determines the degree and success of innovative effort in a country over the long term.

Based on this background this paper aims to assess the strengths and weaknesses of the innovative capacity in Macedonia; the strength of linkages among

⁹ Porter, M and Stern, S (1999). *The New Challenge to America's Prosperity: Finding from the Innovation Index*. Council on Competitiveness, Washington, D.C., March.

¹⁰ Stern, S; Porter, ME and Furman, JL (2001). *The determinants of national innovative capacity*. In MIT Industrial Performance Seminar, Industry, Paper 00-034, Canada, July 27.

¹¹ Furman, JL; Porter, ME and Stern, S (2002). *The determinants of national innovative capacity*. *Research Policy*, 31, 899-993.

¹² Porter, M.E., Stern, S., 2001. *Measuring the 'Ideas' Production Function: Evidence from International Patent Output*. MIT Sloan School of Management, Mimeo. p.29.

¹³ Furman, Jeffrey L.; Porter, Michael E.; Stern, Scott, "The Determinants of National Innovation Capacity", *Research Policy* 31 (2002), pp. 899-933.

¹⁴ Mathews, JA, Hu, M-C (2007). *Enhancing the role of universities in building national innovative capacity in East Asia: the case of Taiwan*. *World Development* 35(6), 1005-1020.

the main actors involved in innovation process as well as the quality of their innovative practices. For this aim we use the framework of the Innovation Input Sub-Index in the Global Innovation Index (GII)¹⁵ to guide our empirical evolution for 2012, 2013, 2014 and 2015.

Measuring Macedonians' innovative capacity: the methodological approach

The empirical analysis that follows is based on the data from the World Intellectual Property Organization (WIPO) data, published in the Global Innovation Index (GII) for the period between 2012 and 2015. The GII¹⁶ is measure tool that allows a number of countries in the world to follow their innovation developments and the progress of national innovation strategies and on this basis to assess what worked (or not) and where. GII captures two sub -index: the Innovation Input Sub-Index and the Innovation Output Sub-Index, each built around pillars that includes total 79 indicators (in 2015). The overall GII score is the simple average of the Input and Output Sub-Indices. In the Innovation Input Sub-Index are included drivers of the national economy that enable innovative activities, while Innovation Outputs Sub-Index presents the results of innovative activities within the economy. So, this tool contributed countries to assess the national climate and infrastructure for innovation and related outcomes. Also, in the index are ranked 141 economies (in 2015) around the world, so it allows their mutual comparison. This relative ranking is helpful for policy makers and experts to understand existing successes and areas of improvement.

For the purpose of our analysis we defined the national innovation system through the five pillars in framework of the Innovation Input Sub-Index which denotes different aspects of the quality of innovation system. The pillars and corresponding indicators are listed in the Table 1. From the table can be seen that this sub-index relies on five pillars significant for innovative activities in the country as: (1) Institutions, (2)

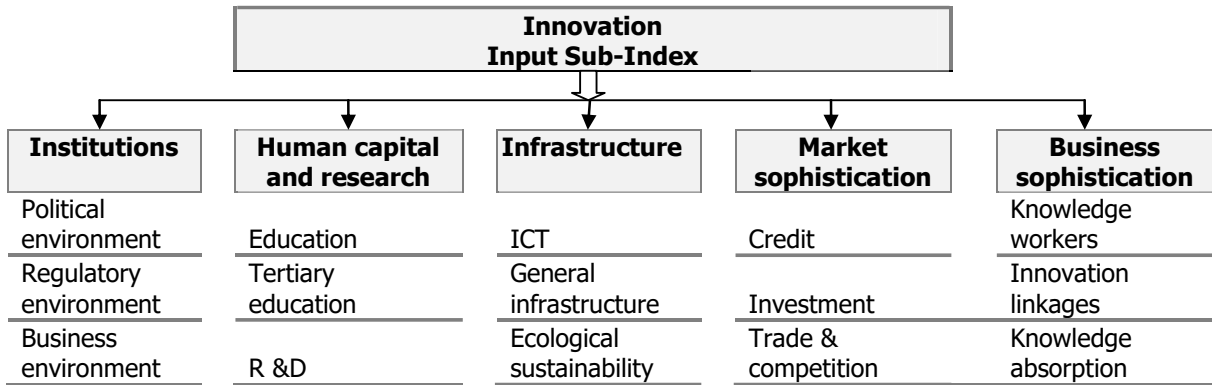
¹⁵ All the reports are available at <https://www.globalinnovationindex.org/content/page/past-reports/> accessed on 03/02/2016

¹⁶ Since 2007, the GII was first published by INSEAD, and the World Intellectual Property Organization (WIPO, a specialized agency of the United Nations). The GII go beyond the traditional measures of innovation such as the level of research and development. Today it is a major benchmarking tool for business executives, policy makers and others seeking insight into the state of innovation around the world.

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Human capital and research, (3) Infrastructure, (4) Market sophistication, and (5) Business sophistication. Each pillar is divided into three sub-pillars and each sub-pillar is composed of individual indicators which produce innovative output. Their scores indicate the innovative capacity of Macedonians' innovative system.

Table 1. Framework of national innovation system



Source: The Global Innovation Index 2013, INSEAD and WIPO 2013, p. 6.

The Institutions pillar captures the following three sub-pillars: *the political environment*, *the regulatory environment* and *the business environment* (see Table 2.1). The political environment sub-pillar reflects perceptions of the likelihood that a government might be destabilized; the quality of public and civil services, policy formulation, and implementation; and perceptions on violations to press freedom. The regulatory environment sub-pillar includes three indicators, as: regulatory quality, rule of law and cost of redundancy dismissal. The business environment sub-pillar includes also three aspects: the ease of starting a business; the ease of resolving insolvency, and the ease of paying taxes captures the institutional framework of a country.

Human capital and research pillar includes three sub-pillars: *education*, *tertiary education* and *R&D* (see Table 2.2). The education sub-pillars cover these indicators: expenditure on education; public expenditure on education per pupil; school life expectancy; assessment in reading, mathematics, and science; and pupil-teacher ratio, secondary. The tertiary education sub-pillar use indicators by: tertiary enrolment; graduates in science and engineering; tertiary inbound mobility; and gross tertiary outbound enrolment. The last sub-pillar, on R&D, measures the level and quality of

R&D activities, with indicators on researchers (headcounts), expenditure, and perceptions of the quality of scientific and research institutions (QS university ranking average score of top 3 universities).

Infrastructure pillar includes three sub-pillars: *information and communication technologies (ICT)*, *infrastructure*, and *ecological sustainability* (see Table 2.3). The Information and communication technologies (ICTs) sub-pillar includes indicators for: ICT access; ICT use; government's online service; and online e-participation. In the general infrastructure sub-pillars are capture indicators for: electricity output; electricity consumption; logistics performance; and gross capital formation. In the last sub-pillar are included indicators for: GDP per unit of energy use; Environmental performance; and ISO 14001 environmental certificates.

Market sophistication pillar has three sub-pillars structured around market conditions and the total level of transactions, as: *credit*, *investment*, and *trade and competition* (see Table 2.4). First sub-pillars include follows indicators: ease of getting credit; domestic credit to private sector; and microfinance institutions' gross loan portfolio. The investment sub-pillar captures four indicators: ease of protecting investors; market capitalization; total value of stocks traded; and venture capital deals. Third sub-pillar tackles applied tariff rate, weighted mean, market access for non-agricultural exports and intensity of local competition.

Business sophistication pillar reflects the level of business sophistication to assess how conducive firms are to innovation activity (Table 2.5). This pillar captures three sub-pillars: ***knowledge workers***, ***innovation linkages***, and ***knowledge absorption***. The first sub-pillar includes follows indicators on knowledge workers: employment in knowledge-intensive services; firms offering formal training; R&D performed by business enterprise (BERD); expenditure for R&D that is financed by business enterprise; and two indicators related to the Graduate Management Admission Test (GMAT). The GMAT mean scores and total number of test takers (scaled by population aged 20 to 34 years old) were taken as proxies for the entrepreneurial mindset of young graduates and for their overall aptitude for success in global

innovation markets (where skills in English and mathematics are crucial). The innovation linkages sub-pillar draws on both qualitative and quantitative data regarding business/ university collaboration on R&D; the prevalence of well-developed and deep clusters; the level of gross R&D expenditure financed by abroad, the number of deals on joint ventures and strategic alliances; and Patent families filed in at least three offices. The last, knowledge absorption sub-pillar includes indicators that are linked to sectors with high-tech content or are the key to innovation: royalty and license fees payments; high-tech imports; imports of communication, computer and information services; and net inflows of foreign direct investment (FDI).

WHAT DOES AND WHAT DOES NOT?

In the GII report the results are assessing on the basis of the development stages of countries, captured by the World Bank income classifications. According to this principle, countries are divided into: High-income (HI), Upper-middle-income countries (UM), Lower-middle-income countries (LM) and Low-income countries (LI). So, this tool enables the countries in the same region or of the same income group mutual to compare their innovation performance and to identify and adopted the best innovative practices in order to build sound innovative platform

Macedonia with GDP per capita from 10,717.5 \$ in GII is placed in group of upper-middle-income countries with other 38 economies in 2015. In this group among 141 countries in 2015 (GII 2015¹⁷, p.25), the 10th best ranked economies are: China (29rd), Malaysia (32th), Hungary (35th), Bulgaria (39rd), Montenegro (41th), Mauritius (49rd), Costa Rica (51th), Belarus (53rd), Romania (54th) and finally (10 position) Thailand (55th). Our country currently ranked on 56th place.

Analysis of the results for the period 2012 to 2015 showed inconsistency in the quality of our innovative system (see Table 2). Our performances of GII there are changes in 2015 compared with those in the 2012, 2013 and 2014. So, in 2013

¹⁷ Cornell University, INSEAD, and WIPO (2015): *The Global Innovation Index 2015: Effective Innovation Policies for Development*, Fontainebleau, Ithaca, and Geneva.

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Macedonia show the best GII scores, it was ranked 51th among 142 countries, an improvement of 11th places over 2012 (among 141 countries) while in 2014 was ranking on 60th (among 143 countries) and in 2015 on 56th.

Table 2. The scores of the Macedonia's innovation capacity

		Macedonia (GII 2012-2015)							
		2012 (out of 141)		2013 (out of 142)		2014 (out of 143)		2015 (out of 141)	
		Score (0-100)	Rank	Score (0-100)	Rank	Score (0-100)	Rank	Score (0-100)	Rank
GII		36.2	62	38.2	51	36.9	60	38.0	56
Innovation									
Input Sub-Index		43.2	52	44.5	48	43.4	57	44.0	56
Pillars	1. Institutions	68.8	42	65.4	58	65.8	60	67.7	55
	2. HC and research	36.6	65	36.1	52	33.8	52	32.7	55
	3. Infrastructure	35.1	62	33.2	67	36.3	72	31.4	94
	4. Market sophistication	43.1	52	51.4	41	54.6	39	52.3	46
	5. Business sophistication	32.2	110	36.4	51	26.8	103 ^o	35.9	62

Note: the mark ° indicates a weakness.

Source: Author's compilation from data of GII 2012 -2015.

The Innovation Input Sub-Index also has the best improvement in 2013, ranking of 48th, in relation of 2012, where it is ranking 52nd, in 2014 on 57nd place and in 2015 is ranking 56th. The improvement in 2015 compared to 2014 is due to the indicators in both pillars: institutions (55nd) and business sophistication (where it was ranks 103st in 2014 compared to 2015 on 51st).

According to the scores in 2015 it needs to make improvements in the infrastructure (94th), as and in the institutions framework (55th), human capital and research (52nd), and in business sophistication (62th) to move up in the rankings.

The in-depth analysis of these five pillars also shows where improvement occurred and where not. In terms of the *Institutions* pillar (Table 2.1) findings suggest that our major strengths in 2012, 2014 and 2015 was the sub-pillar Business environment (where it ranks 12th, 29th and 15th respectively) while in 2013 dropped 20 places (32nd) compared of 2012. In 2015 the score of sub-pillar Political environment has improved of four positions (77th) compared of 2014 (82nd), then the sub-pillar Regulatory environment also has improved, ranking 55th, up two position from 57th in 2014.

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Table 2.1. The structure of institutions pillar and ranking

Pillar 1	Macedonia							
	2012		2013		2014		2015	
	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank
Institutions	68.8	42	65.4	58	43.4	57	67.7	55
Political environment	54.0	77	52.1	82	53.1	81	43.3	77
Regulatory environment	69.8	57	69.7	56	69.4	57	69.8	55
Business environment	82.7	12•	74.5	32	74.7	29•	86.1	15•

Note: the mark • indicates strength.

Source: Author's compilation from data of GII 2012 and GII 2013.

This pillar reflects the ability of the government to formulate and implement policies which facilitate the work and development of the private sector and the extent to which the rule of law prevails (in aspects such as regulatory quality, rule of law and cost of redundancy dismissal). According to findings presented above our government should make improvements to its policies because nurturing an institutional framework that attracts business and fosters growth by providing good governance and the correct levels of protection and incentives is essential to innovation system. On other hand, the framework conditions regulating the complex relations between innovation actors are essential to build an innovation-friendly environment and foster innovation infrastructure in the country.

Regarding the *HC and research* pillar (Table 2.2), our major strengths in 2013, 204 and 2015 is found in Education (at the primary and secondary levels mainly), ranking 13th, 3th, and 5th respectively, what it means high jump from 64th place compared to 2012, while Tertiary education system has improvement in 2015 (78th) compared to 2012 and 2013. In relation to the research activity in 2015 it show relative weakness (ranking 93th), drooping six places compared to 2014 (ranking 87th), drooping eight places compared to 2013 and nearly the same place as 2012 (92th).

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Table 2.2. The structure of HC and research pillar and ranking

Pillar 2	Macedonia							
	2012		2013		2014		2015	
	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank
HC and research	36.6	65	36.1	52	33.8	52	32.7	55
Education	53.1	64	70.7	13•	65.2	3•	66.2	5
Tertiary education	39.7	53	33.5	59	31.9	79	28.8	78
R&D	17.0	92	4.1	84	4.2	87	3.0	93

Note: the mark • indicates strength.

Source: Author's compilation from data of GII 2012 to GII 2015.

This pillar reflects the level and standard of education and research activities in the country that is crucial for economies to move up the value chain beyond simple production processes and products. On the other hand, the accumulation of human capital through education, especially higher education and giving priority to R & D activities is a necessary condition for innovation to take place. So, when a country has good innovative capacities companies can foster their productivity, competitiveness and innovation potential by employing highly qualified professionals and technicians. In order to increase their innovative capacities Macedonia should continue to improve the performance of the drivers placed in HC and research framework.

In terms the *Infrastructure pillars* (Table 2.3) there is relative weakness in the three sub-pillars. The ICT is ranking 88th in 2015, drooping eighteen places compared to 2014 (70th) or drooping nineteen places compared to 2013 (69th) and twenty-five places below compared to 2012. Also, the general infrastructure ranked on 126th in 2015, drooping fifteen places compared to 2014 (101st), thirty places below compared to 2013 (86th) and even fifty-five places below compared to 2012 (71st). The score of third sub-pillar Ecological sustainability in 2015 is ranked 60th, same as in 2012 (60th), or compared to 2014 (45th) and 2013 (45th), drooping fifteen places.

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Table 2.3. The structure of infrastructure pillar and ranking

Pillar 3	Macedonia							
	2012		2013		2014		2015	
	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank
Infrastructure	35.1	62	33.2	67	36.3	72	31.4	94
ICT	36.3	63	36.0	69	37.9	70	38.4	88
General infrastructure	36.0	71	27.5	86	27	101	16.3	126
Ecological sustainability	33.2	60	36.2	45	44.1	45	39.6	60

Source: Author's compilation from data of GII 2012 to GII 2015.

According to this Macedonia's infrastructures framework has many weakness and should also be improved because a good and ecologically friendly communication, transport, and energy infrastructure helps the production and exchange of ideas, services and products into the innovation system through that our country can reduce transaction costs, to improve access to markets and to supports sustainable growth.

The drivers in the **Market sophistication** pillar also indicates relative weakness, so in 2015 credit (46th) has improvement related on 2012 (55th) and 2013 (52nd), but drooping ten places compared to 2014 (36th). The investment climate (75th) has three places below compared to 2012 (72nd), thirty-two up compared to 2013 (43^{the}) and drooping nine placed compared to 2014 (64th). The third sub-pillar Trade and competition in relation to the above two pillars showing better rankings, but compared to previous three years it shows relative weakness. So, in 2015 it is ranking 35th, drooping four places compared to 2014 (31nd) and nine places below compared to 2012 (26th), but related on 2013 (50th) has improvement.

Having in mind that a well-functioning market contribute to the innovation environment through competitive pressure, trade and investment, alignment between supply and demand, improve efficiency and economies of the transaction it is necessary to raise the level of these drives in order to improve the Macedonia's market sophistication.

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Table 2.4. The structure of market sophistication pillar and ranking

Pillar 4	Macedonia							
	2012		2013		2014		2015	
	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank
Market sophistication	43.1	52	51.4	41	54.6	39	52.3	46
Credit	34.3	55	42.6	52	48.2	36	39.1	46
Investment	24.4	72	32.6	43	35.9	64	34.2	75
Trade and competition	70.7	26•	78.9	50	79.7	31	83.4	35

Note: the mark • indicates a strength; °a weakness

Source: Author's compilation from data of GII 2012 and GII 2013.

The **Business sophistication** pillar has improvement in 2015 at the three sub-pillars compared to 2014 and 2012. So, knowledge workers with the highest jump up forty-three positions (ranked at 64th place) from 107th place in 2014 and jump up forty-one from 105th place in 2012; then innovation linkages (66th) jump up seven places compared to 2014 (73th) and fifteen three places from 119th in 2012; and finally, knowledge absorption (59th) jump up twenty places compared to 2014 (79th) and jump up six position compared to 2012 (65th). But, the scores of innovation linkages and knowledge absorption (66th and 59th) in 2015 compared to 2013 have relative weakness.

Table 1.5. Structure of business sophistication pillar and ranking

Pillar 5	Macedonia							
	2012		2013		2014		2015	
	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank	Score (0–100)	Rank
Business sophistication	32.2	110	36.4	51	26.8	103°	35.9	69
Knowledge workers	34.9	105°	37.4	94	25.8	107°	40.0	64
Innovation linkages	25.8	119°	39.5	33	30.8	73	31.8	66
Knowledge absorption	35.8	65	32.1	48	23.9	79	35.8	59

Note: the mark • indicates a strength; °a weakness.

Source: Author's compilation from data of GII 2012 to GII 2015.

The businesses are important driver of innovation system. When one country generates innovative capabilities through better conditions for development of knowledge workers and through stimulating business / university collaboration in R&D it can expect better results in business sophistication framework.

CONCLUSIONS

The concept of national innovation system (NIS) includes various innovative actors and a broad range of activities that help the country and company becomes more productive and competitive. Generally, in the NIS are included three actors: companies, researchers and universities and politicians which are interrelated and work with each other through a number of different links, processes and structures. Their mutual interaction is the core of an innovation system and important determinant of knowledge production and dissemination. The functioning of the NIS need continually assessed in order to improve the national performance, potential and gaps. This concept is important for the measurement of national innovative capacity. The innovative capacity provides a measure of the institutional structures and support systems that sustain innovative activity.

In order to measure Macedonian innovative capacities, we use the Innovation Input Sub-Index of the Global Innovation Index (GII) for period from 2012 to 2015. This measurement tool is built around the following five pillars: (1) Institutions, (2) Human capital and research, (3) Infrastructure, (4) Market sophistication, and (5) Business sophistication. It enables to assess the strengths and weaknesses of the national innovation capacity.

The analysis of Macedonia's innovation capacity in 2015 among 141 countries shows many weaknesses in the infrastructures framework (ICT is ranking 88th, general infrastructure of 126th, and ecological sustainability of 60th). This support system needs to be improved because it helps the production and exchange of ideas, services and products into the innovation system through that our country can reduce transaction costs, to improve access to markets and to supports sustainable growth. Also, giving priority to R & D activities (ranking of 93th) is a necessary condition for innovation in Macedonia to take place. In order to increase innovative capacities Macedonia should continue to improve the performance of the all drivers placed in research framework.

From findings can be concluded that improvement is necessary in overall the innovation system in Macedonia especially in the mutual cooperation of the main actors

– including government, business associations and universities because the economic performance of the country depends not only of how each of the innovation actors performs individually, but also of how they interact among themselves in the process of knowledge creation and distribution.

BIBLIOGRAPHY

- Lundvall, B. A., eds. (1992). *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter.
- Nelson, R (1993). *National Innovation Systems: A Comparative Analysis*. New York: Oxford University Press.
- Freeman, C. (1987). *Technology Policy and Economic Performance: Lessons from Japan*, Pinter: London.
- Furman, J.L., Porter, M.E., Stern, S. (2002), "The determinants of national innovative capacity", *Research Policy*, Vol. 31 pp. 899-933.
- Mathews, JA, Hu, M-C (2007). Enhancing the role of universities in building national innovative capacity in East Asia: the case of Taiwan. *World Development* 35(6), pp. 1005-1020.
- OECD (2005). *Oslo Manual - Guidelines for collecting and interpreting innovation data*. 3rd edition. A joint publication of OECD and Eurostat, OECD, Paris.
- Porter, M and Stern, S (1999). *The New Challenge to America's Prosperity: Finding from the Innovation Index*. Council on Competitiveness, Washington, D.C., March.
- Porter, M.E. & Stern, S. (2001) Innovation: location matters. *MIT Sloan Management Review*, Summer, pp. 28-36.
- Stern, S; Porter, ME and Furman, JL (2001). The determinants of national innovative capacity. In MIT Industrial Performance Seminar, Industry, Paper 00-034, Canada.
- Porter, M.E., Stern, S., 2001. Measuring the 'Ideas' Production Function: Evidence from International Patent Output. MIT Sloan School of Management, Mimeo.
- The Global Innovation Index 2012, INSEAD and WIPO 2012, available at: <https://www.globalinnovationindex.org/content/page/past-reports/> (accessed on 02.02.2016).
- The Global Innovation Index 2013, INSEAD and WIPO 2012, available at: <https://www.globalinnovationindex.org/content/page/past-reports/> (accessed on 02.02.2016).
- The Global Innovation Index 2014, INSEAD and WIPO 2012, available at: <https://www.globalinnovationindex.org/content/page/past-reports/> (accessed on 05.02.2016).
- The Global Innovation Index 2015, INSEAD and WIPO 2012, available at: http://www.wipo.int/econ_stat/en/economics/gii/ (accessed on 07.02.2016).

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**THE RISKS OF LEASING ARRANGEMENTS FOR SMALL AND MEDIUM
ENTERPRISE IN THE REPUBLIC OF MACEDONIA**

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ABSTRACT

Leasing arrangements provide some apparent advantages over the other forms of financing. One of the major advantages of the leasing is that it allows obtaining of equipment for doing business when the company lacks own funds to finance the procurement. Unlike in the case of the developed countries, in the case of Republic of Macedonia, leasing is not sufficiently promoted. Consequently, the use of the leasing as source of financing businesses is very limited. Loans provided by the commercial banks are still the most frequent form of financing for business. The existing leasing houses and the government are trying to promote this form of financing among the business community. They stress the advantages of the leasing for the companies and the fact that the risks related with these arrangements are considerably lower than the risks in case of the loans, for example.

This paper reviews the risks in the leasing arrangements in general and in the case of Macedonia. We stress that the level of risk in case of the lessor essentially equals the level of risk in any other financial arrangement, while on the side of the lessee it can be considerably lower. However, on the side of the lessor these risks can be successfully mitigated with due diligence and proper risk management. The exposure can be controlled, the impact of the risks effectuated can be minimized or delayed. The paper reviews also the specific risks of the leasing arrangements in the case of Republic of Macedonia and offers possible measures that the key stakeholders can employ to control the various types of the risks related with the leasing in the country.

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JEL CLASSIFICATION: G23

1. THE NOTION AND ORIGIN OF LEASING

A lease is legal contract between two parties, the lessor, who owns the asset, and the lessee, who uses the asset. The lessor gives the lessee the right to use the asset for a specified period. In return, the lessee agrees to pay a certain amount of rent during the lease period.³ Equipment leasing is one of the world's oldest professions. The ancient Sumerians evidently produced leases on clay tablets for agricultural tools, land and water rights, oxen and other animals. The City of Ur clay tablets pre-date 2000 BC and, although leasing may have been transacted earlier, these are the oldest "hard evidences" found. According to the research there is a record of Babylonian leasing law, by King Hammurabi, dating back to 1700 BC (Code of Hammurabi).⁴ There are two basic forms of leasing: operational and financial (capital) leasing. In case of the operational leasing, the lessee uses the asset while the lessor bears the risk of obsolescence and incidental risks. Either party to the lease may terminate the lease after giving due notice of the same since the asset may be leased out to other willing leases. In case of the financial leasing, the lessor assumes the role of a financier and services of repairs and maintenance are not provided by him, the legal title is retained by the lessor and he / she has no option to terminate the lease agreement. The lessor here is typically a financial institution and does not render any specialized services in connection with the asset.⁵

From macroeconomic and international aspect, the developing countries, with undercapitalized technologies and weak capital markets, using leasing arrangements have an opportunity to obtain modern equipment and to achieve better results in expanding their capacities, in modernization of their operations, in more reliable budget planning and in more effective and efficient management of their development process. In the case of these countries, the leasing arrangements mean transfer of innovations

³Groppelli, A.; Nikbakht, E., Finance, Barron's Educational Series, 2000, p.317.

⁴The History of Leasing, Canadian Finance & Leasing Association, 2010.

⁵Chand, S.: Leasin. Definitions, Types, Meritsand Demerits, yourarticlelibrary.com, 2016.

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and new technologies from the developed countries, too. In addition, leasing contributes to the better inclusion of marginalized strata of population, like the layoff workers, long term unemployed, the poor in general or women, indigenous people and minorities. They all typically have very limited access to the other intuitional sources of financing and thus have no participation in the economy whatsoever or their contribution has to be informal and thus very limited.

The provision of equipment on leasing is rapidly growing industry worldwide, especially in the developed countries. The extensive use of leasing in the case of the developed economies proves the important role of the leasing as driver of the economic development. Thus, approximately half of the leasing arrangements worldwide belong to the companies from Europe and Japan. In the U.S., in 2008, more than 30% of the productive equipment was provided through some sort of leasing, totaling over \$250 billion Dollars. Moreover, 85% of the companies in the U.S. used leasing to finance their fixed capital purchasing, overall or partially, and over 25% of the airplanes used by the world's major airlines are obtained through some sort of leasing.⁶

2. THE ADVANTAGES OF LEASING

The leasing arrangements can be observed in terms of transfer of new technologies, ways that new investment projects are financed, form of international economic cooperation, or simply a way of financing the purchase of modern equipment without engaging firm's equity. In financial theory and practice, this mode of financing is perceived as a tool for leveraging the growth and development not only of the companies that procure the equipment using some sort of leasing arrangement, but also for the national economies, in general. The major macro and micro economic effects of the larger proliferation of the leasing in a given economy can be traced in:

- The growth of the domestic production
- The growth of the employment
- The diversification of the economic activity

⁶Berk, Jonathan and DeMarzo, Peter: *Corporate finance*. Pearson, 2011, p.821.

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- The growth of the local capital market
- The growth of the investment in fixed assets and modernization of the economy
- The import of modern equipment, technologies and industrial processes
- The growth of the productivity and competitiveness of the companies
- The faster growth of the small and medium sized companies
- The development of the capital market and easier access to finance
- The growth of the export and of the competitiveness of the entire economy
- The Improved management practice of the companies, and in
- The Improved infrastructure at local and national level

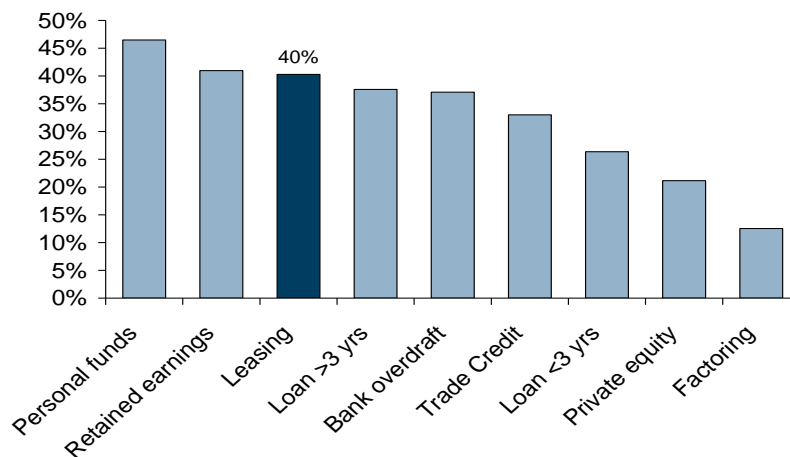
Researchers and practitioners list many reasons for leasing as source of financing. Some of them, like Van de Werve, stress that leasing is often the cheaper than all other forms and the tax benefits since the paid rent can be used as tax shield. Others disagree, stressing that the interest paid in the case of the leasing is higher than in the case of bank loan. The possibility to obtain the needed asset without having to pay any down payment, supplementary guarantees or collateral are other tangible advantages of the leasing arrangements. Leasing allows better cash management and the contract can be additionally adapted to the other technology needs, seasonality or other specifics of the businesses. The predictability and transparency of the rental payments lowers the company's cost of capital. Leasing frees the company from the hassles related with the sale of the used equipment as second hand or other more expansive form of its disposal. On the other hand, leasing allows faster modernization when there are significant leaps in technology and productivity happen requiring new equipment in order a firm to stay competitive on the market. For small businesses is important that leasing allows to bundle many related services like maintenance, repair, renovation, refurbishment, insurance and similar that simplifies the accounting. Finally, it is easier and much faster to get leasing than any other form of financing, stresses Van de Werve.⁷

⁷Tanguy Van de Werve, Leasing to European SMEs, 2012 (Slides).

3.LEASING AS FORM OF FINANCING SMALL BUSINESS

Access to capital is one of the biggest problems for small businesses. They have limited opportunities to raise capital through other forms common for the corporations like the issuance of debt. Moreover, in comparison with the big business, generally they are faced with much more expensive access to the bank loans, too. On the other hand, in an environment in which the technical characteristics of the equipment constantly improve, the small and medium enterprises could benefit a lot from leasing as source of financing of micro, small and medium sized firms both in developed and in developing countries. The use of the leasing for financing of small businesses constantly grows, taking ever larger share in their capital structure, and currently is the third most frequent source of financing, next only to the private funds and the bank loans.

Chart 1. Use of various forms of financing by European Small Firms



Source: Use of Leasing Among Europeans SMEs, Oxford Economics, 2011, p.6.

Consequently, the easier access to finance is considered the major and the greatest advantage of the leasing in case of the small and medium sized companies. The possibility to exploit capital assets for business without having to pay and to have ownership of them is the main feature of leasing arrangements. This feature allows the lessee during the entire leasing period to use the equipment subject of the leasing contract without engaging its own funds and without acquiring ownership of it. In times of rapid technical and technological change, leasing is the only option for these companies to keep pace in the replacement and modernization of their "old" equipment. Thus, the leasing also strongly contributes to their agility, flexibility, and faster

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accommodation to the market trends, allowing them to take the opportunities of the positive and avoiding the damages from the adverse change of the circumstances.

The very distinctive set of advantages of the leasing is related with the taxation of the business income. The lessee enjoys tax shield similar with that of the depreciation and same can use its other own assets for collateral without deteriorating its debt to assets ratio which significantly lowers their costs of the capital and the bank lending. Additionally, leasing allows adjustment of the maturity of the assets with that of the liabilities, which also provides an advantage compared to the bank lending. Leasing provides greater flexibility and diversification of the sources of financing. Moreover, the leasing companies have substantial knowledge in relation with the asset that is subject to the lease arrangement. They have much more and long term developed business relationships with the manufacturers. The lessee is in position to take advantage of these facts and to avoid some common costs related with the survey of the market. He is also in a position to minimize the risks related with possible mistakes in choosing the particular model in the gamma, and similar risks that are unavoidable in case of ownership.⁸

Overall, academic literature underlines the advantages of leasing as an additional financing form for enterprises since the bank might find the loans extended to the SMEs too risky, particularly from the viewpoint of the stricter Basel III liquidity provisions, particularly in countries with insufficient bankruptcy rights. As leasing offers a higher security than a collateralized loan, due to the lessor's retained ownership of the asset, in case of bankruptcy, it will be easier for him to regain control of his asset than for a secured creditor to demand his security interest in the collateral, believe Kirchler and Haiss.⁹

⁸Kraemer-Eis, H. and Lang, F. (2012). *The importance of leasing for SME finance*. European investment fund, 2012, p.21.

⁹Kirchler, E. and Haiss, P. (2008). *Market Structure as Determinant: the Case of Leasing in Banking Industry Transformation in Central and South Eastern Europe*. 8th Global Conference on Business & Economics, Florence. 2008.

3. RISKS RELATED WITH THE LEASING ARRANGEMENTS

The risks in the leasing arrangements are essentially the same as other risks that participants in any other business arrangements face in other everyday operations. However, this implies that both, the lessor as supplier, and the lessee, as user of the leased assets are exposed to certain risks in any leasing arrangement. The impact and the potential damage of that these risks, if effectuated, are contingent to the effectiveness of their forecasts and of their risk management. Consequently, these risks can be avoided, the exposure can be controlled, and the impact of the risks can be minimized or delayed.

Risks associated with the leasing arrangements are closely related with the use, storage and maintenance of the asset subject of the leasing contract and with the risk of its technological obsolescence. Especially important is the risk the asset not to be properly managed by the lessee or not having sufficient and regular cash inflows for meeting the agreed installments to the lessor. The lessee is in position to obtain an asset without having to use own funds for its purchase and avoids any risk related with its technical obsolescence. However, these advantages are associated with some specific risks for which the user should take care. Same time, the lessor, as well as the supplier of the asset also face some specific risks contingent on the rights and obligations as specified in the lease agreement. The participants in a leasing arrangement are exposed on the general risks in relation with any other type of business arrangement and with some risks specific to the leasing transactions. The risks typical for the lease arrangements defers by the type of the leasing, the stipulated rights and obligations of the participants of the arrangements.

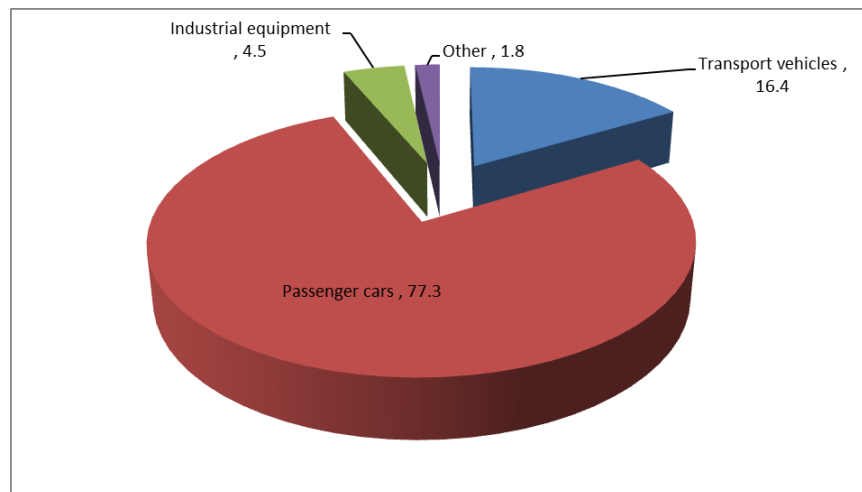
4. LEASING IN REPUBLIC OF MACEDONIA

The contribution of the leasing sector in the economy of the Republic of Macedonia is practically insignificant. As measured by the value of the new leasing contracts relative to the country's GDP, with its 0.3% in 2012 Republic of Macedonia is 18 times behind Estonia, or 18 times behind Slovakia. In comparison with the other countries in the region, less value of the leasing contracts relative to the GDP has only Greece. Republic of Macedonia has also limited

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offer of leasing products. The leasing is mostly limited to light and heavy vehicles that account for more than 90% of all leasing arrangements. Such predominant share of vehicle leasing mirrors the structure of the businesses in which also dominate the wholesale and retail trade. More than 95% of the total active enterprises in the country are in retail trading or servicing of vehicles. Together with the transport and storage, they total 99.2% of all active enterprises. Although there are positive changes in favor to the freight vehicles (from 5.7% in 2009 to 16.4% in 2013) the structure of the vehicles leased is still predominated by the passenger's cars (77.3% in 2013, down from 89.1% in 2009). The share of leasing arrangements for other equipment is very low (2.8% in 2009 and 4.5% in 2013). Consequently, the total value of the industry assets subject to leasing agreements is low, and the duration of the contracts in average is around 5 years.

Chart 2. Structure of leasing arrangements s in Republic of Macedonia in 2013



Source: Financial Stability Report for the Republic of Macedonia in 2013. National Bank of the Republic of Macedonia 2014, p.106.

Leasing of expensive equipment and facilities on long term virtually is not present. So far, the most expensive transactions are linked with leasing the passenger aircraft. Unlike the situation in our country, in the developed countries, equipment has a much greater share in the assets subject to leasing agreements. General (country) risk related with the businesses is modest. According the major global rating agencies, Macedonia is ranked B++. Similar are the risk estimates of the World Bank, the International Monetary Fund and the European Commission. The leasing contracts account for only 0.3% of the country's GDP and consequently the risks in the leasing sector may have only marginal impact on the stability of the financial sector and the national economy. In Republic of Macedonian, the majority of the

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international transactions is carried out in euro and the national currency is pegged also with the euro. So, our central bank follows the monetary policy of the European Central Bank. Therefore, the greatest danger for our companies are coming from the changes in the value of the euro and the dollar, since dollar still serves as global currency and many international transactions primarily those linked with the crude oil and the petrol are still denominated in U.S. dollars.

Among the general risks, particular focus deserves the impact of the developments within the framework of the international economic relations. Thus, the crisis and the recession in the EU have a strong impact on the performance of the economy of the Republic of Macedonia and on the performance of its sector of small businesses. The problems in the financial sector across the European Union affect the leasing companies in our country, since they are almost entirely owned by foreign companies. This means that the developments in the leasing sector, that is in declining in the EU, reflect on the volume and the value of the leasing contracts in the Republic of Macedonia, which also tend to decline.

From the set of the general risks, the most frequent risk is that related with the nature of the small businesses. The small businesses in the country, as a rule, do not have audited financial reports. The business records in most of the cases span only a year or two. Consequently, the leasing companies face difficulties to assess the credit risk of the particular applicants. Reliable estimates of the actual costs of the lessor for the management of the arrangements as well as the estimates of various risk premiums that he should/must include in the fee structure are practically impossible.

The low financial power and frequent illiquidity of the small businesses that used some lease arrangement reflects on their ability to pay the leasing installments in accordance with the agreed terms. Therefore, we have a situation in which the leasing companies have high amounts of uncollected receivables, termination of contracts and a downturn of the overall leasing sector. Consequently, the credit risk with individual clients is the main risk that the leasing sector in the country bears. Moreover, this risk tends to increase causing adverse impact on the leasing companies that thus show unprofitable operations. However, among the reasons for the relatively high credit risk

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is ineffective risk management of the leasing companies in the country. They enter into leasing arrangements without necessary analyses of the short- and long-term financial stability and insufficient cash inflows of the lessees.¹⁰

Finally, underdeveloped regulatory and supervisory function is frequently listed as reason for the high risk of the leasing sector. Supervision is seen as relatively weak and insufficient and with low transparency, although certain improvements have been made in the area of licensing and reporting. In the Assessment of the National Bank of Macedonia, the leasing sector will continue to mark reduced activity, primarily due to the measures for financial deleveraging of the parent banking groups in the EU and the exits from the non-strategic leasing markets, like the Macedonian.¹¹

The insolvency risk is frequent in our leasing practice. The analyses of the operation of our leasing companies prove that they are facing with many nonperforming contracts and high amounts of accrued receivables. Closely related to this risk, are the maturity risk and the risk of the operations. It seems that the leasing companies are not able to make due diligence and to properly evaluate the business situation of the applicants or latter, their operations. This risk is directly related to the risk of efficacy and the risk of profitability.

The major risk for leasing companies in Republic of Macedonia stems from the legal treatment of the means subject of the leasing contracts. The legal risk is associated with the ineffective judiciary and slow resolving of the courts disputes generated from the leasing arrangements. Considering the long court procedure, the costs of it and the uncertainty of the outcome, this risk discourages the leasing companies to enter into leasing arrangements. This statement applies also to disputes relating with collection of receivables and the interest charged on the outstanding debt of the clients.

During the contract duration, the lessee can damage, destroy or refuse to return the asset subject of the contract. The damage reduces the possibilities to re-lease or to

¹⁰Гоце Трајковски: Банкарско финансирање на надворешната трговија. Скопје, 2010, с.180-181.

¹¹Financial Stability Report for the Republic of Macedonia in 2013. National Bank of the Republic of Macedonia 2014, pp.104-105.

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sell the reclaimed asset at affordable price. However, the rate charged for such a damaged item (for example a vehicle) is lower and reduces the overall yields to the lessor. Many users fail to meet their obligations under the lease agreement. It is associated with their general unprofitable operations and the lack of regular cash inflows. This situation is major reason for the numerous terminated leasing contracts, extensive expenses or operations and unrealized operational and financial goals of the leasing companies in the Country.

The limited number of leasing companies, the global recession, the weak legal framework, the rigid and slow administration, the tax system and the psychological preference of ownership are often listed as other yet important factors why leasing is still under represent in Macedonia. All these reasons are closely interrelated. Leasing companies are small and with limited financial power and offer relatively poor range of products and services. Leasing industry is focused on vehicles and mostly to the personal lease. The offer to the legal entities in terms of equipment or construction machinery is weak.¹²

The mentioned psychological preference of ownership is important aspect of the problem. Our society and culture prefer ownership of the business tools, and leasing is considered as last resort and option for those that cannot afford to buy. Very appreciated common tradition is to inherit the real estate and to pass it to the next generation. This, in turn, contributes strongly to the bigger attractiveness of the bank loans.

¹²Financial Stability Report for the Republic of Macedonia in 2014. National Bank of the Republic of Macedonia 2015, p.112-113.

5. CONCLUSIONS

The potential for development of the leasing in Macedonia is indisputable. In creation of environment conducive for leasing the rich experience of the developed countries and successful examples from transitional and developing countries should be used. Considering the current situation, the projections of future development of leasing in the Country are depend on successful implementation of measures and activities in several areas, such as changes on the supply and on demand side of the leasing business.¹³

Issues of particular interest in the domain of the legal regulation are the property repossession procedure, the bankruptcy procedure, registration and definition of the financial leasing. The correctly designed solutions in these areas are prerequisite for legal security of participants in the leasing arrangements, as well as for development and successful application of the leasing. Some of these prerequisites are already present and some can be fulfilled in a relatively short-term. However, an adequate development of the banking sector and the secondary financial markets can be expected only on long term. It is a process that is similar in all countries with a similar level of development like Macedonia.

The structure of the offer of assets for leasing is largely determined by the demand that forms the structure of the active leasing agreements. Nevertheless, the increase and diversification of the demand for leasing of business assets is associated with a variety of macro and micro economic factors, changes and adjustments to the legislation and regulation and with other measures and activities that require time and efforts on many parallel areas. The impact of the developments in the international economy should also be listed among the factors affecting leasing.

Particularly great potential for development of leasing is in the area of business assets and related equipment in mining, minerals, but also in agriculture and services. The small businesses can largely benefit from leasing since it contributes to their faster

¹³SME Finance Policy Guide. International Finance Corporation, 2011, p.25.

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adaptation to the needs of customers or the large companies they supply. Leasing can supply various necessary equipment, often of large volume and diverse in type. In Macedonia there are several industrial zones in which operate several foreign companies. Modern equipment is main prerequisite for local sourcing to these companies and the leasing is the most suitable solution for that. Agriculture is other area of possible growth of the leasing. Modern agriculture requires expensive equipment and storage areas that can easily be obtained with leasing if the other obstacles like the lack of reliable credit record and suitable collateral of the companies and farmers in that sector.¹⁴

¹⁴ Blagoja Nanevski, Vesna Stojanova, Klimentina Poposka: Achievements of the leasing industry in the Republic of Macedonia. Journal of sustainable Development, May 2015.

BIBLIOGRAPHY

- Bank's Leasing Operations Regional. Special Study. European Bank for Reconstruction and Development. May 2011.
- Blagoja Nanevski, Vesna Stojanova, Klimentina Poposka: Achievements and perspectives of the leasing industry in the Republic of Macedonia. Journal of Sustainable Development, 2015.
- Canadian Finance & Leasing Association. The History of Leasing, 2010
- Chand, S. :Leasing: Definitions, Types, Merits and Demerits, <http://www.yourarticlelibrary.com/law/leasing-definitions-types-merits-and-demerits/23516>, visited February 9, 2016.
- Financial Stability Report for the Republic of Macedonia in 2013. National Bank of the Republic of Macedonia 2014.
- Financial Stability Report for the Republic of Macedonia in 2014, National Bank of the Republic of Macedonia 2015.
- Financing SMEs and entrepreneurs 2012. OECD, 2012.
- Groppelli, A.; Nikbakht, E.: Finance, Barron's Educational Series, 2000.
- Helmut Kraemer-Eis, Frank Lang: The importance of leasing for SME finance. European investment fund, 2012.
- Kirchler, E. and Haiss, P.: Market Structure as Determinant: the Case of Leasing in Banking Industry Transformation in Central and South Eastern Europe. Paper for presentation at the 8th Global Conference on Business & Economics. Florence. Oct. 2008.
- Leas Europe. A view on the European leasing market and vehicle theft, 2011.
- Leasing in Development. Guidelines for Emerging Economies. International Finance Corporation, 2009.
- SME Finance Policy Guide. International Finance Corporation, 2011.
- The Use of Leasing Among Europeans SMEs. Executive Summary. Oxford Economics, 2011
- Tanguy van de Werve, Leasing to European SMEs, November 2012
- Годишен извештај за секторот на МСП за 2013 година. АППРМ, Скопје, 2013.
- Гоце Трајковски: Банкарско финансирање на надворешната трговија. Скопје, 2010.

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**BANKING SERVICES IN TERMS OF CHANGING ENVIRONMENT: THE
CASE OF MACEDONIA**

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ABSTRACT

The aim of this paper is to elaborate the impact of the changing environment on the services that the banking sector is providing. The trends in the international banking will be analyzed also from the perspective of the banking activities on Macedonian banks. Speaking of changes, there are two tendencies that can be determined in the international banking: 1) increased competition that influence on the banking products and pricing, 2) technology improvements that affects the distribution channels of selling and the operating cost on the banking activities. Increased competition and sharing the same target market along with other financial institutions affects the banks' market share and prices of their products. In developed economies there is a trend of suppression of banks from certain market segments and reducing their market share. This trend is mostly expressed in USA and is less pronounced in EU. Also rapid technology development and penetration of Internet in everyday life doesn't leave immune nor the banking sector. The technological improvements affect the banking industry through introduction of new products, increasing efficiency in terms of operating costs and developing new distribution channels. Banks are forced to adapt their products to a new generation that is coming and who grew up in the Internet Age. The biggest changes have been made in terms of payment methods by allowing transactions to be made 24 hours a day from anywhere. The development of technology also affects on the improvement of data bases which enable better assessment of credit risk to individual products and customers. Banks along with other

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financial institutions are joining in collecting and sharing of customer data that enables better assessment of the credit risk.

KEYWORDS: banking services; increased competition; technology improvements; credit cards; internet; credit assessment tools

JEL CLASSIFICATION: G21, L86

1. INTRODUCTION

The banking activities and products are changing rapidly. These changes are induced mainly from the increased competition in the financial sector and the technology improvements. These two factors affect simultaneously and are interrelated. Their impact will be subject on analyze in this paper. In the part of technology improvement special attention will be given to credit cards, internet and credit assessment tools.

Namely, the increased competition in the financial sector affects on the market share of the banking industry and is forcing it to create new products and to increase efficiency. The best way to achieve these goals is through greater use of new technologies and new distribution channels. According to Digal⁴ technological changes relating to telecommunications and data processing have spurred financial innovations that have altered bank products and services and production processes. The ability to use applied statistics cost-effectively has markedly altered the process of financial intermediation. The technological changes also have impact on the assessment tools that are used in risk management. The bigger data warehouses allow building new models for assessment of the risks that banks are taking. That enables more precise measurement of the risks that are taken and better product development. The new marketing philosophy requires any product to be available at anytime, anywhere which

⁴ Digal Birenjan: Technological Change & Financial Innovation in Banking, Institute of Management Studies

implies increased use of electronic banking in the banking activities which turns banks into shops with 24-hour service.

2. INCREASED COMPETITION IN THE FINANCIAL SECTOR

As a consequence of deregulation of the financial market the position of the banks is changed. There is terminal decline of commercial banks and their long-standing deposit taking and loans functions. This tendency is especially distinctive for USA, where for example, the commercial banks' share of total assets in financial institutions has fallen from over 70% in 1900 to barely 30% hundred years later⁵. The banks' share of corporate debt has fallen from 19% in the 80-ties to 14% in the 90-ties. So competition on both sides of the balance sheet has increased. The main drivers of changes on the liability side were the new technologies and deregulation that gave access to mutual funds and others types of alternatives. On the asset side of the balance sheet the growth of money and bond markets and commercial paper has given companies alternative ways of borrowing money. The banks can respond in two ways: 1) bigger risk appetite or 2) improve the products and services and reduce costs. Competition affects the value of bank franchises. Faced with difficulties, banks might, in the presence of imperfect monitoring by the regulators and the markets, can further enhancing risk taking, hoping that positive outcomes will materialize. The relative attractiveness of these options depends on the regulatory framework and the scope for moral hazard, but also on the value of bank franchises.

The second manner in which a bank can respond in increased competition is to improve its products and services and to reduce the costs. This is strongly associated with the use of new technologies and distributive cannels. The first and the most obvious change which will affect retail banks is that the new technology will drastically reduce branch numbers. The increased use of credit cards, internet payments and other forms of payment will result with staff reduction and smaller operative expenses. According to Crédit Lyonnais the new alternatives of payment in UK will result with 5%

⁵ Deloitte center for banking solutions: Adapting to a changing environment - Evolving models of retail banking distribution, p7.

decrease in the number of employees per year and total annual savings of 1.677 million pounds⁶. Also, in changing environment the development of new distribution channels has become a key strategy in improving value added and satisfying customer requirements. The former marketing philosophy of “the right product must be available at the right time” has been replaced by “any product must be available at anytime, anywhere”.

The Macedonian banking sector is still not affected by increasing competition from the other financial companies, as can be seen in Table1⁷. The share of the banks in the total assets of the financial system is stable and it is around 90%. Compared with the EU area average where banks and saving houses have 70% share⁸ in the total financial assets, the depository financial institutions in Macedonia have very dominant share.

One of the factors that have influence on the small share of the other financial institutions in total assets is certainly the low sophistication of the customers. As their interest awareness is growing probably this tendency of decreasing market share on the banks in the total structure of financial assets will be case in Macedonia too.

Table 1. Structure of total assets of the financial system of the Republic of Macedonia

Structure of total assets of the financial system of the Republic of Macedonia				
	2005	2010	2013	2014
Depository financial institutions	90%	90%	88,3%	87,5%
Banks	88%	89%	87,6%	86,8%
Saving houses	2%	1%	0,7%	0,6%
Nondepository financial institutions	10%	10%	11,7%	12,5%

Source: National Bank of the Republic of Macedonia.

Another aspect that has impact on the banks activities and products is the level of financial intermediation. The financial intermediation in the Republic of Macedonia

6 Edward M. P. Gardener, Peter C. Versluijs: Bank Strategies and Challenges in the New Europe, Palgrave Macmillan (September 22, 2001), p1-4.

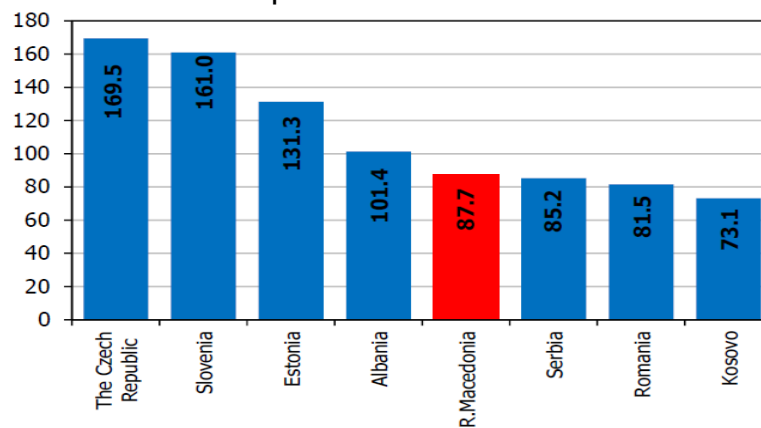
7 National Bank of the Republic of Macedonia: Financial Stability Report for the Republic of Macedonia in 2014, pp 64.

8 Bank of Slovenija: Financial stability review, 2015, pp 28.

(Figure 1) is on the lowest level relative to some countries from the European Union⁹. The financial intermediation measured through the credits and GDP ratio in the banking systems in Romania and the Republic of Macedonia are almost at the same level. The small level of financial intermediation decreases considerable the efficiency of the banking sector. The small level of financial intermediation has negative effects on the real economy development.

The structure of the Banks' assets and liabilities structure indicates that the Macedonian banks business model is traditional. On the liabilities side the deposits of non-financial entities with 71,7% are dominant source of financing. The assets side is dominated by loans on non-financial entities whose share in the total assets is 55,5%¹⁰.

Figure 1. Financial intermediation level in the Republic of Macedonia and other sample countries in 2014



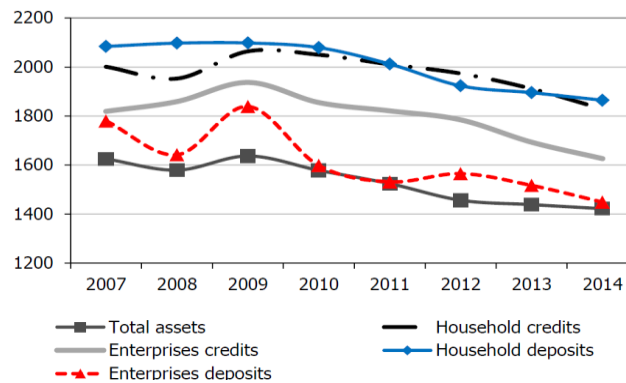
Source: National Bank of the Republic of Macedonia.

Important characteristic of the Macedonian banking sector that influence on the products that are offered and their pricing is the concentration. The measurement with the Herfindahl index points that the banking system is highly concentrated in all the banking activities, especially in the household deposits. The Herfindahl indexes (Figure 2) assert that this condition is very rigid and there aren't any big movements in the concentration of the banking sector.

⁹ National Bank of the Republic of Macedonia: Financial Stability Report for the Republic of Macedonia in 2014, pp 65.

¹⁰ National Bank of the Republic of Macedonia: Report on Banking System and Banking Supervision of the Republic of Macedonia in 2014.

Figure 2. Herfindahl index on the Macedonian banking sector.



Source: National Bank of the Republic of Macedonia.

With three main competitors that hold more than 65% of the market, the biggest three banks are market leaders and are main innovators in banking services. This practically oligopoly structure has strong influence on the pricing of the banking activities. The three leading banks are price makers and the other banks follow the actions of the big banks¹¹. The size of the assets of banks and market share, indicate extensive use of market power of banks in determining interest rates and lending spreads. These variables can be treated as "key" variables, i.e variables with the greatest effect. The growth of banks' assets and reducing the market share of certain banks (i.e. the growth of competition), can lead to further reduction of lending interest rates and narrowing spreads. Considering the current structure of the banking system, a relatively high concentration and relatively large number of banks, there is need for consolidation of the banking system through acquisitions and / or mergers in the segment to other banks and thereby creating larger banks, which will increase the level of competition and contribute to reducing interest rates and spreads. As far as the global trend of reducing the banking network, the number of business units in Macedonia is stable¹². The banks network in 2014 includes 429 business units (including banks' headquarters) and is spread in almost all towns in the country. However, compared with the average of all EU member countries (EU-27) the indicator for number of

11 Mihajlo Vaskov, Ljupka Georgievska, Riland Kabasi, Nora Manova Trajkovska and Ana Mitrevska: Determinants of lending interest rates and interest spreads in R.Macedonia, pp.17, 2010.

12 National Bank of the Republic of Macedonia: Report on Banking System and Banking Supervision of the Republic of Macedonia in 2014, pp 55.

residents to which a single bank in the Republic of Macedonia can render its services is almost double. The lack of competition in Macedonia does not affect the scope of banking services, but their prices. The development of new banking products is determined by the development of technology and innovations that are primary promoted by the parent banks.

3. THE IMPACT OF TECHNOLOGY CHANGES ON BANKING ACTIVITIES

Retailers have long recognized that it takes more than just good products to bring in customers and keep them in the store. The most sophisticated retailers have become very adept at designing their stores around the needs of their customers, with the goal of making them “destinations” — some place that customers want to visit as opposed to some place they have to endure. Bank branches, on the other hand, have typically been designed as transaction centers, aiming for speed and efficiency as opposed to creating a positive and memorable customer experience, that attracts customers. Branches will have little choice but to leverage technology to its fullest, if not to manage operating costs, then to meet the expectations of its younger counterparts who view technology as an integral way of life. Gone are the days when technology was only seen and used by trained branch staff, remote from ordinary customers. Today bank branches around the world are creatively using technology to construct a new image for their branches, inform consumers about products and services enhance customers’ branch experience, and give them an opportunity to execute basic banking services without queues.

The major changes in banking services are reflected in innovations on the methods of payment. The methods of making payments have shifted considerable with a strong trend towards automated settlement and away from paper transactions. This trend is expected to continue with gains in bank profitability as customers move from

high cost transaction, such as cheques, to low cost methods of payment such as debit cards. The main changes in the payment methods can be summarized as follows¹³:

- The extensive use of plastic cards for various purposes

The application of automation to special payment circuits for regular small value payments.

3.1 Credit cards

This is one of the most standardized methods of payment, standardized that is to size and shape. Perhaps the most important characteristic of credit cards is that they are very versatile and adaptive. They can be used to withdraw banknotes from ATMs but also to pay for purchases at a distance quoting the holder's card number over the telephone. There are benefits to customers and merchants from the credit card use. The main benefit to each customer is convenience. Compared to debit cards and cheques, a credit card allows small short-term loans to be quickly made to a customer who need not calculate a balance remaining before every transaction, provided the total charges do not exceed the maximum credit line for the card. For merchants, a credit card transaction is often more secure than other forms of payment, because the issuing bank commits to pay the merchant the moment the transaction is authorized, regardless of whether the consumer defaults on the credit card payment. In most cases, cards are even more secure than cash, because they discourage theft by the merchant's employees and reduce the amount of cash on the premises.

This trend of increased use of credit cards can be confirmed in the Macedonian banking sector. Starting from 2006 until 2009 the share in the total household exposure had increasing trend, and until 2014 there is a slightly opposite trend. (Fig 3) Still, the number of credit cards compared to 2006 is tripled. Banking sector also constantly strengthens the infrastructure for credit card use through increasing of the POS and ATM terminals. As can be seen from fig.4 the growth to credit cards

¹³ Edward M. P. Gardener, Peter C. Versluijs: Bank Strategies and Challenges in the New Europe, Palgrave Macmillan (September 22, 2001), pp7.

exposure is accompanied by growth in the number of POS and ATM terminals¹⁴. Once the infrastructure is set the growth rate of POS and ATM terminal decreased and the number of terminals is stable.

Fig 3. Annual credit card growth in R. Macedonia

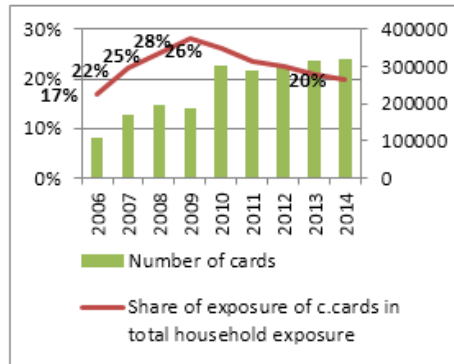
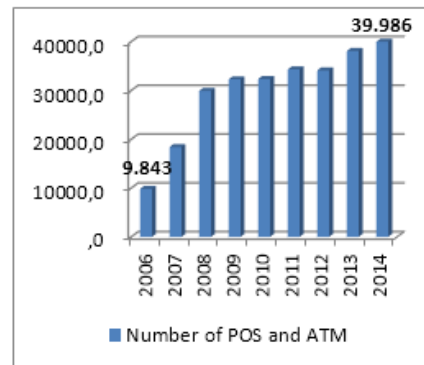


Fig 4. Number of POS and ATM terminals



Source: National Bank of the Republic of Macedonia

However more forthrightly analysis is showing that although the number of credit cards has increased, they are not used directly in merchants' network but mainly for cash withdraw. According to the National Bank of Macedonia, at the end of 2014 the country has over 1.6 million credit cards, most of them debit, or about 1.289 thousand. But this fact it's not surprising as the fact that over 74 percent of the value of the transactions were made only to raise cash¹⁵. This shows that the habits of the clients also have a major role in introducing new products. However, there is a positive trend of increased number of credit cards and increased value of payments made with them. Compare to 2006 the number of transactions with credit cards is increased for 971% and the value of payment transactions for 7.5 times.

3.2 The Internet

The internet has attracted the attention of economist because of his possibilities for selling all sorts of goods and services. Behind all these commercial uses for the Internet lies the question of payment for the goods and services purchased. As a result of this

¹⁴ National Bank of the Republic of Macedonia: Report on the use of payment cards and devices for their use in the country, 2015.

¹⁵ National Bank of the Republic of Macedonia: Report on the usage of payment cards and the devices at which they are used in the country, 2015.

need Internet banking was developed. The internet banking has a lot of advantages: 1) the operating costs are lower, resulting in a redundancy of employees, 2) it saves time and money on the clients because it can be used from home at any time, 3) it can be used for cross selling of other bank products. There are several methods in existence that can be used for internet payments. One criterion against which all will be judged is that of security, protection against hackers either intervening in the transaction or obtaining information that could be used in fraudulent transactions. One obvious method is to use credit cards. But because it involves giving a credit card number it enables a hacker to collect the numbers and to use them fraudulently. Although encryption is used for the number the level of protection isn't that high to prevent all possible hacker attacks. Other method is the use of electronic money. The money consists of unique numbers in digital, binary form. Although as method of payment are more secure than the credit cards the use of e-money has been relatively low-scale. According to De Young (2005)¹⁶, the first bank websites were launched in 1995 and by 2002 nearly one-half of all U.S. banks and thrifts operated transactional websites. As of 2007, bank call report data suggests that 77% of commercial banks offer transactional websites (and these banks control 96.8% of commercial bank deposits). Turning to online bank performance, De Young, Lang, and Nolle¹⁷ (2007) report that internet adoption improved U.S. community bank profitability – primarily through deposit-related charges. In a related study, Hernando and Nieto (2007) find that, over time, online banking was associated with lower costs and higher profitability for a sample of Spanish banks. Both papers conclude that the internet channel is a complement to – rather than a substitute for – physical bank branches. Gonzales and Guerrero (2004) note the results of a survey by Pricewaterhouse Coopers and the Confederation of British Industry, that, 83% of the UK financial institutions expected

16 DeYoung R. (2005) "The performance of internet-based business models: evidence from the banking industry", *Journal of Business*, vol.78, n.3, pp. 893-947

17 DeYoung, Lang, and Nolle, 2007, "How the Internet Affects Output and Performance at Community Banks" *Journal of Banking & Finance* 2007(4): 1033-1060

e-business would reshape the banking industry, while the rest claimed that it would have a significant impact on the banking sector¹⁸.

The Macedonian banks are aware that new changes are fundamental for their performance improvement. Almost all Macedonian banks offer internet banking. Particularly important is that this method of payment has more and more customers. There is 100% increase on number of internet payments in 2014 compared to 2006. The value of transaction is more than tripled¹⁹.

3.3 The impact of technology on credit assessment tools

The technology improvement and data base building have great influence on the credit assessment process. Especially at the retail segment it's a worldwide practice the assessment to be done by scoring system. Retail loan applications are now routinely evaluated using credit scoring tools, rather than using human judgment. And to build a good scoring system a data base with quality data for sufficient period of time is of crucial importance. Such an approach makes underwriting much more transparent to third parties and hence facilitates secondary markets for retail credits. Another important use of data bases in the credit approval process is through the information provided by the credit bureaus. All these opportunities have influence on processes that are carried in a bank. They make the approval process less human intensive and the pricing is more correct. In that way the banks are decreasing their operative expenses and in the same time are decreasing the default rates of its products.

One way of thinking about technology is that it is a package of decisions taken for the users by its designers. Technology specifies a set of interrelated steps one needs to take to achieve some desired end. In a sense, technology can be thought of as a package of decisions taken out of the hands of the customer. What technologies promise us is that after the initial choice of the specific technology, to get optimal results, it is enough to follow the technological prescriptions. After the technology was deployed, its results may present users with hitherto unavailable options, but

¹⁸ Maria Victoria Roman Gonzalez, Mario Martinez Guerrero, New competitors in banking services, *Journal of Financial Services Marketing*, 2004.

¹⁹ National Bank of the Republic of Macedonia: Reports on the usage of the payment instruments.

technology itself greatly reduces the role of human agency during the process of achieving those results.

According to Akos Rona-Tast²⁰ the package of decisions is justified in three ways: by its functionality, architectural coherence and autonomy. Functionality is the first and most important consideration. Here the claim is that the technology achieves its goals in some optimal fashion. Architectural coherence, on the other hand, points to how each decision depends on others. Here the claim is that even though each element may not directly promote functional optimality in the context of the architecture of the technology, the other choices designers made, it is the best technical solution, and i.e. replacing it with another part would harm functionality. Finally, a technology has to be easy to apply, otherwise it needs other technologies. If a technology is not autonomous and requires other technologies to work, it is incomplete and must expand to incorporate its complementary technological requisites. The strong claim for a technology is that it is functionally optimal (it achieves best results compared to available alternatives), architecturally coherent (its component decisions are a seamless whole), and it is autonomous (it functions in most contexts).

The credit scoring should be viewed as a process. This process is supported by IT technology and fulfills the three conditions: is optimal, coherent and autonomous. It is claimed to provide the best prediction of the applicant behavior and everything in the process to be chosen to promote that. It is also alleged to be autonomous, to be applicable anywhere, anytime by just about anyone. The technology of predicting credit behavior has been a great success despite the fact that its functionality is hard to gauge, its internal architecture often follows computational convenience at the expense of functionality and its application depends on other, complex technologies that can have crucial effect on its performance. So why is it spreading so fast in lending? The expansion of credit scoring does not depend on its superior ability of vaticination. It is driven by its other advantages: that it is cheaper, faster than its alternative, expert

²⁰ Akos Rona-Tas, University of California, San Diego: Credit assessment as formalized vaticination, pp 3, 2010.

judgment. It also gives more control for top managers over their subordinates and the lending process, in general, and provides legitimacy both legal and professional.

Another use of the opportunities that the modern data bases are providing is through a credit bureau. A credit bureau is a company that collects information from various sources and provides consumers' or businesses' credit information on individual consumers/businesses for a variety of uses. Credit bureaus ordinarily prepare and issue reports for lending institutions and stores that investigate the financial reliability of an applicant for credit prior to the execution of the credit agreement. This helps lenders assess credit worthiness, the ability to pay back a loan, and can affect the interest rate and other terms of a loan. Interest rates are not the same for everyone, but instead can be based on risk-based pricing, a form of price discrimination based on the different expected risks of different borrowers, as set out in their credit rating. Consumers with poor credit repayment histories or court adjudicated debt obligations like tax liens or bankruptcies will pay a higher annual interest rate than consumers or businesses that do not have these factors. This is another way for the banking industry to get more accurate assessments on the credit risk and to decrease the operating expenses and the default rate. In Macedonia there is law for credit bureaus from 2008 and one credit bureau is already established. This bureau started with its operations from January 2011.

4. CONCLUSION

Banking is a dynamic activity constantly subject to changes. These changes worldwide are driven by two main factors that are connected mutually: 1) increased competition between the financial institutions and 2) technology improvement. The technology improvements influence on the banking products and distribution channels. These improvements have impact on the marketing strategy of the banks and now the bank's products are available 24 hours a day. The biggest improvements are in the payment methods through increased use of credit cards and internet. Internet is medium of the new generation and heavily influence on the banking activities. The biggest application on Internet is in the payment system but is also used to promote

other banking products as well as an on line application for them. The technology improvement and data base building also have great influence on the credit assessment process. Especially at the retail segment it's a worldwide practice the assessment to be done by scoring system. And to build a good scoring system a data base with quality data for sufficient period of time is of crucial importance. Another important use of data bases in the credit approval process is through the information provided by the credit bureaus. All these opportunities have influence on processes that are carried in a bank. They make the approval process less human intensive and the pricing is more correct. In that way the banks are decreasing their operative expenses and in the same time are decreasing the default rates of its products. As a result of the changing environment the banking industry is enhancing the existing products and there is a permanent process of promoting new products in order to maintain the market share and to make the products more accessible to clients.

These world trends are applied by the Macedonian banks in order better to satisfy the customer needs and to provide better market position. The number of cards is increasing every year. Still there is high increase of the value of payment transactions since 2006 which means that the citizen habits are changing in positive way. Also, Macedonian bank accept the international practices for increased use of internet in banking. Almost all Macedonian banks offer internet banking. And it is increased the number of legal, as well as retail customers who rapidly use internet banking in the last two years. Further increase in the number of services in the Macedonian banking system, as well as enhancing their quality can be achieved through further enlargement of the banks, strengthening their capital base that will result in increased competition between them.

BIBLIOGRAPHY

- Akos Rona-Tas: University of California, San Diego: Credit assessment as formalized vaticination, 2010.
- Bank of Slovenija: Financial stability review, 2010.
- Deloitte center for banking solutions: Adapting to a changing environment - Evolving models of retail banking distribution, 2009.
- DeYoung Robert: The performance of internet-based business models: evidence from the banking industry, *Journal of Business*, 2007.
- DeYoung, Lang, and Nolle: How the Internet Aspects Output and Performance at Community Banks, *Journal of Banking & Finance*, 2007.
- Digal Birenjan: Technological Change & Financial Innovation in Banking, *Institute of Management Studies*, 2009.
- Edward M. P. Gardener, Peter C. Versluijs: Bank Strategies and Challenges in the New Europe, 2001.
- Maria Victoria Roman Gonzalez, Mario Martinez Guerrero: New competitors in banking services, *Journal of Financial Services Marketing*, 2004.
- Mihajlo Vaskov, Ljupka Georgievska, Riland Kabasi, Nora Manova Trajkovska and Ana Mitrevska: Determinants of lending interest rates and interest spreads in R.Macedonia, 2010.
- National Bank of the Republic of Macedonia: Financial Stability Report for the Republic of Macedonia in 2014, 2015.
- National Bank of the Republic of Macedonia: Report on Banking System and Banking Supervision of the Republic of Macedonia in 2014, 2015.
- National Bank of the Republic of Macedonia: Report on the usage of payment cards and the devices at which they are used in the country, 2015.
- National Bank of the Republic of Macedonia: Reports on the usage of the payment instruments, 2013.

**IMPORTANCE-PERFORMANCE GAPS IN SKILLS AND KNOWLEDGE OF JUNIOR
MANAGEMENT AND STAFF IN TOURISM AND HOSPITALITY INDUSTRY IN REPUBLIC OF
MACEDONIA**

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IMPORTANCE-PERFORMANCE GAPS IN SKILLS AND KNOWLEDGE OF
JUNIOR MANAGEMENT AND STAFF IN TOURISM AND HOSPITALITY
INDUSTRY IN REPUBLIC OF MACEDONIA

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ABSTRACT

To meet the needs of the rapidly changing tourism and hospitality industry, the educators in higher education for tourism must continually survey what competencies are essential and accordingly to revise their curricula. We research executive managers in Macedonian tourism services and industries for their perception of the importance of a set of 22 skills and abilities and then compare the answers with their assessment of the level of performance that the newly employed bachelors show. The results show that the most appreciated skills by the managers are event handling, creativity, accountability (reliability). However, the survey turned perceived gap between the need and the skills of the bachelors is highest precisely in case of the creativity and in the event handling skill. However, managers same time think that new employees do not need networking and negotiation skills, which is odd, if they are supposed to ultimately replace them on their executive positions. Despite its limitations, our research indicates on some particular skills that industry professionals in Macedonia appreciate and they are not always from the professional core of skills and knowledge. While our research did not contradict the results of the many other research that put forward professional skills and training, it puts forward creativity, inherently a soft skill and suggests that the higher education should consider introduction of more creativity-fostering content and subjects.

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KEYWORDS: tourism, Importance – Performance Analysis, competencies, education, skill sets, curricula design, internships

JEL CLASSIFICATION: L25, L83, M15, O11, O32

INTRODUCTION

While researching the differences in the speed of the recovery of Germany and Japan versus that of the Great Britain, after the II WW, Theodore Schultz, the father of the human resource management, notices that the former two countries had education systems that make their work force better to cope with the challenges of the modern environment. Meanwhile we all learned that one of the key facets of creation of valuable human capital is the careful balance between hard knowledge and soft skills. Tourism today is major social phenomenon driven by social, religious, recreational, knowledge-seeking and business interests and it is motivated by the human need for new experience, adventure, education and entertainment. Consequently, it is industry that entails plenty of “face to face” interaction with its customers, and that makes the tourism industry highly dependent on an adequate balance between the hard and the soft skills of its employees. Globalization fostered further the development of the tourism to become global sector and one of the main sources of revenue generation in many economies.³ Travel and tourism industry is the largest service industry and largest employment generators in the World.⁴ With increasing globalization and disposable income, tourism has over the last few decades, become one of the largest and fastest growing industries generating app. 5 per cent of global gross domestic product (GDP) and between 6 and 7 per cent of the overall number of jobs worldwide.⁵ Thus, tourism today is both, a cause and a consequence of the economic development of the World. It has potential to stimulate other sectors in the economy, thanks to its cross-sectorial synergistic effect and its backward and

³Hinch, T. and Butler, R. (2007) “Tourism and indigenous people: issues and implications”, Butterworth-Heinemann Publishers, Amsterdam

⁴Amalu, E. at al. (2012) “Assessment of the Influence of Education on Tourism Development in Enugu State, Nigeria”, American Journal of Tourism Research 1(1) pp. 33-42

⁵UNCTAD (2013) “Tourism’s Contribution to Sustainable Development”, pp. 14–15

IMPORTANCE-PERFORMANCE GAPS IN SKILLS AND KNOWLEDGE OF JUNIOR MANAGEMENT AND STAFF IN TOURISM AND HOSPITALITY INDUSTRY IN REPUBLIC OF MACEDONIA

forward linkages.⁶ Having all this in mind, no wonder the most important success factor in the contemporary tourism become the supply of educated and skilled labour. Consequently, the number of hospitality and tourism management programs continually grows since the first such program was established at Cornell, back in 1920's.⁷ This is also a substantial shift from the traditional image of this industry as employer of mainly unskilled or semi-skilled labour prone to high turnover rates.

Our research aims to identify the gaps between the current offer and the needs for quality and educated labour in the tourist industry in Republic of Macedonia. By identifying the gaps in performance of the junior management and staff we pinpoint on the areas in which the education systems should concentrate. The beneficiaries of the results of our study are all key industry stakeholders. The educational institutions can redesign their curricula accordingly, while the professionals can adjust their on the job training to fill the gaps and to meet the newest trends in the industry. Finally, the entire economy of the Republic of Macedonia benefits since the tourism sector is important contributor to the gross domestic product. The travel and tourism direct contribution to the country GDP grow from 3.7% in 2005 to 5.5% in 2015, making it an attractive visitor destination.⁸

LITERATURE REVIEW

An effective education in tourism must address a subset of very specific issues unique to this industry, in addition to the general challenges that the XXI Century brings to many other domains of the education system in a given country. Many researchers studied the general framework and the consultations between the policy makers in tourism and in education. That general framework traditionally advocated the development and implementation of a specific tourism education policy in order to

⁶Dun & Bradstreet India (2015) Indian Travel, Tourism and Hospitality Industry

⁷Chung, Y. (2000) "Hotel management curriculum reform based on required competencies of hotel employees and career in the hotel industry", *Tourism management*, 21 (5) pp. 473-487

⁸World Data Atlas – Tourism (2015)

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bring the tourism education closer to the respective national tourism policies.⁹ Education for tourism started with the development of the professional colleges in Europe. These schools offered professional education and training in the core skills of hospitality, hotel management and in related business skills. They were soon accompanied with programs in travel and tourism offered by the universities. However, Morgan in 2004, while exploring how the tourism education meets the needs of the students and the employers, found that in order to prepare the students for the future in which this industry will be part of the much wider "experience" industry, it should introduce many liberal arts and humanistic values, beyond the professional knowledge base.¹⁰ In other words, the education for tourism should go much far than the core education for the hospitality segment if we want to improve the attractiveness of these studies among the students, who do not always appreciate the tourism programs as sufficiently lucrative career path. Aksu and Köksal, in 2005 surveyed the expectations of the Turkish students. Their results show negative perceptions and attitudes toward the tourism industry.¹¹

The industry also has sometimes perception of low usefulness of these studies. Connolly and McGingre searched how tertiary education meets the needs of the hotel industry in Ireland. They found that the industry has a strong preference to hire people with practical skills and that the providers of education need to concentrate on this element including placements in hotels as part of the courses they provide. They also found that the analytical skills are not considered very important, whereas problem-solving and decision-making skills are valued. As a result of these findings, the authors suggest that an evaluation of graduate education in the hospitality industry in Ireland should be undertaken in terms of the way in which courses are being designed and what learning outcomes should be achieved. They also found the usefulness of the

⁹Vanessa A. et al. (1997)'Tourism education: policy versus practice', International Journal Of Contemporary Hospitality Management, 9(1) p.5

¹⁰Morgan, M. (2004) 'From production line to drama school: higher education for the future of tourism', International Journal Of Contemporary Hospitality Management, 16 (2). pp. 91-99

¹¹Aksu, A.,&Köksal, C. (2005) 'Perceptions and attitudes of tourism students in Turkey', International Journal of Contemporary Hospitality Management, 17 (5). pp. 436-447

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work placement and part of the course outlines.¹² Lam and Xiao, in 2000 undertook a comprehensive review of the tourism education in China. Their results show big gap between the supply and the demand for quality personnel and generally poor curriculum designs. They found that the graduates from tourism education institutes and vocational training schools in China often fail to meet industry needs, despite the number of educational reforms.¹³

The professional education in the domain of tourism calls for introduction of various seemingly unrelated disciplines like the national history and culture, ethnology, sociology, sports, health and many other disciplines, that are relevant for the tourism industry in a country. Since they all intersect in the minds of the consumers of the tourism related services, the professionals working in this industry should all possess advanced knowledge of the main facets of all these disciplines. However, this might prove very difficult to achieve. Thus, Crispin and Neil argue for an opposite approach and proposed that tourism education should be more focused. For them, the mayor objective is to make both the industry and the field of study, sustainable in the long term and conclude that it cannot be achieved if the social phenomena like the "McDonaldization" and the "Disneyization" of the societies are ignored.¹⁴

Morgan also suggests that the tourism educators should develop courses specifically to meet the needs of the industry.¹⁵ Leslie and Richardson call for more work experience.¹⁶ Busby, Brunt, and Baber noted that the academic subjects, if supported with strong summer internships, significantly improve competence skills set of the students advocating for schooling-work-schooling sandwich placements and advocating

¹²Connolly, P. and McGing, G. (2006), 'Graduate education and hospitality management in Ireland', *International Journal Of Contemporary Hospitality Management*, 18 (1), pp. 50-59

¹³Lam, T. and Xiao, H. (2000), 'Challenges and constraints of hospitality and tourism education in China', *International Journal Of Contemporary Hospitality Management*, 12 (5) p. 291,

¹⁴Crispin, D. and Neil, R. (2001). 'The theming of tourism education: a three-domain approach', *International Journal Of Contemporary Hospitality Management*. 13(1) p. 30.

¹⁵Morgan, M. (2004)'From production line to drama school: higher education for the future of tourism', *International Journal Of Contemporary Hospitality Management*, 16 (2). pp. 91-99

¹⁶Leslie, D., and Richardson A. (2000) "Tourism and cooperative education in UK undergraduate courses: Are the benefits being realized?", *Tourism Management*, 21(5)

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programs that incorporate practical vocational experience.¹⁷ Similarly, Ernawati promoted practicums as part of regular curricula.¹⁸ Martin and McEvoy surveyed the students that attended simulation as a part of the overall tourism and hospitality industry. They found that the learning experience and critical and analytical thinking are all positively related with the level of involvement in the simulation.¹⁹

Contemporary hospitality programs together with the traditional areas of accommodation, catering and tourism also include courses in event management, recreation, gaming, and cruise management. With this expansion comes a demand from students and a willingness from educators to add focused areas of study and a broader array of course offerings in the curriculum. More recently, globalization of the market, growth in technology, and cultural diversity, have become critical factors affecting the needs of hospitality graduates.²⁰ Singal compared the structural characteristics of the hospitality and tourism industry with other industries, based on a sample of firms from the S&P 1500 Index and found that this industry has higher risk, higher capital intensity, higher leverage and harsher competitive rivalry than other industries in the U.S. These differences call for different profile of employees and consequently, for different curricula and style of teaching.²¹ In case of the tourism industry, all three general human resource management approaches are needed: (1) the universal or the best practice approach, (2) the best-fit or contingency approach and (3) the resource-based approach indicating on the practice of the international hotel industry that uses a mixed approach. They also found that the achievement of

¹⁷Graham Busby, Paul Brunt and Sally Baber (1997) "Tourism sandwich placements: an appraisal", *Tourism Management*. 18 (2). Pp. 105–110

¹⁸Ernawati, B. (2003) "Stakeholders' Views on Higher Tourism Education", *Annals of Tourism Research*, 30 (1),pp. 255-258

¹⁹ Martin, D., and McEvoy, B., (2003) 'Business simulations: a balanced approach to tourism education', *International Journal Of Contemporary Hospitality Management* 15 (6). pp. 336-339

²⁰ Whitelaw, P. at al. (2009) "training needs of the hospitality industry", *CRC for Sustainable Tourism*

²¹Singal, M. (2015), "How is the hospitality and tourism industry different? An empirical test of some structural characteristics", *International Journal of Hospitality Management* 47 pp. 116–119

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the competitive advantage based on superior human resources is only possible if the staff has expertise that matches the corporate needs.²²

METHODOLOGY AND THE RESULTS OF THE RESEARCH

In order to survey the needs of the businesses versus the actual skills of the junior managerial cohorts of bachelors of various tourism disciplines, they employ, we designed a structured questionnaire that was distributed to the sample of 172 senior managers in the Macedonian tourism industry (hospitality, catering, tour operators and agents). In order to identify and present the gaps between the current skills set and the needs of the industry, we used Importance-Performance Analysis. Participants were asked to mark one for the non-important, up to five for the very important skills the young employees and junior managers should, according to their opinion, possess for successful fit and prospective career in the tourism industry. Next, they were asked to do the same, now marking their personal opinion about the level of the skills that their recent employees actually possess. The Table 1 shows the relative scores for each skill, generated by merging the answers of all participants in the survey. Chart 1 shows the same results, using the common importance – performance spatial matrix. The chart 2 visualizes the average values of the perceptions of the importance, the performance and the gap between the two lines for all 22 skills, tested.

Table 1. Importance, performance perceptions for given skills of the tourism graduates of the managers in Macedonian tourism industry

Index	Skill	Importance	Performance	Gap
1	Creativity	90%	52%	38%
2	Event handling	91%	57%	34%
3	Problem solving	72%	48%	24%
4	Knowledge of the industry	73%	51%	22%
5	Critical thinking	74%	53%	21%

²²Gannon, J., Roperb, A. and Doherty, L. (2015) "Strategic human resource management: Insights from the international hotel industry", *International Journal of Hospitality Management* 47 pp. 65–75

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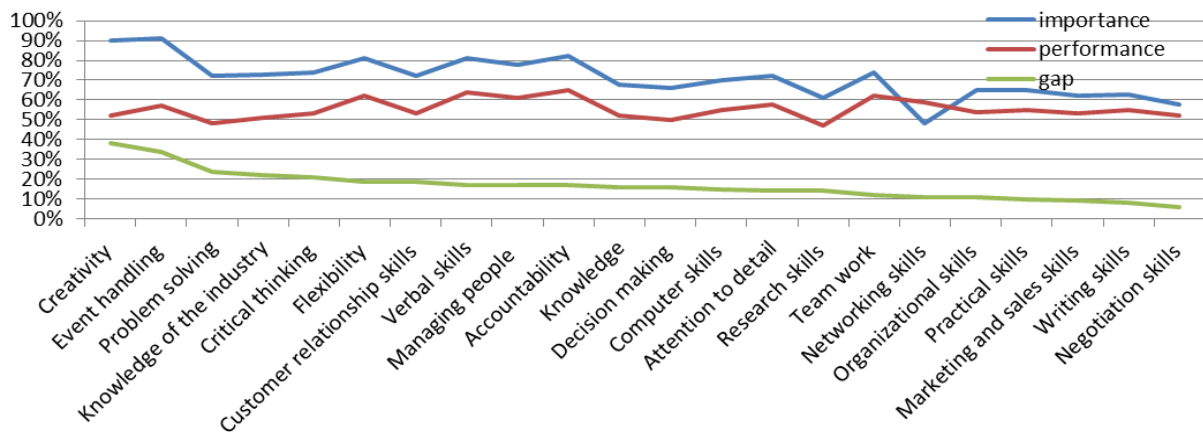
6	Flexibility	81%	62%	19%
7	Customer relationship skills	72%	53%	19%
8	Verbal skills	81%	64%	17%
9	Managing people	78%	61%	17%
10	Accountability	82%	65%	17%
11	Knowledge of legal issues	68%	52%	16%
12	Decision making	66%	50%	16%
13	Computer skills	70%	55%	15%
14	Attention to detail	72%	58%	14%
15	Research skills	61%	47%	14%
16	Team work	74%	62%	12%
17	Networking skills	48%	59%	11%
18	Organizational skills	65%	54%	11%
19	Practical skills	65%	55%	10%
20	Marketing and sales skills	62%	53%	9%
21	Writing skills	63%	55%	8%
22	Negotiation skills	58%	52%	6%
Average gap				15.82%

Chart 1. Importance, performance matrix for all 22 skills as perceived by senior managers in Macedonian tourism industry



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Chart 2. Importance-performance and gaps as perceived by the managers in Macedonian tourism industry



Regarding the structure of the sample, the participants in the survey were in 60% from restaurants and bed and breakfast and privately held boutiques hotels, 16% were from larger hotels and 24% from tourist operators and agencies. Regarding their personal business experience, 38% had less than five years in tourism, 35% had between 5 and 10 years, and 27% had more than ten years of experience.

CONCLUSIONS AND RECOMMENDATIONS

The results show that the most appreciated skills of the newly graduates as perceived by the managers are the event handling (planning, organizing and executing), creativity, accountability in terms of reliability, flexibility and verbal skills in terms of easiness of communication. The less important skills are the networking skills, negotiation skills, research skills, marketing and sales skills and writing and verbal skills. In addition, it can be seen that the level of performance lags behind the level of importance in average by 15.8%. Only in the case of the networking skills, the performance level exceeds the perception of its importance. Indicative is that in the case of the three skills perceived as most important (creativity, event handling and problem solving) the gaps between the needs and the perception of the actual ability of the employees to perform are highest.

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Performance Analysis has been already successfully applied in education, hospitality and tourism to help managers identify which attributes of their product or service should be improved in order to increase overall customer satisfaction.²³ However, the technique is far from being flawless and without limitations. Firstly, the assumption of the independence between the importance and the performance is questioned by many studies and in many real-life situations. If managers perceive particular skill as important they will judge the performance more scrupulously. If they perceive particular skill as less important they will fail to appreciate properly the related performance. This phenomenon can be seen on the Chart 2, where the importance and the performance lines tend to mirror each other with a tendency to close the gap in the direction of the "less important" skills. Other important limitation is linked with non-proportional skills that not move proportionally on the importance-performance map.²⁴

However, despite the listed limitations, our research manages to indicate on the particular skills that the industry managers expect from the professionals they employee. It is important to stress that the creativity, inherently a soft skill, is ranked higher than the event handling, a fundamentally professional and thus hard skill. In these terms, our research did not contradict the results of other researches that put forward the importance of the professional skills training. However, it proved that managers now think that the creativity is much more important and consequently higher and vocational education institution should put forward more creativity-fostering subjects at least in parallel with professional training. The reasons for the wide gap in the case of the creativity can partially be explained by the design of the curricula or the ex-cathedra teaching at the traditional universities and partly by the low image of the education for tourism, which consequently attracts only mediocre students.

²³Silva, F. and Fernandes, P. (2015) "Importance-Performance Analysis As A Tool In Evaluating Higher Education Service Quality: The Empirical Results Of Estig (IPB)", *Creating Global Competitive Economies: A 360-Degree Approach*, Biblioteca Digital IPB

²⁴Eskildsen, J. and Kristensen, K. (2006), "Enhancing importance-performance analysis", *International Journal of Productivity and Performance Management*. 55 (1) pp. 40 - 60

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However, since we do not have answers on that it is fruit for though for future exploration. In addition, it would prove interesting to explore why managers perceive the critical thinking so high when, same time, think that networking and negotiation skills are almost not important. Moreover, it would be interesting to explore why they think that the research, marketing and sales skills are less important for people that will ultimately have to replace them on their executive positions.

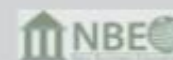
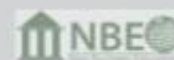
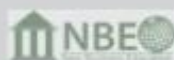
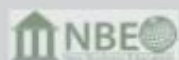
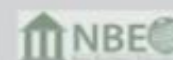
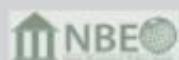
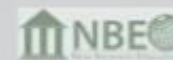
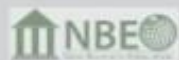
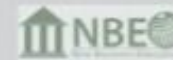
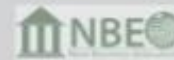
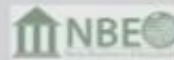
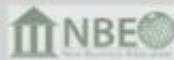
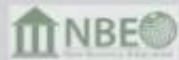
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MANAGEMENT AND STAFF IN TOURISM AND HOSPITALITY INDUSTRY IN REPUBLIC OF
MACEDONIA**

BIBLIOGRAPHY

- Aksu, A. and Köksal, C. (2005). '*Perceptions and attitudes of tourism students in Turkey*', International Journal of Contemporary Hospitality Management.17 (5). pp. 436-447, Business Source Complete, EBSCOhost, viewed 12 May 2015
- Amalu, E. at al. (2012). "*Assessment of the Influence of Education on Tourism Development in Enugu State, Nigeria*", American Journal of Tourism Research.1(1). pp. 33-42
- Busby, G. (2003). "*Tourism degree internships: a longitudinal study*". Journal of Vocational Education and Training, 55 (3). Pp. 319-332
- Chung, Y. (2000). "*Hotel management curriculum reform based on required competencies of hotel employees and career in the hotel industry*". Tourism management. 21 (5) pp. 473-487
- Connolly, P. and McGing, G. (2006), '*Graduate education and hospitality management in Ireland*', International Journal Of Contemporary Hospitality Management, 18 (1), pp. 50-59, Business Source Complete, EBSCOhost, viewed 12 May 2015.
- Crispin, D. and Neil, R. (2001). '*The theming of tourism education: a three-domain approach*', International Journal Of Contemporary Hospitality Management. 13(1) p. 30. Business Source Complete, EBSCOhost, viewed 12 May 2015.
- Dun & Bradstreet India (2015) "*Indian Travel, Tourism and Hospitality Industry*", available at https://www.dnb.co.in/Travel_Tourism, viewed 22 January, 2016.
- Ernawati, B. (2003). "*Stakeholders' Views on Higher Tourism Education*". Annals of Tourism Research.30 (1). Pp/. 255-258
- Eskildsen, J. and Kristensen,K. (2006), "*Enhancing importance-performance analysis*", International Journal of Productivity and Performance Management. 55 (1). pp. 40-60
- Gannon, J., Roperb, A. and Doherty, L. (2015). "*Strategic human resource management: Insights from the international hotel industry*", International Journal of Hospitality Management. 47. pp. 65–75
- Graham Busby, Paul Brunt, Sally Baber (1997). "*Tourism sandwich placements: an appraisal*", Tourism Management.18 (2). Pp. 105–110
- Hinch, T. and Butler, R. (2007). "*Tourism and indigenous people: issues and implications*". Butterworth-Heinemann Publishers, Amsterdam.
- Lam,T. and Xiao, H. (2000), '*Challenges and constraints of hospitality and tourism education in China*', International Journal Of Contemporary Hospitality Management, 12 (5) p. 291, Business Source Complete, EBSCOhost, viewed 12 May 2015.
- Leslie, D.,and Richardson A. (2000). "*Tourism and cooperative education in UK undergraduate courses: Are the benefits being realized?*". Tourism Management, 21(5) pp. 489-498

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MANAGEMENT AND STAFF IN TOURISM AND HOSPITALITY INDUSTRY IN REPUBLIC OF
MACEDONIA**

- Martin, D. and McEvoy, B. (2003). *'Business simulations: a balanced approach to tourism education'*, International Journal Of Contemporary Hospitality Management, 15 (6). pp. 336-339, Business Source Complete, EBSCOhost, viewed 12 May 2015
- Morgan, M. (2004). *'From production line to drama school: higher education for the future of tourism'*, International Journal Of Contemporary Hospitality Management, 16 (2). pp. 91-99, Business Source Complete, EBSCOhost, viewed 12 May 2015.
- Silva, F. and Fernandes, P. (2015) *"Importance-Performance Analysis As A Tool In Evaluating Higher Education Service Quality: The Empirical Results Of Estig (IPB)"*, Creating Global Competitive Economies: A 360-Degree Approach, Biblioteca Digital IPB
- Singal, M. (2015). *"How is the hospitality and tourism industry different? An empirical test of some structural characteristics"*. International Journal of Hospitality Management. 47. Pp. 116–119
- UNCTAD (2013). *"Tourism's Contribution to Sustainable Development"*. pp. 14–15
- Vanessa A. et al. (1997). *'Tourism education: policy versus practice'*, International Journal Of Contemporary Hospitality Management, 9(1) p. 5. Business Source Complete, EBSCOhost, viewed 12 May 2015.
- World Data Atlas – Tourism (2015) available at <http://knoema.com/atlas/topics/Tourism/Travel-and-Tourism-Direct-Contribution-to-GDP/Direct-Contribution-to-GDP-percent-share>, viewed 21. Jan. 2016



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